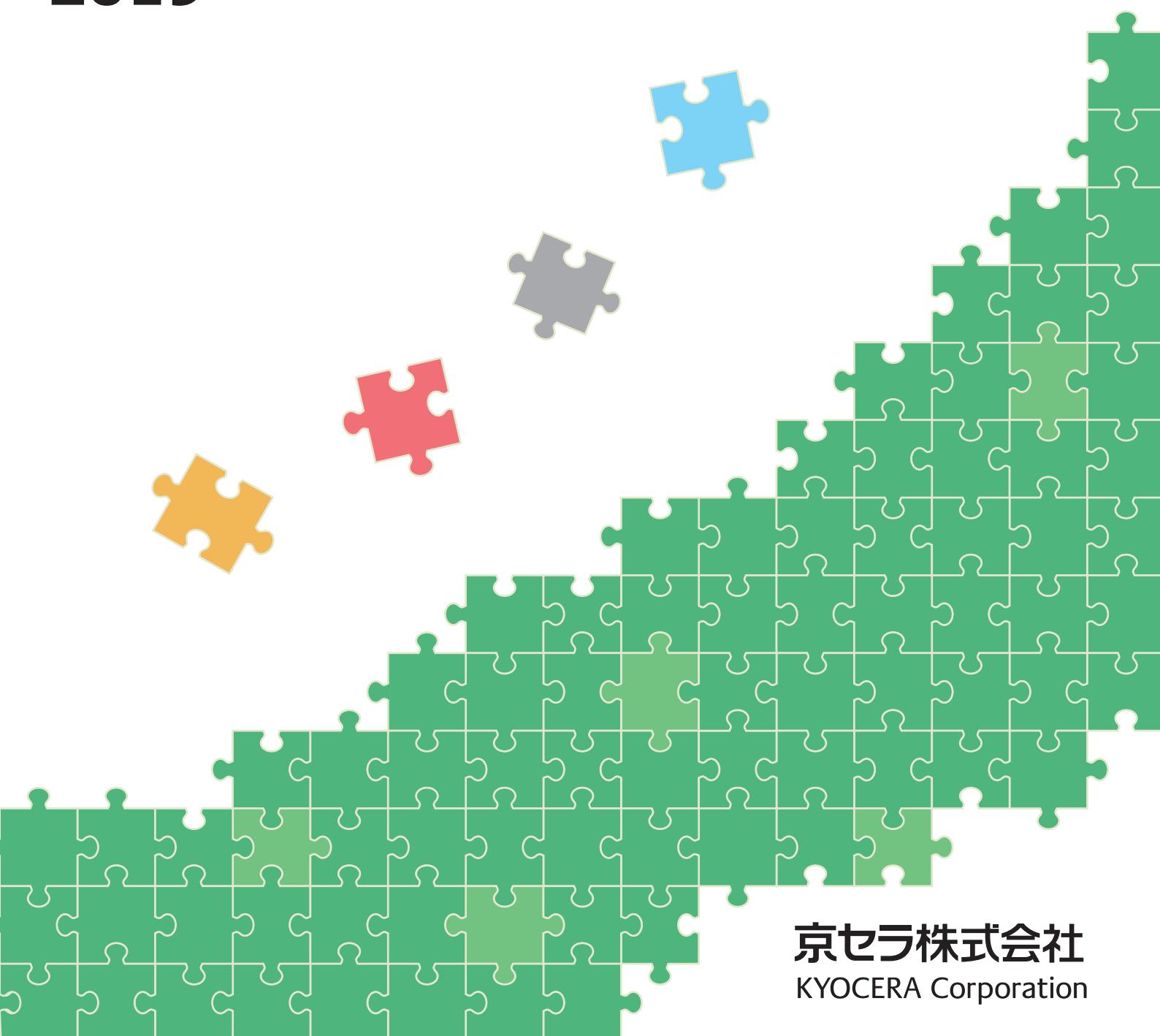
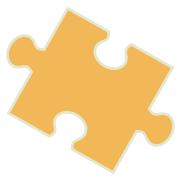
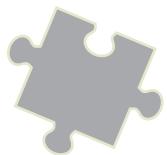
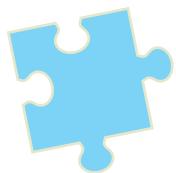
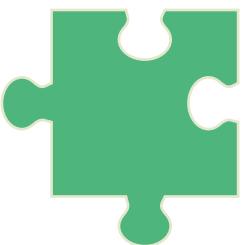


THE NEW VALUE FRONTIER



# Power Devices 2019



京セラ株式会社  
KYOCERA Corporation

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Please check our website for the latest information.

日本語



English



# 1. 記号と用語 Symbols and Terms

## 1-1. ダイオード Diode

記号 Symbols	用語 Terms	定義 Definitions
VRM	繰り返しピーク逆電圧 Repetitive Peak Reverse Voltage	繰り返し印加できる逆電圧のピーク値 Allowable peak reverse voltage repetitively applicable to diode
	非繰り返しピーク逆電圧 Surge Peak Reverse Voltage	非繰り返し印加できる逆電圧のピーク値 Allowable peak reverse voltage non-repetitively applicable to diode
IF(RMS)	実効順電流 RMS Forward Current	連続して通電できる順電流の実効値 Maximum RMS value of continuous forward current
	Io	平均整流電流 Average rectified output current
IFSM	サージ順電流 Surge forward current	50Hzまたは60Hzの正弦波1サイクルを非繰り返しで流しうる最大順電流のピーク値 Non-repetitive maximum peak forward current in one cycle of (50Hz/60Hz) sin wave
	PRRSM	繰り返しピークサージ逆電力 Repetitive Surge Peak Reverse Power
I <sup>2</sup> t	電流2乗時間積 Current squared times	10ms未満1msまでの非繰り返しピーク順電流を計算するための値 Value to estimate none-repetitive peak forward current for 1ms ≤ t < 10ms pulse width
	I <sub>RM</sub>	ピーク逆電流 Peak reverse current
VFM	ピーク順電圧 Peak Forward Voltage	規定の順電流を流したときの順電圧ピーク値 Peak forward voltage at specified current
	T <sub>jw</sub>	動作接合温度範囲 Operating Junction Temperature Range
T <sub>stg</sub>	保存温度範囲 Storage Temperature Range	保存(非動作時)の周囲温度保証範囲 Range of ambient temperature while not operating
	R <sub>th</sub>	熱抵抗 Thermal Resistance
trr	逆回復時間 Reverse Recovery Time	順方向通電状態から逆方向にスイッチするときに、逆阻止能力を回復するまでの時間、図1参照 Time required to recover blocking capability after current is switched from forward to reverse. Refer to Fig 1.

## 1-2. サイリスタ Thyristor

記号 Symbols	用語 Terms	定義 Definitions
VRM	繰り返しピーク逆電圧 Repetitive Peak Reverse Voltage	アノード・カソード間に繰り返し印加できる逆電圧のピーク値 Allowable peak reverse voltage repetitively applicable between anode and cathode
	V <sub>DRM</sub>	繰り返しピークオフ電圧 Repetitive Peak Off-state Voltage
Io	平均オン電流 Average rectified output current	アノード・カソード間に繰り返し印加できるオフ電圧のピーク値 Allowable peak off-state voltage repetitively applicable between anode and cathode
	ITSM	平均オン電流 Average rectified output current
IGT	サージオン電流 Surge on-state current	50Hz正弦波1サイクルを非繰り返しで流しうる最大オン電流のピーク値 Non-repetitive maximum peak on-state current in one cycle of 50Hz sin wave
	VGT	トリガゲート電流 Gate trigger current
T <sub>jw</sub>	トリガゲート電圧 Gate trigger voltage	オンさせるのに必要な最小ゲート電流 Minimum gate current required to turn on
	動作接合温度範囲 Operating Junction Temperature Range	オンさせるのに必要な最小ゲート電圧 Minimum gate voltage required to turn on

### 1-3. MOSFET

記号 Symbols	用語 Terms	定義 Definitions
V <sub>DSS</sub>	ドレイン・ソース間電圧 Drain-Source Voltage	ゲート・ソース間に短絡したうえでドレイン・ソース間に印加できる電圧のピーク値 Allowable peak voltage between drain and source with gate short-circuited to source
	ドレイン電流 Drain Current	連続して流せるドレイン電流の最大値 Maximum allowable continuous value of drain current
P <sub>D</sub>	全損失 Power dissipation	ケース温度 25°C での最大許容電力損失 Maximum allowable power dissipation at 25°C
	動作チャンネル温度範囲 Operating channel Temperature Range	動作時のチャンネル温度の範囲 Range of channel temperature while operating
R <sub>D(on)</sub>	ドレイン・ソース間オン抵抗 Static Drain-Source On-resistance	規定のゲート電圧を印加して、規定のドレイン電流を流したときのドレイン・ソース間の直流抵抗 DC resistance between drain and source at specified gate voltage and drain current
	V <sub>D(on)</sub>	ドレイン・ソース間オン電圧 Drain-Source On-Voltage
I <sub>S</sub>	ソース電流 Source Current	連続して流せるソース電流の最大値 Maximum allowable current into source terminal
	V <sub>SD</sub>	ソース・ドレイン間電圧 Source-Drain Voltage

### 1-4. IGBT

記号 Symbols	用語 Terms	定義 Definitions
V <sub>CES</sub>	コレクタ・エミッタ間電圧 Collector-Emitter Voltage	ゲート・エミッタ間に短絡したうえでコレクタ・エミッタ間に印加できる電圧のピーク値 Allowable peak voltage between collector and emitter with gate short-circuited to emitter
	コレクタ電流 Collector Current	連続して流せるコレクタ電流の最大値 Maximum allowable continuous value of collector current
V <sub>CES(sat)</sub>	コレクタ・エミッタ間飽和電圧 Collector-Emitter Saturation Voltage	規定のゲート電圧を印加して、規定のドレイン電流を流したときのコレクタ・エミッタ間電圧 Collector-Emitter saturation voltage at specified gate voltage and source current
	ターンオン時間 turn-on time	図 2. 参照 Refer to Fig 2.
t <sub>off</sub>	ターンオフ時間 turn-off time	図 2. 参照 Refer to Fig 2.

#### 用語解説用波形

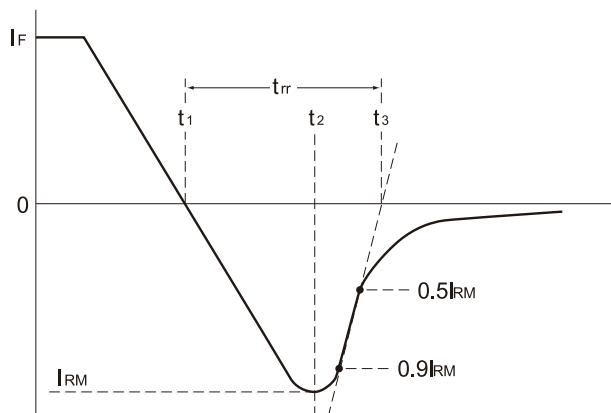


図 1. 逆回復波形  
Fig 1. Recovery Waveforms

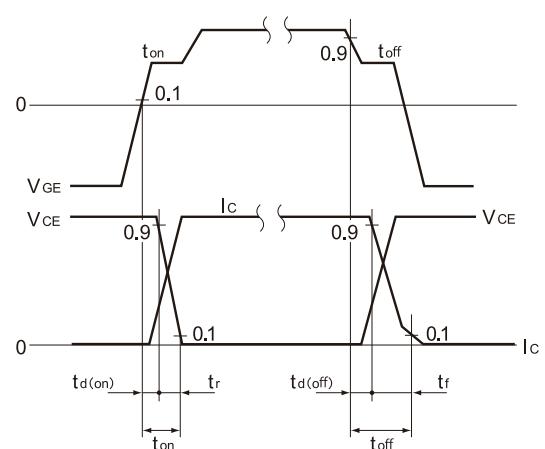


図 2. スイッチング時間波形  
Fig 2. Switching Time Waveforms

## 2. 製品早見表 Quick Reference

### 2-1. ディスクリート製品 Discrete Products

#### 2-1-1. 一般整流ダイオード Rectifier Diodes

Package	$V_{RRM}$ [V] $I_o$ [A]	400	600	900	Page
SOD-123	0.5	EP05DA40	✓		23
DO-214AC (SMA)	1.0	EC10DS4			23
		EC10DA40	✓		23
3Max× Ø2.7 (DO-41S)	1.0	10EDB40	10EDB60		23
DO-204AC (DO-15)	2.0	20CDA40	20CDA60		23
DO-201AD	3.0	30GDA40	30GDA60		23
nSMC	3.0	NSD03A40	✓		23
TO-220 Full-Mold 2pin	20.0			FSD20A90	23

✓ : AEC-Q101準拠 AEC-Q101 qualified

#### 2-1-2. ファストリカバリダイオード (単体) (1/2) Fast Recovery Diodes (Single chip) (1/2)

Package	$V_{RRM}$ [V] $I_o$ [A]	200	300	400	600	Page
SOD-123	0.4				EP04RA60	✓ 23
	0.5	EP05FA20	✓			23
DO-214AC (SMA)	0.8				EC8FS6	✓ 23
	1.0	EC11FS2	✓	EC11FS4	✓	23
		EC10UA20				23
3Max× Ø2.7 (DO-41S)	1.0	11EFS2		11EFS4		23
DO-204AC (DO-15)	2.0			20CFA40	20CFB60	23
TO-251	3.0			EA31FS4		23
TO-252 (Dpak)	3.0	EA31FS2-F		EA31FS4-F	ESF03F60-F	23
TO-220 Full-Mold 2pin	3.0				FSF03F60	24
DO-201AD	3.0	30GFA20		30GFA40	30GFB60	23
					30GFD60	23
DO-214AC (SMA)	3.0	EC30FA20	✓	EC30FA40	✓	EC30FH60 23
nSMC	3.0	NSF03A20		NSF03A40	✓	NSF03B60 23
					✓	NSF03E60 23
					NSU03A60	23
TO-277	5.0	VSF05A20	✓			23
TO-252 (Dpak)	5.0				ESF05H60-F	23
TO-220 2pin	5.0	GSF05A20		GSF05A40	GSF05F60	23
TO-220 Full-Mold 2pin	5.0	FSF05A20		FSF05A40	FSF05F60	24
					FSF05H60	24
					FSF05HU60	24
		FSU05A20	FSU05A30	FSU05A40	FSU05D60	24
TO-220 Full-Mold	5.0	FSF05A20B		FSF05A40B	FSF05F60B	24
TO-262	5.0	TSF05A20-11A			TSU05D60-11A	24
		TSF05A20			TSU05D60	24

✓ : AEC-Q101準拠 AEC-Q101 qualified

2-1-2. ファストリカバリダイオード（単体）（2/2）Fast Recovery Diodes (Single chip) (2/2)

Package	$I_o$ [A]	$V_{RRM}$ [V]	200	300	400	600	Page
TO-252 (Dpak)		8.0				ESF08HU60B-F	23
TO-220 Full-Mold 2pin	8.0					FSF08F60	24
						FSF08H60	24
						FSU08D60	24
			GSF10A20		GSF10A40		23
TO-220 Full-Mold 2pin	10.0	FSF10A20		FSF10A40	FSF10F60		24
					FSF10H60		24
					FSF10HU60		24
		FSU10A20	FSU10A30	FSU10A40	FSU10D60		24
					FSU10D60V		24
		FSF10A20B		FSF10A40B	FSF10F60B		23
TO-262	10.0				TSU10D60-11A		24
					TSU10D60		24
TO-220 Full-Mold 2pin	15.0				FSF15F60		24
					FSF15H60		24
					FSU15D60		24
TO-247 2pin	30.0				KSF30F60		24
					KSF30H60		24
					KSU30D60		24
TO-247	30.0	KSF30A20B	KSU30A30B	KSF30A40B	KSF30F60B		24
TO-247 2pin (long lead)	30.0				KSU30D60N		24
					KSF30F60N		24
					KSF30H60N		24
TO-247	60.0				KSF60F60B		24
TO-247 2pin (long lead)	60.0				KSF60F60N		24
					KSF60H60N		24
					KSU60D60N		24

## 2. 製品早見表 Quick Reference

2-1-2. ファストリカバリダイオード（複合型） Fast Recovery Diodes (Multi chip)

Package	$I_o$ [A]	$V_{RRM}$ [V]	200	300	400	600	Page
TO-277	6.0	VCF06A20	✓				25
TO-251	6.0	EA61FC2		EA61FC4			25
TO-252 (Dpak)	6.0	EA61FC2-F	✓		EA61FC4-F ✓	ECF06B60-F ✓	25
						ECF06F60-F ✓	25
						ECU06B60-F	25
TO-220	6.0	GCF06A20		GCF06A40	GCF06F60		25
TO-220 Full-Mold	6.0	FCF06A20		FCF06A40	FCF06F60		25
TO-220	10.0	GCF10A20		GCF10A40			25
TO-220 Full-Mold	10.0	FCF10A20		FCF10A40	FCF10F60		25
				FCF10A40V			25
					FCF10H60		25
		FCU10A20	FCU10A30	FCU10A40	FCU10A60		25
					FCU10D60		25
		FRF10A20		FRF10A40			25
TO-262	10.0	TCF10A20-11A		TCF10A40-11A	TCF10F60-11A		25
		TCU10A20-11A		TCU10A40-11A	TCF10B60-11A		25
TO-263 (D2pak)	10.0	TCF10A20		TCF10A40	TCF10F60		26
		TCU10A20		TCU10A40	TCF10B60		26
TO-263LP	10.0			UCF10B40 ✓			26
TO-262	16.0	TCF16A20-11A					25
TO-263	16.0	TCF16A20					26
TO-220 Full-Mold	16.0	FCF16A20		FCF16A40			25
TO-247	16.0	KCF16A20		KCF16A40			26
TO-220 Full-Mold	20.0			FCF20AU40	FCF20F60		25
					FCF20G60		25
					FCF20H60		25
					FCF20H60V		25
		FCU20A20	FCU20A30	FCU20A40	FCU20D60		25
			FCU20D30	FCU20AU40			25
TO-262	20.0	TCU20A20-11A	TCU20A30-11A	TCU20A40-11A	TCF20B60-11A		25
TO-263 (D2pak)	20.0	TCU20A20	TCU20A30	TCU20A40	TCF20B60		26
TO-263LP	20.0		UCU20D30	UCF20B40 ✓			26
TO-247	20.0				KCF20F60		26
		KCU20A20	KCU20A30	KCU20A40			26
		25.0	KCF25A20	KCF25A40			26
		30.0	KCU30A20	KCU30A30	KCU30A40		26
TO-247 (long lead)	30.0				KCF30F60N ✓		26
	60.0				KCU60D60N		26

✓ : AEC-Q101準拠 AEC-Q101 qualified

2-1-3. ショットキーバリアダイオード（単体） Schottky Barrier Diodes (Single chip)

Package	$V_{RRM}$ [V] $I_o$ [A]	30	35	40	45	60	65	Page
SOD-123	0.5	EP05Q03L		EP05Q04 ✓		EP05Q06 ✓		26
3Max × ø2.7 (DO-41S)	1.0	11EQS03L		11EQS04		11EQS06		26
SOD-323FL	1.0	SA10QA03		SA10QA04		SA10QA06		26
SOD-123	1.0	EP10QY03		EP10QY04 ✓				26
DO-214AC (SMA)	1.0	EC10QS03L		EC10QS04 ✓		EC10QS06 ✓		26
DO-204AC (DO-15)	2.0	20CQA03L		20CQA04		20CQA06		26
DO-214AC (SMA)	2.0	EC21QS03L		EC21QS04 ✓	EC20QSA045 ✓	EC21QS06	EC20QSA065	27
TO-251	3.0			EA30QS04				27
TO-252 (Dpak)	3.0	EA30QS03L-F		EA30QS04-F		EA30QS06-F		27
DO-201AD	3.0	30GQA03L		30GQA04		30GQA06		26
DO-214AC (SMA)	3.0	EC31QS03L		EC31QS04 ✓	EC30QSA045 ✓	EC31QS06 ✓	EC30QSA065 ✓	27
NA (DO-221BC)	3.0		NA03QSA035		NA03QSA045		NA03QSA065	27
nSMC	3.0	NSQ03A03L		NSQ03A04		NSQ03A06		27
TO-220 2pin	5.0			GSQ05A04		GSQ05A06		27
TO-220	5.0	FSQ05A03L			FSQS05A045		FSQS05A065	27
Full-Mold 2pin							FSQS05AU065	27
DO-201AD	5.0				50GQSA045		50GQSA065	27
NA (DO-221BC)	5.0		NA05QSA035		NA05QSA045		NA05QSA065	27
TO-277	10.0				VSQS10A045 ✓		VSQS10A065	27
TO-220 2pin	10.0			GSQ10A04		GSQ10A06		27
TO-220	15.0	10.0			FSQS10A045		FSQS10A065	27
Full-Mold 2pin					FSQS15A045			27
					FSQS15A045V			27
TO-277	15.0				VSQS15A045			27
TO-247 2pin	15.0			KSQ15A04		KSQ15A06		27
TO-220 Full-Mold 2pin	30.0				FSQS30A045			27
TO-247 2pin	30.0			KSQ30A04		KSQ30A06		27

✓ : AEC-Q101準拠 AEC-Q101 qualified

## 2. 製品早見表 Quick Reference

2-1-3. ショットキーバリアダイオード H シリーズ 〈低リーク品〉(単体) V<sub>RRM</sub> : 30～80  
 Schottky Barrier Diodes H-Series <Low-IR type> (Single chip) V<sub>RRM</sub> : 30 to 80

Package	$\frac{V_{RRM}[V]}{I_o[A]}$	30	40	65	80	Page
SOD-123	0.5					-
3Max× Ø2.7 (DO-41S)	1.0					-
SOD-123	1.0	EP10HY03				28
DO-214AC (SMA)	1.0					-
DO-204AC (DO-15)	2.0					-
DO-214AC (SMA)						-
TO-252 (Dpak)	3.0					-
DO-201AD	3.0					-
DO-214AC (SMA)	3.0	EC30HA03L	EC30HA04			28
NA (DO-221BC)	3.0			NA03HSA065	NA03HSA08	28
nSMC	3.0	NSH03A03L				28
TO-277	3.0					-
TO-252 (Dpak)	5.0					-
TO-220 2pin	5.0					-
TO-220 Full-Mold 2pin	5.0	FSH05A03L		FSHS05A065	FSHS05A08	28
DO-201AD	5.0				50GHS08	28
NA (DO-221BC)	5.0			NA05HSA065	NA05HSA08	28
nSMC	5.0	NSH05A03		NSHS05A065	✓	28
TO-277	10.0					-
TO-220 2pin	10.0					-
TO-220 Full-Mold 2pin	10.0	FSH10A03L				-
TO-277	15.0				VSHS15A08	28
TO-247 2pin	15.0					-
	30.0					-

✓ : AEC-Q101準拠 AEC-Q101 qualified

2-1-3. ショットキーバリアダイオード H シリーズ 〈低リーク品〉(単体) V<sub>RRM</sub> : 100～200  
 Schottky Barrier Diodes H-Series <Low-IR type> (Single chip) V<sub>RRM</sub> : 100 to 200

Package	$I_o$ [A]	V <sub>RRM</sub> [V]	100	120	150	200	Page
SOD-123	0.5	EP05H10	✓				28
3Max× Ø2.7 (DO-41S)	1.0	11EQS10				10EHA20	28
SOD-123	1.0						-
DO-214AC (SMA)	1.0	EC10QS10	✓				28
DO-204AC (DO-15)	2.0	20CHA10				20CHA20	28
DO-214AC (SMA)	2.0	EC21QS10	✓				28
TO-252 (Dpak)	3.0	EA30QS10-F					28
DO-201AD	3.0	30GHA10				30GHA20	28
DO-214AC (SMA)	3.0	EC31QS10	✓				28
NA (DO-221BC)	3.0		NA03HSA12	NA03HA15	NA03HA20		28
nSMC	3.0	NSH03A10		NSH03A15			28
TO-277	3.0		VSHS03A12	✓			28
TO-252 (Dpak)	5.0			ESH05A15-F			28
TO-220 2pin	5.0	GSH05A10					28
TO-220 Full-Mold 2pin	5.0	FSH05A10		FSH05A15	FSH05A20		28
DO-201AD	5.0		50GHSA12				28
NA (DO-221BC)	5.0		NA05HSA12				28
nSMC	5.0						28
TO-277	10.0		VSHS10A12				28
TO-220 2pin	10.0	GSH10A10					28
TO-220 Full-Mold 2pin	10.0	FSH10A10		FSH10A15			28
TO-277	15.0		VSHS15A12				28
TO-247 2pin	15.0	KSH15A10					28
	30.0					KSH30A20	28

✓ : AEC-Q101準拠 AEC-Q101 qualified

## 2. 製品早見表 Quick Reference

2-1-3. ショットキーバリアダイオード（複合）V<sub>RRM</sub> : 30～40 Schottky Barrier Diodes (Multi chip) V<sub>RRM</sub> : 30 to 40

Package	V <sub>RRM</sub> [V] I <sub>o</sub> [A]	30	35	40	Page
TO-251	6.0			EA60QC04	29
TO-252 (Dpak)	6.0	EA60QC03L-F		EA60QC04-F	29
NB	6.0		NB06QSA035		29
TO-252 (Dpak)	10.0		ECQS10A035-F		29
TO-220	10.0			GCQ10A04	29
TO-220 Full-Mold	10.0	FCQ10A03L	FCQS10A035		29
					-
					-
					-
TO-262	10.0			TCQ10A04-11A	29
TO-263 (D2pak)	10.0			TCQ10A04	29
TO-263LP	10.0				-
NB	10.0		NB10QSA035		29
TO-220	20.0			GCQ20A04	29
TO-220 Full-Mold	20.0	FCQ20A03L			29
					-
					-
					-
TO-262	20.0	TCQ20A03L-11A		TCQ20A04-11A	29
TO-263 (D2pak)	20.0	TCQ20A03L		TCQ20A04	29
TO-263LP	20.0				-
TO-247	20.0			KCQ20A04	29
TO-220	30.0	GCQ30A03L		GCQ30A04	29
TO-220 Full-Mold	30.0	FCQ30A03L			29
	30.0				-
TO-262	30.0			TCQ30A04-11A	29
TO-263 (D2pak)	30.0			TCQ30A04	29
TO-263LP	30.0				-
TO-247	30.0	KCQ30A03L		KCQ30A04	30
	60.0	KCQ60A03L		KCQ60A04	30

2-1-3. ショットキーバリアダイオード（複合）V<sub>RRM</sub> : 45～65 Schottky Barrier Diodes (Multi chip) V<sub>RRM</sub> : 45 to 65

Package	V <sub>RRM</sub> [V] I <sub>o</sub> [A]	45	60	65	Page
TO-251	6.0		EA60QC06		29
TO-252 (Dpak)	6.0		EA60QC06-F		29
NB	6.0	NB06QSA045		NB06QSA065	29
TO-252 (Dpak)	10.0	ECQS10A045-F			29
TO-220	10.0		GCQ10A06		29
TO-220 Full-Mold	10.0	FCQS10A045		FCQS10A065	29
		FCQS10AU045			29
		FCQS10AU045V			29
TO-262	10.0				-
TO-263 (D2pak)	10.0				-
TO-263LP	10.0			UCQS10A065	29
NB	10.0	NB10QSA045		NB10QSA065	29
TO-220	20.0		GCQ20A06		29
TO-220 Full-Mold	20.0	FCQS20A045		FCQS20A065	29
				FCQS20BU065	29
				FCQS20BU065V	29
		FRQS20A045		FRQS20A065	29
TO-262	20.0				-
TO-263 (D2pak)	20.0				-
TO-263LP	20.0	UCQS20A045		UCQS20A065	29
TO-247	20.0		KCQ20A06		29
TO-220	30.0		GCQ30A06		29
TO-220 Full-Mold	30.0	FCQS30A045		FCQS30A065	29
	30.0	FCQS30AU045		FCQS30AU065	29
TO-262	30.0		TCQ30A06-11A		29
TO-263 (D2pak)	30.0		TCQ30A06		29
TO-263LP	30.0	UCQS30A045			29
TO-247	30.0		KCQ30A06		30
	60.0		KCQ60A06		30

: AEC-Q101準拠 AEC-Q101 qualified

## 2. 製品早見表 Quick Reference

2-1-3. ショットキーバリアダイオード Hシリーズ 〈低リーク〉 (複合) V<sub>RRM</sub> : 30~65  
 Schottky Barrier Diodes H-Series <Low-IR type> (Multi chip) V<sub>RRM</sub> : 30 to 65

Package	V <sub>RRM</sub> [V] I <sub>o</sub> [A]	30	40	45	60	65	Page
TO-251	6.0						-
TO-252 (Dpak)	6.0						-
NB	6.0					NB06HSA065	30
TO-220 Full-Mold	8.0						-
TO-252 (Dpak)	10.0						-
TO-220	10.0						-
TO-220 Full-Mold	10.0	FCH10A03L		FCHS10A045		FCHS10A065	30
							-
							-
							-
							-
TO-262	10.0						-
TO-263 (D2pak)	10.0						-
TO-263LP	10.0					UCHS10A065	31
NB	10.0					NB10HSA065	30
TO-220	20.0						-
TO-220 Full-Mold	20.0	FCH20A03L		FCHS20A045		FCHS20A065	30
							-
							-
							-
							-
TO-262	20.0						-
TO-263 (D2pak)	20.0						-
TO-263LP	20.0						-
TO-247	20.0						-
TO-220	30.0						-
TO-220 Full-Mold	30.0	FCH30A03L		FCHS30A045		FCHS30A065	30
							-
							-
							-
							-
TO-262	30.0				TCH30A06-11A		31
TO-263 (D2pak)	30.0				TCH30A06		31
TO-263LP	30.0						31
TO-247	30.0				KCH30A06		31
	60.0	KCH60A03L	KCH60A04				31

2-1-3. ショットキーバリアダイオード G シリーズ 〈超低リーク品〉 (複合)  
 Schottky Barrier Diodes G-Series <Ultra-Low-IR type> (Multi chip)

Package	V <sub>RRM</sub> [V] I <sub>o</sub> [A]	150	Page
TO-220 Full-Mold	10.0	FCG10AU15	32
	20.0	FCG20BU15	32
	30.0	FCG30AU15	32
	30.0	FCG30AU15V	32

2-1-3. ショットキーバリアダイオード Hシリーズ〈低リーク〉(複合) V<sub>RRM</sub> : 80~200  
 Schottky Barrier Diodes H-Series <Low-IR type> (Multi chip) V<sub>RRM</sub> : 80 to 200

Package	$V_{RRM}$ [V] I <sub>o</sub> [A]	80	100	120	150	200	Page
TO-251	6.0		EA60QC10				30
TO-252 (Dpak)	6.0		EA60QC10-F			ECH06A20-F	30
NB	6.0	NB06HSA08		NB06HSA12			30
TO-220 Full-Mold	8.0		FCH08A10	FCHS08A12	FCH08A15		30/31
TO-252 (Dpak)	10.0	ECHS10A08-F					30
TO-220	10.0		GCH10A10				30
TO-220 Full-Mold	10.0	FCHS10A08	FCH10A10	FCHS10A12	FCH10A15	FCH10A20	30/31
					FCH10A15V	FCH10A20V	31
			FCH10AU10V				30
			FCH10E10		FRH10A15	FRH10A20	30/31
TO-262	10.0		TCH10A10-11A		TCH10A15-11A		31
TO-263 (D2pak)	10.0		TCH10A10		TCH10A15		31
TO-263LP	10.0	UCHS10A08		UCHS10A12			31
NB	10.0	NB10HSA08		NB10HSA12			30
TO-220	20.0		GCH20A10				30
TO-220 Full-Mold	20.0	FCHS20A08	FCH20A10	FCHS20A12	FCH20A15	FCH20A20	30/31
			FCH20BU10		FCH20BU15	FCH20A20V	30/31
			FCH20E10		FCH20BU15V	FCH20AU20	30/31
			FCH20E10V			FCH20AU20V	30/31
			FCH20AU10V				30
			FRH20A10		FRH20A15	FRH20A20	30/31
TO-262	20.0		TCH20A10-11A		TCH20A15-11A	TCH20A20-11A	31
TO-263 (D2pak)	20.0		TCH20A10		TCH20A15	TCH20A20	31
TO-263LP	20.0	UCHS20A08	✓	UCHS20A12			31
TO-247	20.0		KCH20A10			KCH20A20	31
TO-220	30.0	GCHS30A08	GCH30A10				30
TO-220 Full-Mold	30.0	FCHS30A08	FCH30A10	FCHS30A12	FCH30A15		30/31
		FCHS30AU08	FCH30E10				30
			FCH30E10V				30
			FCH30AU10				30
TO-262	30.0				TCH30A15-11A		31
TO-263 (D2pak)	30.0				TCH30A15		31
TO-263LP	30.0	UCHS30A08		UCHS30A12			31
TO-247	30.0		KCH30A10		KCH30A15	KCH30A20	31
	60.0						31

✓ : AEC-Q101準拠 AEC-Q101 qualified

2-1-4. アバランシェ保証型ショットキーバリアダイオード  
 Avalanche Guaranteed Schottky Barrier Diode

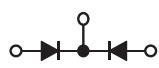
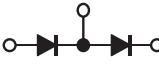
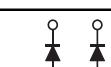
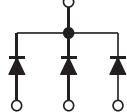
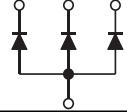
Package	$V_{RRM}$ [V] I <sub>o</sub> [A]	90	Page
TO-263LP	30.0	UCHD30A09	✓ 32

✓ : AEC-Q101準拠 AEC-Q101 qualified

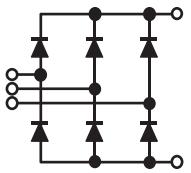
## 2. 製品早見表 Quick Reference

### 2-1. モジュール製品 Module Products

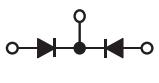
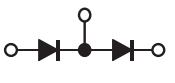
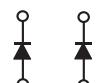
#### 2-2-1. 一般整流ダイオードモジュール (1/2) Rectifier Diode Modules(1/2)

Series	Circuit	$V_{RRM}$ [V] $I_o$ [A]	800	1600	1800	Page	
PH		150	PH1508			33	
		250	PH2508			33	
		400	PH400N8	PH400N16		33	
PC		30	PC308	PC3016		33	
		60	PC608	PC6016		33	
		100	PC1008	PC10016		33	
		150	PC1508	PC15016		33	
		200	PC2008	PC20016		33	
		250	PC2508	PC25016		33	
		400	PC400N8	PC400N16		33	
PD		30	PD308	PD3016		33	
		PD30KN8	PD30KN16			33	
		60	PD608	PD6016		33	
		PD60KN8	PD60KN16			33	
		100	PD100N8C	PD100N16		33	
			PD100KN8	PD100KN16		33	
		150	PD100MYN16	PD100MYN18		33/34	
			PD1508	PD15016		33	
			PD1518	PD15116		33	
			PD15216			33	
			PD150S8	PD150S16		33	
		200	PD150KN8	PD150KN16		33	
			PD2008	PD20016		33	
			PD2018	PD20116		33	
			PD200S8	PD200S16		33	
			PD200KN8	PD200KN16		33	
		230	PD200MYN16	PD200MYN18		33/34	
			PD230S8	PD230S16		33	
			PD2508	PD25016		33/34	
			PD250KN8A	PD250KN16A		33/34	
			PD260	PD260MYN16	PD260MYN18	33/34	
		250		PD380MYN16	PD380MYN18	33/34	
		260		PD400N8	PD400N16	33/34	
		380			PD700MYN16	PD700MYN18	33/34
		400					
		700					
PR		250	PR250KN8N			34	
PE		30	PE30SN8	PE30SN16		34	
		100	PE1008N			34	
			PE100SN8			34	
PF		30	PF30SN8	PF30SN16		34	
		100	PF1008N			34	
			PF100SN8			34	

2-2-1. 一般整流ダイオードモジュール (2/2) Rectifier Diode Modules(2/2)

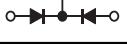
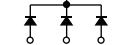
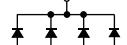
Series	Circuit	$V_{RRM}[V]$ $I_o[A]$	800	1600	1800	Page
PT		50	PT50SN8	PT50SN16		34
			PT50KN8	PT50KN16		34
		75	PT76SN8	PT76SN16		34
			PT75KN8	PT75KN16		34
		80		PT80MYN16	PT80MYN18	34
			PT100SN8	PT100SN16		34
		100	PT100KN8	PT100KN16		34
			PT151S8			34
		150	PT150KN8	PT150KN16		34
			PT150N8	PT150N16		34
				PT150MYN16	PT150MYN18	34
		200	PT200KN8	PT200KN16		34
			PT200N8	PT200N16		34
				PT200MYN16	PT200MYN18	34
		300	PT300S8	PT300S16		34

2-2-2. ファストリカバリダイオードモジュール Fast Recovery Diode Modules

Package	Circuit	$V_{RRM}[V]$ $I_o[A]$	200	400	600	1200	Page
PH-F		270	PH270F2				35
		300			PH300F6		35
PC-F		50	PC50F2	PC50F4			35
		100	PC100F2				35
					PC100FYN6		35
					PC100FYN6C		35
		150			PC150FYN6		35
					PC150FYN6C		35
					PC151FYN6		35
					PC151FYN6C		35
		200			PC201FKN6		35
					PC200FYN6		35
					PC200FYN6C		35
		300			PC300FN6		35
PD-F		50	PD50F2	PD50F4			35
		100	PD100F2				35
					PD100FYN6		35
		150			PD150FYN6		35
					PD151FYN6		35
		200			PD201FKN6		35
					PD200FYN6		35
P2H-F		30	P2H30F2	P2H30F4			35
		50				P2H50F12	35
		60	P2H60F2	P2H60F4			35
		80	P2H80F2	P2H80F4			35

## 2. 製品早見表 Quick Reference

### 2-2-3. ショットキーバリアダイオードモジュール Schottky Barrier Diode Modules

Package	Circuit	$V_{RRM}[V]$ $I_o[A]$	30	40	60	100	150	200	Page
PC-Q		60	PC60QL03N	PC60Q04N					35
		80	PC80QL03N	PC80Q04N					35
PE-Q		80	PE80QL03N						35
PQ-Q		160		PQ160QH04N	PQ160QH06N				35
P2H-Q		30				P2H30QH10	P2H30QH15	P2H30QH20	35
		60				P2H60QH10	P2H60QH15	P2H60QH20	35
		80				P2H80QH10	P2H80QH15	P2H80QH20	35

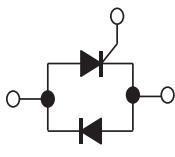
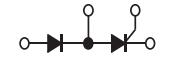
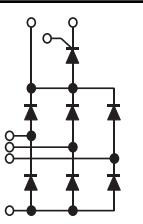
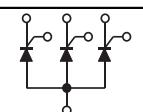
### 2-2-4. アバランシェ保証型ショットキーバリアダイオードモジュール Avalanche Guaranteed Schottky Barrier Diode Modules

Package	Circuit	$V_{RRM}[V]$ $I_o[A]$	90	120	Page
MR		80	MR80QZ09N	MR80QZ12N	36

### 2-2-5. サイリスタモジュール (1/2) Thyristor Modules(1/2)

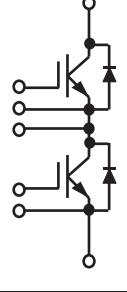
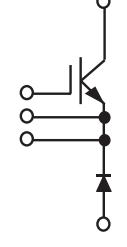
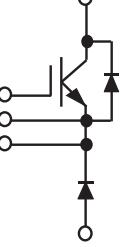
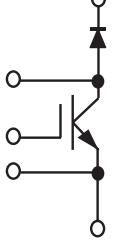
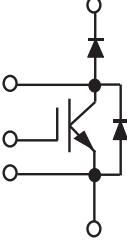
Series	Circuit	$V_{DRM}[V]$ $I_o[A]$	400	600	800	1600	Page
PHT		30			PHT308C		36
		60			PHT608C		36
		250			PHT608AC	PHT6016AC	36
		400			PHT250N8	PHT250N16	36
PDT		30			PDT308	PDT3016	36
		60			PDT608	PDT6016	36
		100			PDT1008	PDT10016	36
		150			PDT1508	PDT15016	36
		150			PDT1518	PDT15116	36
		200			PDT2008	PDT20016	36
		250			PDT2018	PDT20116	36
		400				PDT25016	36
					PDT400N8	PDT400N16	36
PAT		30			PAT308	PAT3016	36
		60			PAT608	PAT6016	36
		100			PAT1008	PAT10016	36
		150			PAT1508	PAT15016	36
		200			PAT2008	PAT20016	36
		400			PAT400N8	PAT400N16	36

2-2-5. サイリスタモジュール (2/2) Thyristor Modules(2/2)

Series	Circuit	$V_{DRM} [V]$ $I_o [A]$	400	600	800	1600	Page
PAH		30			PAH308	PAH3016	37
					PAH30N8CM	PAH30N16CM	37
		60			PAH608	PAH6016	37
					PAH60N8CM	PAH60N16CM	37
					PAH60LN8	PAH60LN16	37
		100			PAH1008	PAH10016	37
					PAH100N8CM		37
					PAH100LN8	PAH100N16	37
		150			PAH1508	PAH15016	37
						PAH150N16	37
PCH		200			PAH2008	PAH20016	37
					PAH200N8		37
		250			PAH250N8		37
		300			PAH300N8		37
		400			PAH400N8	PAH400N16	37
PDH		30			PDH308	PDH3016	37
		60			PDH608	PDH6016	37
		100			PDH1008	PDH10016	37
		150			PDH1508	PCH15016	37
		200			PCH2008	PCH20016	37
		400			PCH400N8		37
PGH		50			PGH50N8	PGH50N16	38
		75			PGH75N8	PGH75N16	38
		100			PGH100N8	PGH100N16	38
					PGH101N8		38
		150			PGH150N8	PGH150N16	38
PFT		200			PGH200N8	PGH200N16	38
		150			PFT1506N		38
		200			PFT2004N		38
					PFT2014N		38

## 2. 製品早見表 Quick Reference

### 2-2-6. IGBT モジュール IGBT Modules

Series	Circuit	$V_{CES}[V]$	650	1200	Page
		$I_o[A]$			
PHMB		50		PHMB50W12CL	38
PDMB		50	PDMB50W6	PDMB50W12	38
		75	PDMB75W6	PDMB75W12	38
		100	PDMB100W6	PDMB100W12	38
		150	PDMB150W6	PDMB150W12	38
		200	PDMB200W6	PDMB200W12	38
		300	PDMB300W6		38
		400	PDMB400W6		38
PCHMB		50	PCHMB50W6	PCHMB50W12	38
		75	PCHMB75W6	PCHMB75W12	38
		100	PCHMB100W6	PCHMB100W12	38
		150	PCHMB150W6	PCHMB150W12	38
		200	PCHMB200W6	PCHMB200W12	38
		300	PCHMB300W6		38
		400	PCHMB400W6		38
PCFMB		50	PCFMB50W6	PCFMB50W12	39
		75	PCFMB75W6	PCFMB75W12	39
		100	PCFMB100W6	PCFMB100W12	39
		150	PCFMB150W6	PCFMB150W12	39
		200	PCFMB200W6	PCFMB200W12	39
		300	PCFMB300W6		39
		400	PCFMB400W6		39
PRHMB		50	PRHMB50W6	PRHMB50W12	39
		75	PRHMB75W6	PRHMB75W12	39
		100	PRHMB100W6	PRHMB100W12	39
		150	PRHMB150W6	PRHMB150W12	39
		200	PRHMB200W6	PRHMB200W12	39
		300	PRHMB300W6		39
		400	PRHMB400W6		39
PRFMB		50	PRFMB50W6	PRFMB50W12	39
		75	PRFMB75W6	PRFMB75W12	39
		100	PRFMB100W6	PRFMB100W12	39
		150	PRFMB150W6	PRFMB150W12	39
		200	PRFMB200W6	PRFMB200W12	39
		300	PRFMB300W6		39
		400	PRFMB400W6		39

2-2-7. ソリッドステートリレー Solid State Relays (SSR)  
 AC リレー AC Relays

Load Current [A]	Rated Voltage [V]	240 [V <sub>rms</sub> ]		Page
		非ゼロ電圧スイッチング AC Relays/Non Zero-Cross Switching Type	ゼロ電圧スイッチング AC Relays/Zero-Cross Switching Type	
1.0	D2N201LD			40
	D2N201LE			40
	D2N201LF			40
	D2N201LG			40
2.0	D2N202LD			40
	D2N202LE			40
	D2N202LF			40
	D2N202LG			40
3.0	D2N203LD			40
	D2N203LE			40
	D2N203LF			40
	D2N203LG			40
15.0		PHA15DW2RP		40
25.0		PHA25DW2RP		40
35.0		PHA35DW2RP		40
45.0		PHA45DW2RP		40

## 2. 製品早見表 Quick Reference

### 2-3. ハイパワー製品 Hi Power Products

#### 2-3-1. 一般整流ダイオード Rectifier Diodes

Case Style	Parts No.	I <sub>o</sub> [A]	V <sub>RRM</sub> [V]													Page	
			100	200	400	600	800	1000	1200	1400	1600	1800	2000	2500	3000	4000	
スタッド型 Stud Package	15MA	25													○	○	41
	100MAB	100										○	○	○	○		42
	151M	150				○	○	○	○	○	○						41
	45MA		○	○	○	○	○	○	○	○	○						41
	251M	250				○	○	○	○	○	○						41
	70MA		○	○	○	○	○	○	○	○	○						41
	400MAB	400										○	○	○	○		42
	250MA	700				○	○	○	○	○	○						42
平型 Flat Package	253PJA	250				○	○	○	○	○	○						42
	303PJA	300										○	○	○			42
	403PJA	400				○	○		○	○	○						42
	503PJA	500										○	○	○			42
	603PJA	600												○		○	42
	703PJA	700				○	○	○	○	○	○						42
	801PJA	800												○		○	42
	1003PJA	1000												○		○	42
	1500PJA	1500	○	○	○												42
	1603PJA	1600												○	○		42
	3500PJA	3500	○	○	○												42

#### 2-3-2. ファストリカバリダイオード Fast Recovery Diodes

Case Style	Parts No.	I <sub>o</sub> [A]	V <sub>RRM</sub> [V]							Page	
			1600	1800	2000	2500	3000	4000	4500		
スタッド型 Stud Package	15MLA	25	○	○	○						43
	15MLS		○		○	○					43
	100MLAB	100	○								43
	100MLS		○		○	○					43
	120FLAS	150					○	○	○		43
	120FLCS						○	○	○	○	43
	200FLAB	200			○	○	○				43
	200FLCB					○	○	○			43

### 2-3-3. サイリスタ Thyristors

Case Style	Parts No.	I <sub>o</sub> [A]	V <sub>DRM</sub> [V]												Page
			100	200	400	600	800	1000	1200	1400	1600	1800	2000	2500	
スタッド型 Stud Package	68RP	60	○	○	○	○	○								44
	68RS							○	○	○	○				44
	78RT	70										○	○	○	44
	88RP	80		○	○	○	○								44
	88RS							○	○	○	○				44
	108RP	100	○	○	○	○	○								44
	128RS	120						○	○	○	○				44
	158RP	150	○	○	○	○	○								44
	158RT											○	○	○	44
	178RS	175						○	○	○	○				44
	208RP	200	○	○	○	○	○								44
	258RT	250										○	○	○	44
	278RS	270						○	○	○	○				44
	308RP	300	○	○	○	○	○								44
	358RS	350						○	○	○	○				44
	408RP	400	○	○	○	○	○								44
	508RP	500		○	○										44
平型 Flat Package	253PA	250						○	○	○	○				44
	403PAB	400										○	○	○	44
	503PA	500				○	○	○	○	○					44
	503PAB										○	○	○		44
	553PA	550			○	○	○	○	○	○					44
	803PA	800		○	○	○	○	○	○						44
	853PA	850									○				44
	853PAB										○		○		44
	1003PA	1000						○	○	○	○				44
	1003PAB										○	○	○		44
	1503PA	1500			○	○	○	○	○		○				44
	3003PA	3000			○		○	○	○		○				44
	4003PA	4000			○	○	○								44

## 2. 製品早見表 Quick Reference

### 2-3-4. 高速スイッチングサイリスタ Fast Turn-Off Thyristors

Case Style	Parts No	I <sub>o</sub> [A]	V <sub>DRM</sub> [V]							Page
			100	200	400	600	800	1000	1200	
スタッド型 Stud Package	88RLE	80				○	○			47
	88RLF					○	○			47
	88RLG							○	○	47
	88RLH							○	○	47
	178RLE	175				○	○			47
	178RLF					○	○			47
	178RLG							○	○	47
	178RLH								○	47
	208RLE	200		○	○					47
	258RLG	250						○	○	47
	258RLH							○	○	47
平型 Flat Package	308RLE	300				○	○			47
	308RLF					○	○			47
	1003PLF	1000						○	○	48
	1003PLH								○	48
	2503PLF	2500						○		48
	2503PLH							○	○	48

## 2-4. スタック製品 Stack Products

分類 Classification	回路構成 Circuit	出力電流(A) Output current							
汎用整流スタック General rectifier stack	単相全波整流 Single phase half-wave rectifier stack	P-type stack	F-type stack	G-type stack					
	三相半波整流 Three phase half-wave rectifier	P-type stack	F-type stack	G-type stack	X, KS - type stack	H, T-type stack	AJ, AP, AV, FW, GY - type stack	ET, EW type stack	
	三相全波整流 Three phase full-wave rectifier stack								
逆流防止スタック Backflow prevention stack		BD series							
シリコンドロッパースタック Silicon dropper (SID) stack		SD Series							
太陽光発電接続箱用逆流防止スタック Backflow prevention stack for photovoltaic power generation junction box									
単相交流電力調整用スタック Single phase AC control stack		Module package device stack							
三相交流電力調整用スタック Three phase AC control stack		Module package device stack							
三相UPS用ACスイッチスタック AC switching stack for three phase UPS		Flat package device stack							
三相サイリスタダブルコンバータスタック Three phase double converter stack		Flat package device stack (Short time ratings)							
高電圧スタック High voltage rectifier stack	15MA stack	Flat package device stack							
抵抗溶接機1次側サイリスタスイッチ Thyristor switch for primary resistance welding		A series							
抵抗溶接機2次側整流スタック Water cooling diode stack for secondary resistance welding		I-N series							
		JD series							
		AN series							
用途別スタック Stack products by applications		10	50	100	500	1,000	5,000	10,000	50,000 100,000

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We provides Power stack/unit products that matches customers request. Please feel free to contact us.

### 3. 定格・特性表 Specifications

#### 3-1. ディスクリート製品 Discrete Products

##### 3-1-1. 一般整流ダイオード Rectifier Diodes

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>jw</sub> , T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Outline No.	Connection type	
3Max×φ 2.7 (DO-41S)	10EDB40	400	1.0	45	0.01	1.00	1.0	-40 to +150	110.0 (j-a)*	0.170	A-1	A	
	10EDB60	600	1.0	45	0.01	1.00	1.0	-40 to +150	110.0 (j-a)*	0.170			
DO-204AC (DO-15)	20CDA40	400	2.0	75	0.01	1.00	2.0	-40 to +150	17.0 (j-l)	0.350	A-2		
	20CDA60	600	2.0	75	0.01	1.00	2.0	-40 to +150	17.0 (j-l)	0.350			
DO-201AD	30GDA40	400	3.0	100	0.01	1.00	3.0	-40 to +150	13.0 (j-l)	1.050	A-3		
	30GDA60	600	3.0	100	0.01	1.00	3.0	-40 to +150	13.0 (j-l)	1.050			
SOD-123	EP05DA40 ✓	400	0.5	8	0.01	1.10	0.5	-40 to +150	70.0 (j-l)	0.011	A-5		
DO-214AC (SMA)	EC10ADA40 ✓	400	1.0	25	0.01	1.05	1.0	-40 to +150	108.0 (j-a)*	0.060	A-6		
	EC10DS4	400	1.0	25	0.01	1.10	1.0	-40 to +150	108.0 (j-a)*	0.060			
nSMC	NSD03A40 ✓	400	3.0	80	0.05	1.00	3.0	-40 to +150	13.0 (j-l)	0.160	A-9		
TO-220	FSD20A90	900	20.0	200	0.05	1.25	20.0	-40 to +150	1.50	1.700	A-15	J	

✓ : AEC-Q101準拠 AEC-Q101 qualified

\* : 詳細な測定条件は、別途仕様書のご確認をお願い致します。 \*: For more specific condition of measurement, please check data sheet.

##### 3-1-2. ファストリカバリダイオード (単体) (1/2) Fast Recovery Diodes (Single chip) (1/2)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>jw</sub> , T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	trr [ns]	Weight [g]	Outline No.	Connection type	
3Max×φ 2.7 (DO-41S)	11EFS2	200	1.0	30	0.010	0.98	1.0	-40 to +150	110.0 (j-a)*	30	0.170	A-1	A	
	11EFS4	400	1.0	30	0.020	1.25	1.0	-40 to +150	110.0 (j-a)*	30	0.170			
DO-204AC (DO-15)	20CFA40	400	2.0	50	0.010	1.28	2.0	-40 to +150	17.0 (j-l)	35	0.350	A-2		
	20CFB60	600	2.0	50	0.010	1.58	2.0	-40 to +150	17.0 (j-l)	35	0.350			
DO-201AD	30GFA20	200	3.0	60	0.010	0.98	3.0	-40 to +150	13.0 (j-l)	30	1.050	A-3		
	30GFA40	400	3.0	60	0.020	1.25	3.0	-40 to +150	13.0 (j-l)	30	1.050			
	30GFD60	600	3.0	45	0.020	1.45	3.0	-40 to +150	13.0 (j-l)	45	1.050			
	30GFB60	600	3.0	45	0.020	1.70	3.0	-40 to +150	13.0 (j-l)	35	1.050			
SOD-123	EP05FA20 ✓	200	0.5	8	0.010	0.95	0.5	-40 to +150	70.0 (j-l)	30	0.011	A-5		
	EP04RA60 ✓	600	0.4	8	0.010	1.32	0.4	-40 to +150	70.0 (j-l)	40	0.011			
DO-214AC (SMA)	EC11FS2 ✓	200	1.0	20	0.010	0.98	1.0	-40 to +150	108.0 (j-a)*	30	0.060	A-6		
	EC10UA20	200	1.0	20	0.020	1.10	1.0	-40 to +150	108.0 (j-a)*	20	0.060			
	EC30FA20 ✓	200	3.0	45	0.010	0.98	3.0	-40 to +150	23.0 (j-l)	30	0.060			
	EC11FS4 ✓	400	1.0	20	0.020	1.25	1.0	-40 to +150	108.0 (j-a)*	30	0.060			
	EC30FA40 ✓	400	3.0	45	0.020	1.25	3.0	-40 to +150	23.0 (j-l)	30	0.060			
	EC8FS6 ✓	600	0.8	20	0.020	1.32	0.8	-40 to +150	108.0 (j-a)*	80	0.060			
	EC30FH60 ✓	600	3.0	35	0.020	1.22	3.0	-40 to +150	23.0 (j-l)	60	0.060			
nSMC	NSF03A20	200	3.0	45	0.010	0.98	3.0	-40 to +150	13.0 (j-l)	30	0.160	A-9	A	
	NSF03A40 ✓	400	3.0	45	0.020	1.25	3.0	-40 to +150	13.0 (j-l)	30	0.160			
	NSF03E60 ✓	600	3.0	60	0.020	1.28	3.0	-40 to +150	13.0 (j-l)	75	0.160			
	NSF03B60 ✓	600	3.0	45	0.020	1.70	3.0	-40 to +150	13.0 (j-l)	35	0.160			
	NSU03A60	600	3.0	35	0.020	2.30	3.0	-40 to +150	13.0 (j-l)	32	0.160			
TO-277	VSF05A20 ✓	200	5.0	80	0.010	0.98	5.0	-55 to +175	9.0 (j-l)	35	0.086	A-10	L	
TO-251	EA31FS4	400	3.0	45	0.020	1.25	3.0	-40 to +150	6.00	30	0.350	A-11	C	
TO-252 (Dpak)	EA31FS2-F	200	3.0	45	0.010	0.98	3.0	-40 to +150	6.00	30	0.300	A-12		
	EA31FS4-F	400	3.0	45	0.020	1.25	3.0	-40 to +150	6.00	30	0.300			
	ESF03F60-F	600	3.0	45	0.020	1.70	3.0	-55 to +175	6.00	35	0.300			
	ESF05H60-F	600	5.0	80	0.020	1.35	5.0	-55 to +175	6.00	90	0.300			
	ESF08HU60B-F	600	8.0	80	0.020	1.52	8.0	-55 to +175	6.00	100	0.300			
TO-220 2pin	GSF05A20	200	5.0	80	0.020	0.98	5.0	-40 to +150	5.00	35	1.850	A-13	I	
	GSF10A20	200	10.0	120	0.025	1.03	10.0	-40 to +150	4.00	35	1.850			
	GSF05A40	400	5.0	80	0.030	1.25	5.0	-40 to +150	5.00	45	1.850			
	GSF10A40	400	10.0	120	0.030	1.30	10.0	-40 to +150	4.00	45	1.850			
	GSF05F60	600	5.0	80	0.020	1.70	5.0	-40 to +175	5.00	40	1.850			

✓ : AEC-Q101準拠 AEC-Q101 qualified

\* : 詳細な測定条件は、別途仕様書のご確認をお願い致します。 \*: For more specific condition of measurement, please check data sheet.

3-1-2. ファストリカバリダイオード（単体）(2/2) Fast Recovery Diodes (Single chip) (2/2)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [mA]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>jw</sub> , T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	t <sub>rr</sub> [ns]	Weight [g]	Outline No.	Connection type
TO-220 Full-Mold 2pin	FSF05A20	200	5.0	80	0.020	0.98	5.0	-40 to +150	5.00	35	1.700	A-15	J
	FSU05A20	200	5.0	100	0.020	1.10	5.0	-40 to +150	5.00	27	1.700		
	FSF10A20	200	10.0	120	0.025	1.03	10.0	-40 to +150	4.00	35	1.700		
	FSU10A20	200	10.0	120	0.025	1.13	10.0	-40 to +150	4.00	32	1.700		
	FSU05A30	300	5.0	100	0.025	1.30	5.0	-40 to +150	5.00	30	1.700		
	FSU10A30	300	10.0	120	0.025	1.40	10.0	-40 to +150	4.00	35	1.700		
	FSF05A40	400	5.0	80	0.030	1.25	5.0	-40 to +150	5.00	45	1.700		
	FSU05A40	400	5.0	80	0.030	1.53	5.0	-40 to +150	5.00	32	1.700		
	FSF10A40	400	10.0	120	0.030	1.30	10.0	-40 to +150	4.00	45	1.700		
	FSU10A40	400	10.0	120	0.030	1.53	10.0	-40 to +150	4.00	40	1.700		
	FSF03F60	600	3.0	45	0.020	1.70	3.0	-55 to +175	8.00	35	1.700		
	FSF05H60	600	5.0	80	0.020	1.35	5.0	-55 to +175	5.00	90	1.700		
	FSF05HU60	600	5.0	45	0.020	1.65	5.0	-40 to +175	6.00	85	1.700		
	FSF05F60	600	5.0	80	0.020	1.70	5.0	-40 to +175	5.00	40	1.700		
	FSU05D60	600	5.0	60	0.010	2.30	5.0	-55 to +175	5.00	35	1.700		
	FSF08H60	600	8.0	100	0.020	1.35	8.0	-55 to +175	4.00	100	1.700		
	FSF08F60	600	8.0	100	0.020	1.70	8.0	-55 to +175	4.00	55	1.700		
	FSU08D60	600	8.0	90	0.020	2.30	8.0	-55 to +175	4.00	45	1.700		
	FSF10H60	600	10.0	120	0.030	1.35	10.0	-40 to +175	4.00	100	1.700		
	FSF10HU60	600	10.0	80	0.020	1.65	10.0	-40 to +175	5.00	100	1.700		
	FSF10HU60V	600	10.0	80	0.020	1.65	10.0	-40 to +175	5.00	100	1.700		
	FSF10F60	600	10.0	120	0.030	1.80	10.0	-55 to +175	4.00	65	1.700		
	FSU10D60	600	10.0	100	0.030	2.30	10.0	-55 to +175	4.00	45	1.700		
	FSU10D60V	600	10.0	100	0.030	2.30	10.0	-55 to +175	4.00	45	1.700	A-16	A-15
	FSF15H60	600	15.0	140	0.030	1.35	15.0	-55 to +175	3.00	120	1.700		
	FSF15F60	600	15.0	140	0.030	1.57	15.0	-55 to +175	3.00	60	1.700		
	FSU15D60	600	15.0	140	0.030	2.30	15.0	-55 to +175	3.00	55	1.700		
TO-220 Full-Mold	FSF05A20B	200	5.0	80	0.020	0.98	5.0	-40 to +150	5.00	35	1.750	A-17	F
	FSF10A20B	200	10.0	120	0.025	1.03	10.0	-40 to +150	4.00	35	1.750		
	FSF05A40B	400	5.0	80	0.030	1.25	5.0	-40 to +150	5.00	45	1.750		
	FSF10A40B	400	10.0	120	0.030	1.30	10.0	-40 to +150	4.00	45	1.750		
	FSF05F60B	600	5.0	80	0.020	1.70	5.0	-40 to +175	5.00	40	1.750		
	FSF10F60B	600	10.0	120	0.030	1.80	10.0	-55 to +175	4.00	65	1.750		
TO-262	TSF05A20-11A	200	5.0	80	0.030	0.98	5.0	-40 to +150	5.00	35	1.450	A-20	I
	TSU05D60-11A	600	5.0	60	0.010	2.30	5.0	-55 to +175	5.00	35	1.450		
	TSU10D60-11A	600	10.0	100	0.030	2.30	10.0	-55 to +175	4.00	45	1.450		
TO-263 (D2pak)	TSF05A20	200	5.0	80	0.030	0.98	5.0	-40 to +150	5.00	35	1.400	A-21	I
	TSU05D60	600	5.0	60	0.010	2.30	5.0	-55 to +175	5.00	35	1.400		
	TSU10D60	600	10.0	100	0.030	2.30	10.0	-55 to +175	4.00	45	1.400		
TO-247 2pin	KSF30H60	600	30.0	250	0.050	1.35	30.0	-40 to +175	1.40	130	5.500	A-23	
	KSF30F60	600	30.0	240	0.050	1.70	30.0	-55 to +175	1.40	60	5.500		
	KSU30D60	600	30.0	250	0.030	1.95	30.0	-55 to +175	1.40	60	5.500		
TO-247	KSF30A20B	200	30.0	400	0.025	0.98	30.0	-40 to +150	1.40	50	5.550	A-24	H
	KSU30A30B	300	30.0	400	0.050	1.33	30.0	-40 to +150	1.40	45	5.550		
	KSF30A40B	400	30.0	400	0.050	1.25	30.0	-40 to +150	1.40	60	5.550		
	KSF30F60B	600	30.0	240	0.050	1.70	30.0	-55 to +175	1.40	60	5.550		
	KSF60F60B	600	60.0	600	0.050	1.70	60.0	-55 to +175	0.75	85	5.550		
TO-247 2pin (long lead)	KSU30D60N	600	30.0	250	0.030	2.30	30.0	-55 to +175	1.40	60	5.500	A-25	I
	KSF60H60N	600	60.0	400	0.050	1.35	60.0	-55 to +175	0.75	140	5.500		
	KSF60F60N	600	60.0	600	0.050	1.70	60.0	-55 to +175	0.75	85	5.500		
	KSU60D60N	600	60.0	400	0.05	1.95	60.0	-55 to +175	0.75	65	5.500		

\* : 詳細な測定条件は、別途仕様書のご確認をお願い致します。 \*: For more specific condition of measurement, please check data sheet.

### 3. 定格・特性表 Quick Reference

3-1-2. ファストリカバリダイオード（複合型）(1/2) Fast Recovery Diodes (Multi chip) (1/2)

Outline	Parts No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$I_R$ [mA]	$V_{FM}$ [V]	@IFM [A]	$T_{JW}, T_{stg}$ [°C]	$R_{th(f-c)}$ [°C/W]	t <sub>rr</sub> [ns]	Weight [g]	Outline No.	Connection type
TO-277	VCF06A20	200	6.0	60	0.010	0.93	3.0	-55 to +175	9.0 (j-l)	30.0	0.09	A-10	M
TO-251	EA61FC2	200	6.0	45	0.010	0.98	3.0	-40 to +150	5.00	30.0	0.35	A-11	B
	EA61FC4	400	6.0	45	0.020	1.25	3.0	-40 to +150	5.00	30.0	0.35		
TO-252 (Dpak)	EA61FC2-F	200	6.0	45	0.010	0.98	3.0	-40 to +150	5.00	30.0	0.30	A-12	B
	EA61FC4-F	400	6.0	45	0.020	1.25	3.0	-40 to +150	5.00	30.0	0.30		
	ECF06B60-F	600	6.0	45	0.020	1.70	3.0	-40 to +150	5.00	35.0	0.30		
	ECF06F60-F	600	6.0	45	0.020	1.70	3.0	-55 to +175	5.00	35.0	0.30		
	ECU06B60-F	600	6.0	35	0.020	2.70	3.0	-40 to +150	5.00	27.0	0.30		
TO-220	GCF06A20	200	6.0	60	0.010	0.98	3.0	-40 to +150	4.00	30.0	1.90	A-14	B
	GCF10A20	200	10.0	80	0.020	0.98	5.0	-40 to +150	3.00	35.0	1.90		
	GCF06A40	400	6.0	60	0.020	1.25	3.0	-40 to +150	4.00	30.0	1.90		
	GCF10A40	400	10.0	80	0.030	1.25	5.0	-40 to +150	3.00	45.0	1.90		
	GCF06F60	600	6.0	45	0.020	1.70	3.0	-55 to +175	4.00	35.0	1.90		
TO-220 Full-Mold	FCF06A20	200	6.0	60	0.010	0.98	3.0	-40 to +150	4.00	30.0	1.75	A-17	E
	FCF10A20	200	10.0	80	0.020	0.98	5.0	-40 to +150	3.00	35.0	1.75		
	FCU10A20	200	10.0	100	0.020	1.10	5.0	-40 to +150	3.00	27.0	1.75		
	FCF16A20	200	16.0	120	0.025	0.98	8.0	-40 to +150	2.00	35.0	1.75		
	FCU20A20	200	20.0	120	0.025	1.13	10.0	-40 to +150	2.00	32.0	1.75		
	FCU10A30	300	10.0	100	0.025	1.30	5.0	-40 to +150	3.00	30.0	1.75		
	FCU20D30	300	20.0	120	0.010	1.30	10.0	-55 to +175	2.00	33.0	1.75		
	FCF06A40	400	6.0	60	0.020	1.25	3.0	-40 to +150	4.00	30.0	1.75		
	FCF10A40	400	10.0	80	0.030	1.25	5.0	-40 to +150	3.00	45.0	1.75	A-18	G
	FCF10A40V	400	10.0	80	0.030	1.25	5.0	-40 to +150	3.00	45.0	1.75		
	FCU10A40	400	10.0	80	0.030	1.53	5.0	-40 to +150	3.00	32.0	1.75		
	FCF16A40	400	16.0	120	0.030	1.25	8.0	-40 to +150	2.00	45.0	1.75		
	FCF20AU40	400	20.0	80	0.030	1.39	10.0	-40 to +150	3.00	45.0	1.75		
	FCU20A40	400	20.0	120	0.030	1.53	10.0	-40 to +150	2.00	40.0	1.75		
	FCF06F60	600	6.0	45	0.020	1.70	3.0	-55 to +175	4.00	35.0	1.75		
	FCF10H60	600	10.0	80	0.020	1.35	5.0	-40 to +175	3.00	90.0	1.75		
TO-262	FCF10F60	600	10.0	80	0.020	1.70	5.0	-55 to +175	3.00	40.0	1.75	A-17	B
	FCU10A60	600	10.0	70	0.030	2.30	5.0	-40 to +150	3.00	35.0	1.75		
	FCU10D60	600	10.0	60	0.010	2.30	5.0	-55 to +175	3.00	35.0	1.75		
	FCF20H60	600	20.0	120	0.030	1.35	10.0	-55 to +175	4.00	100.0	1.75		
	FCF20H60V	600	20.0	120	0.030	1.35	10.0	-55 to +175	4.00	100.0	1.75		
	FCF20G60	600	20.0	120	0.030	1.50	10.0	-40 to +150	2.00	75.0	1.75		
	FCF20F60	600	20.0	120	0.030	1.80	10.0	-55 to +175	4.00	65.0	1.75		
	FCU20D60	600	20.0	100	0.030	2.30	10.0	-55 to +175	4.00	45.0	1.75		
	FRF10A20	200	10.0	80	0.020	0.98	5.0	-40 to +150	3.00	35.0	1.75		
	FRF10A40	400	10.0	80	0.030	1.25	5.0	-40 to +150	3.00	45.0	1.75		
TO-262	TCF10A20-11A	200	10.0	80	0.020	0.98	5.0	-40 to +150	3.00	35.0	1.45	A-20	B
	TCU10A20-11A	200	10.0	100	0.020	1.10	5.0	-40 to +150	3.00	27.0	1.45		
	TCF16A20-11A	200	16.0	120	0.025	0.98	8.0	-40 to +150	2.00	35.0	1.45		
	TCU20A20-11A	200	20.0	120	0.025	1.13	10.0	-40 to +150	2.00	32.0	1.45		
	TCU20A30-11A	300	20.0	120	0.025	1.40	10.0	-40 to +150	2.00	35.0	1.45		
	TCF10A40-11A	400	10.0	80	0.030	1.25	5.0	-40 to +150	3.00	45.0	1.45		
	TCU10A40-11A	400	10.0	80	0.030	1.53	5.0	-40 to +150	3.00	32.0	1.45		
	TCU20A40-11A	400	20.0	120	0.030	1.53	10.0	-40 to +150	2.00	40.0	1.45		
	TCF10B60-11A	600	10.0	80	0.030	1.70	5.0	-40 to +150	3.00	40.0	1.45		
	TCF10F60-11A	600	10.0	80	0.020	1.70	5.0	-55 to +175	3.00	40.0	1.45		
	TCF20B60-11A	600	20.0	120	0.030	1.80	10.0	-40 to +150	2.00	50.0	1.45		

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### 3-1-2. ファストリカバリダイオード（複合型）(2/2) Fast Recovery Diodes (Multi chip) (2/2)

Outline	Parts No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$I_R$ [mA]	$V_{FM}$ [V]	@IFM [A]	$T_{JW}, T_{STG}$ [°C]	$R_{th(j-c)}$ [°C/W]	$t_{rr}$ [ns]	Weight [g]	Outline No.	Connection type
TO-263 (D2pak)	TCF10A20	200	10.0	80	0.020	0.98	5.0	-40 to +150	3.00	35.0	1.40	A-21	B
	TCU10A20	200	10.0	100	0.020	1.10	5.0	-40 to +150	3.00	27.0	1.40		
	TCF16A20	200	16.0	120	0.025	0.98	8.0	-40 to +150	2.00	35.0	1.40		
	TCU20A20	200	20.0	120	0.025	1.13	10.0	-40 to +150	2.00	32.0	1.40		
	TCU20A30	300	20.0	120	0.025	1.40	10.0	-40 to +150	2.00	35.0	1.40		
	TCF10A40	400	10.0	80	0.030	1.25	5.0	-40 to +150	3.00	45.0	1.40		
	TCU10A40	400	10.0	80	0.030	1.53	5.0	-40 to +150	3.00	32.0	1.40		
	TCU20A40	400	20.0	120	0.030	1.53	10.0	-40 to +150	2.00	40.0	1.40		
	TCF10B60	600	10.0	80	0.030	1.70	5.0	-40 to +150	3.00	40.0	1.40		
	TCF10F60	600	10.0	80	0.020	1.70	5.0	-55 to +175	3.00	40.0	1.40		
	TCF20B60	600	20.0	120	0.030	1.80	10.0	-40 to +150	2.00	50.0	1.40		
TO-263LP	UCU20D30	300	20.0	120	0.025	1.30	10.0	-40 to +175	2.00	33.0	0.59	A-22	E
	UCF10B40	400	10.0	80	0.020	1.35	5.0	-40 to +150	3.00	45.0	0.59		
	UCF20B40	400	20.0	150	0.02	1.30	10.0	-55 to +175	2.00	45.0	0.59		
TO-247	KCF16A20	200	16.0	120	0.025	0.98	8.0	-40 to +150	2.00	35.0	5.55	A-24	B
	KCU20A20	200	20.0	120	0.025	1.13	10.0	-40 to +150	2.00	32.0	5.55		
	KCF25A20	200	25.0	150	0.025	0.98	12.5	-40 to +150	2.00	50.0	5.55		
	KCU30A20	200	30.0	150	0.025	1.13	15.0	-40 to +150	2.00	38.0	5.55		
	KCU20A30	300	20.0	120	0.025	1.40	10.0	-40 to +150	2.00	35.0	5.55		
	KCU30A30	300	30.0	150	0.025	1.30	15.0	-40 to +150	2.00	38.0	5.55		
	KCF16A40	400	16.0	120	0.030	1.25	8.0	-40 to +150	2.00	45.0	5.55		
	KCU20A40	400	20.0	120	0.030	1.53	10.0	-40 to +150	2.00	40.0	5.55		
	KCF25A40	400	25.0	200	0.050	1.25	12.5	-40 to +150	2.00	60.0	5.55		
	KCU30A40	400	30.0	150	0.030	1.57	15.0	-40 to +150	2.00	45.0	5.55		
	KCF20F60	600	20.0	120	0.030	1.80	10.0	-55 to +175	2.00	65.0	5.55		
TO-247 (long lead)	KCF30F60N	600	30.0	140	0.030	1.57	15.0	-55 to +175	2.00	60.0	5.55	A-26	B
	KCU60D60N	600	60.0	250	0.030	2.30	30.0	-55 to +175	0.75	60.0	5.55		

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### 3-1-3. ショットキーバリアダイオード（単体）(1/2) Schottky Barrier Diodes (Single chip)

Outline	Parts No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$I_R$ [mA]	$V_{FM}$ [V]	@IFM [A]	$T_{JW}, T_{STG}$ [°C]	$R_{th(j-c)}$ [°C/W]	Weight [g]	Outline No.	Connection type
3Max×Φ 2.7 (DO-41S)	11EQS03L	30	1.0	40	1.00	0.45	1.0	-40 to +150	110.0 (j-a)*	0.17	A-1	A
	11EQS04	40	1.0	40	1.00	0.55	1.0	-40 to +150	110.0 (j-a)*	0.17		
	11EQS06	60	1.0	25	1.00	0.58	1.0	-40 to +150	110.0 (j-a)*	0.17		
DO-204AC (DO-15)	20CQA03L	30	2.0	50	0.50	0.46	2.0	-40 to +150	17.0 (j-l)	0.35	A-2	A
	20CQA04	40	2.0	80	0.30	0.55	2.0	-40 to +150	17.0 (j-l)	0.35		
	20CQA06	60	2.0	45	3.00	0.60	2.0	-40 to +150	17.0 (j-l)	0.35		
DO-201AD	30GQA03L	30	3.0	120	0.50	0.45	3.0	-40 to +150	13.0 (j-l)	1.05	A-3	A
	30GQA04	40	3.0	120	0.30	0.55	3.0	-40 to +150	13.0 (j-l)	1.05		
	50GQSA045	45	5.0	150	0.35	0.55	5.0	-40 to +150	13.0 (j-l)	1.05		
	30GQA06	60	3.0	75	0.30	0.58	3.0	-40 to +150	13.0 (j-l)	1.05		
	50GQSA065	65	5.0	150	0.40	0.61	5.0	-40 to +150	13.0 (j-l)	1.05		
SOD-323FL	SA10QA03	30	1.0	20	0.10	0.45	0.7	-40 to +150	30.0 (j-l)	0.00	A-4	A
	SA10QA04	40	1.0	20	0.10	0.52	0.7	-40 to +150	30.0 (j-l)	0.00		
	SA10QA06	60	1.0	20	0.10	0.58	0.7	-40 to +150	30.0 (j-l)	0.00		
SOD-123	EP05Q03L	30	0.5	8	0.20	0.45	0.5	-40 to +150	70.0 (j-l)	0.01	A-5	A
	EP10QY03	30	1.0	12	1.00	0.47	1.0	-40 to +150	70.0 (j-l)	0.01		
	EP05Q04	40	0.5	8	0.10	0.51	0.5	-40 to +150	70.0 (j-l)	0.01		
	EP10QY04	40	1.0	12	1.00	0.57	1.0	-40 to +150	70.0 (j-l)	0.01		
	EP05Q06	60	0.5	8	0.10	0.62	0.5	-40 to +150	70.0 (j-l)	0.01		

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### 3. 定格・特性表 Specifications

3-1-3. ショットキーバリアダイオード（単体）(2/2) Schottky Barrier Diodes (Single chip) (2/2)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>W</sub> , T <sub>stg</sub> [°C]	R <sub>th(f,c)</sub> [°C/W]	Weight [g]	Outline No.	Connection type	
DO-214AC (SMA)	EC10QS03L	30	1.0	20	1.00	0.45	1.0	-40 to +150	108.0 (j-a)*	0.06	A-6	A	
	EC21QS03L	30	2.0	50	2.00	0.47	2.0	-40 to +150	23.0 (j-l)	0.06			
	EC31QS03L	30	3.0	60	3.00	0.45	3.0	-40 to +150	23.0 (j-l)	0.06			
	EC10QS04	40	1.0	20	1.00	0.55	1.0	-40 to +150	108.0 (j-a)*	0.06			
	EC21QS04	40	2.0	60	1.00	0.55	2.0	-40 to +150	23.0 (j-l)	0.06			
	EC31QS04	40	3.0	60	3.00	0.55	3.0	-40 to +150	23.0 (j-l)	0.06			
	EC20QSA045	45	2.0	50	0.20	0.55	2.0	-40 to +150	23.0 (j-l)	0.06			
	EC30QSA045	45	3.0	60	0.30	0.55	3.0	-40 to +150	23.0 (j-l)	0.06			
	EC10QS06	60	1.0	20	1.00	0.58	1.0	-40 to +150	108.0 (j-a)*	0.06			
	EC21QS06	60	2.0	40	2.00	0.61	2.0	-40 to +150	23.0 (j-l)	0.06			
	EC31QS06	60	3.0	50	3.00	0.61	3.0	-40 to +150	23.0 (j-l)	0.06			
	EC20QSA065	65	2.0	50	0.20	0.61	2.0	-40 to +150	23.0 (j-l)	0.06			
	EC30QSA065	65	3.0	60	0.30	0.61	3.0	-40 to +150	23.0 (j-l)	0.06			
NA (DO221BC)	NA03QSA035	35	3.0	60	2.00	0.47	3.0	-40 to +150	13.0 (j-l)	0.03	A-7	A	
	NA05QSA035	35	5.0	100	3.00	0.47	5.0	-40 to +150	13.0 (j-l)	0.03			
	NA03QSA045	45	3	60	0.2	0.55	3	-40 to +150	13.0 (j-l)	0.03			
	NA05QSA045	45	5	100	0.35	0.57	5	-40 to +150	13.0 (j-l)	0.03			
	NA03QSA065	65	3.0	60	0.30	0.61	3.0	-40 to +150	13.0 (j-l)	0.03			
	NA05QSA065	65	5.0	100	0.40	0.61	5.0	-40 to +150	13.0 (j-l)	0.03			
nSMC	NSQ03A03L	30	3.0	100	3.00	0.45	3.0	-40 to +150	13.0 (j-l)	0.16	A-9	A	
	NSQ03A04	40	3.0	80	3.00	0.55	3.0	-40 to +150	13.0 (j-l)	0.16			
	NSQ03A06	60	3.0	50	3.00	0.58	3.0	-40 to +150	13.0 (j-l)	0.16			
TO-277	VSQS10A045	45	10.0	280	0.60	0.56	10.0	-40 to +150	9.0 (j-l)	0.09	A-10	L	
	VSQS15A045	45	15.0	230	1.00	0.54	15.0	-40 to +150	6.0 (j-l)	0.09			
	VSQS10A065	65	10.0	140	0.20	0.65	10.0	-40 to +150	9.0 (j-l)	0.09			
TO-251	EA30QS04	40	3.0	45	3.00	0.55	3.0	-40 to +150	6.00	0.35	A-11	C	
TO-252 (Dpak)	EA30QS03L-F	30	3.0	45	3.00	0.45	3.0	-40 to +150	6.00	0.30	A-12		
	EA30QS04-F	40	3.0	45	3.00	0.55	3.0	-40 to +150	6.00	0.30			
	EA30QS06-F	60	3.0	45	3.00	0.58	3.0	-40 to +150	6.00	0.30			
TO-220 2pin	GSQ05A04	40	5.0	120	5.00	0.55	5.0	-40 to +150	5.00	1.85	A-13	I	
	GSQ10A04	40	10.0	180	10.00	0.59	10.0	-40 to +150	3.00	1.85			
	GSQ05A06	60	5.0	110	5.00	0.58	5.0	-40 to +150	5.00	1.85			
	GSQ10A06	60	10.0	150	10.00	0.67	10.0	-40 to +150	3.00	1.85			
TO-220 Full-Mold 2pin	FSQ05A03L	30	5.0	120	5.00	0.47	5.0	-40 to +150	5.00	1.70	A-15	J	
	FSQS05A045	45	5.0	120	0.35	0.54	5.0	-40 to +150	5.00	1.70			
	FSQS10A045	45	10.0	180	0.60	0.54	10.0	-40 to +150	3.00	1.70			
	FSQS15A045	45	15.0	200	1.00	0.54	15.0	-40 to +150	3.00	1.70			
	FSQS15A045V	45	15.0	200	1.00	0.54	15.0	-40 to +150	3.00	1.70			
	FSQS30A045	45	30.0	400	1.00	0.56	30.0	-40 to +150	1.50	1.70			
	FSQS05A065	65	5.0	120	0.40	0.58	5.0	-40 to +150	5.00	1.70			
	FSQS05AU065	65	5.0	100	0.30	0.69	5.0	-40 to +150	5.00	1.70			
TO-247 2pin	FSQS05A065	65	10.0	180	1.00	0.60	10.0	-40 to +150	3.00	1.70	A-23	I	
	KSQ15A04	40	15.0	250	15.00	0.55	15.0	-40 to +150	2.00	5.50			
	KSQ30A04	40	30.0	400	25.00	0.58	30.0	-40 to +150	1.30	5.50			
	KSQ15A06	60	15.0	200	15.00	0.65	15.0	-40 to +150	2.00	5.50			
	KSQ30A06	60	30.0	400	25.00	0.67	30.0	-40 to +150	1.30	5.50			

✓ : AEC-Q101準拠 AEC-Q101 qualified

\* : 詳細な測定条件は、別途仕様書のご確認をお願い致します。 \*: For more specific condition of measurement, please check data sheet.

3-1-3. ショットキーバリアダイオード H シリーズ 〈低リーク品〉(単体) Schottky Barrier Diodes H-Series <Low-IR type> (Single chip)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@I <sub>FM</sub> [A]	T <sub>JW</sub> , T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Outline No.	Connection type
3Max×φ 2.7 (DO-41S)	11EQS10	100	1.0	40	0.50	0.85	1.0	-40 to +150	110.0 (j-a)*	0.17	A-1	A
	10EHA20	200	1.0	20	0.20	0.90	1.0	-40 to +150	110.0 (j-a)*	0.17		
DO-204AC (DO-15)	20CHA10	100	2.0	70	0.20	0.85	2.0	-40 to +150	17.0 (j-l)	0.35	A-2	A
	20CHA20	200	2.0	40	0.20	0.90	2.0	-40 to +150	17.0 (j-l)	0.35		
DO-201AD	50GHSA08	80	5.0	120	0.10	0.70	5.0	-40 to +150	13.0 (j-l)	1.05	A-3	A
	30GHA10	100	3.0	100	0.20	0.85	3.0	-40 to +150	13.0 (j-l)	1.05		
	50GHSA12	120	5.0	120	0.10	0.86	5.0	-40 to +150	13.0 (j-l)	1.05		
	30GHA20	200	3.0	60	0.20	0.90	3.0	-40 to +150	13.0 (j-l)	1.05		
SOD-123	EP10HY03	30	1.0	12	0.50	0.56	1.0	-40 to +150	70.0 (j-l)	0.01	A-5	A
	EP05H10	100	0.5	8	0.05	0.80	0.5	-40 to +150	70.0 (j-l)	0.01		
DO-214AC (SMA)	EC30HA03L	30	3.0	60	0.50	0.54	3.0	-40 to +150	23.0 (j-l)	0.06	A-6	A
	EC30HA04	40	3.0	60	0.50	0.59	3.0	-40 to +150	23.0 (j-l)	0.06		
	EC10QS10	100	1.0	20	0.50	0.85	1.0	-40 to +150	108.0 (j-a)*	0.06		
	EC21QS10	100	2.0	50	1.00	0.85	2.0	-40 to +150	23.0 (j-l)	0.06		
	EC31QS10	100	3.0	60	2.00	0.85	3.0	-40 to +150	23.0 (j-l)	0.06		
NA (DO221BC)	NA03HSA065	65	3.0	80	0.07	0.66	3.0	-40 to +150	13.0 (j-l)	0.03	A-7	A
	NA05HSA065	65	5.0	120	0.10	0.66	5.0	-40 to +150	13.0 (j-l)	0.03		
	NA03HSA08	80	3.0	80	0.10	0.70	3.0	-40 to +150	13.0 (j-l)	0.03		
	NA05HSA08	80	5.0	120	0.10	0.70	5.0	-40 to +150	13.0 (j-l)	0.03		
	NA03HSA12	120	3.0	60	0.07	0.86	3.0	-40 to +150	13.0 (j-l)	0.03		
	NA05HSA12	120	5.0	100	0.10	0.86	5.0	-40 to +150	13.0 (j-l)	0.03		
	NA03HA15	150	3.0	60	1.00	0.90	3.0	-40 to +150	13.0 (j-l)	0.03		
	NA03HA20	200	3.0	110	1.00	0.90	3.0	-40 to +150	13.0 (j-l)	0.03		
nSMC	NSH03A03L	30	3.0	80	0.50	0.53	3.0	-40 to +150	13.0 (j-l)	0.16	A-9	A
	NSH05A03	30	5.0	100	1.00	0.57	5.0	-40 to +150	13.0 (j-l)	0.16		
	NSHS05A065	65	5.0	130	0.10	0.64	5.0	-40 to +150	13.0 (j-l)	0.16		
	NSH03A10	100	3.0	60	1.00	0.85	3.0	-40 to +150	13.0 (j-l)	0.16		
	NSH03A15	150	3.0	60	1.00	0.90	3.0	-40 to +150	13.0 (j-l)	0.16		
TO-277	VSHS15A08	80	15.0	150	0.10	0.76	15.0	-40 to +150	6.0 (j-l)	0.09	A-10	L
	VSHS03A12	120	3.0	70	0.07	0.86	3.0	-40 to +150	9.0 (j-l)	0.09		
	VSHS10A12	120	10.0	190	0.10	0.89	10.0	-40 to +150	9.0 (j-l)	0.09		
	VSHS15A12	120	15.0	150	0.10	0.92	15.0	-40 to +150	6.0 (j-l)	0.09		
TO-252 (Dpak)	EA30QS10-F	100	3.0	45	1.00	0.85	3.0	-40 to +150	6.00	0.30	A-12	C
	ESH05A15-F	150	5.0	130	1.00	0.88	5.0	-40 to +150	5.00	0.30		
TO-220 2pin	GSH05A10	100	5.0	120	1.00	0.85	5.0	-40 to +150	5.00	1.85	A-13	I
	GSH10A10	100	10.0	180	1.00	0.88	10.0	-40 to +150	3.00	1.85		
TO-220 Full-Mold 2pin	FSH05A03L	30	5.0	120	1.00	0.57	5.0	-40 to +150	5.00	1.70	A-15	J
	FSH10A03L	30	10.0	180	1.00	0.54	10.0	-40 to +150	3.00	1.70		
	FSHS05A065	65	5.0	120	0.10	0.63	5.0	-40 to +150	5.00	1.70		
	FSHS05A08	80	5.0	120	0.10	0.72	5.0	-40 to +150	5.00	1.70		
	FSH05A10	100	5.0	120	1.00	0.85	5.0	-40 to +150	5.00	1.70		
	FSH10A10	100	10.0	180	1.00	0.88	10.0	-40 to +150	3.00	1.70		
	FSH05A15	150	5.0	130	1.00	0.88	5.0	-40 to +150	5.00	1.70		
	FSH10A15	150	10.0	180	1.00	0.90	10.0	-40 to +150	3.00	1.70		
TO-247 2pin	FSH05A20	200	5.0	100	0.20	0.90	5.0	-40 to +150	5.00	1.70	A-23	I
	KSH15A10	100	15.0	250	2.00	0.88	15.0	-40 to +150	2.00	5.50		
	KSH30A20	200	30.0	300	0.50	0.95	30.0	-40 to +150	1.30	5.50		

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\*: For more specific condition of measurement, please check data sheet.

### 3. 定格・特性表 Specifications

3-1-3. ショットキーバリアダイオード（複合）(1/2) Schottky Barrier Diodes (Multi chip) (1/2)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>jw</sub> , T <sub>stg</sub> [°C]	R <sub>th(j-e)</sub> [°C/W]	Weight [g]	Outline No.	Connection type
NB	NB06QSA035	35	6.0	60	2.00	0.47	3.0	-40 to +150	7.0 (j-l)	0.06	A-8	K
	NB10QSA035	35	10.0	100	3.00	0.47	5.0	-40 to +150	7.0 (j-l)	0.06		
	NB06QSA045	45	6.0	60	0.20	0.55	3.0	-40 to +150	7.0 (j-l)	0.06		
	NB10QSA045	45	10.0	100	0.35	0.57	5.0	-40 to +150	7.0 (j-l)	0.06		
	NB06QSA065	65	6.0	60	0.30	0.61	3.0	-40 to +150	7.0 (j-l)	0.06		
	NB10QSA065	65	10.0	100	0.40	0.61	5.0	-40 to +150	7.0 (j-l)	0.06		
TO-251	EA60QC04	40	6.0	45	3.00	0.55	3.0	-40 to +150	5.00	0.35	A-11	B
	EA60QC06	60	6.0	45	3.00	0.58	3.0	-40 to +150	5.00	0.35		
TO-252 (Dpak)	EA60QC03L-F	30	6.0	45	3.00	0.45	3.0	-40 to +150	5.00	0.30	A-12	B
	ECQS10A035-F	35	10.0	100	3.00	0.47	5.0	-40 to +150	4.00	0.30		
	EA60QC04-F	40	6.0	45	3.00	0.55	3.0	-40 to +150	5.00	0.30		
	ECQS10A045-F	45	10.0	120	0.35	0.57	5.0	-40 to +150	4.00	0.30		
	EA60QC06-F	60	6.0	45	3.00	0.58	3.0	-40 to +150	5.00	0.30		
TO-220	GCQ30A03L	30	30.0	250	15.00	0.49	15.0	-40 to +150	1.50	1.90	A-14	B
	GCQ10A04	40	10.0	120	5.00	0.55	5.0	-40 to +150	3.00	1.90		
	GCQ20A04	40	20.0	180	10.00	0.55	10.0	-40 to +150	1.50	1.90		
	GCQ30A04	40	30.0	250	15.00	0.55	15.0	-40 to +150	1.50	1.90		
	GCQ10A06	60	10.0	110	5.00	0.58	5.0	-40 to +150	3.00	1.90		
	GCQ20A06	60	20.0	150	10.00	0.65	10.0	-40 to +150	1.50	1.90		
	GCQ30A06	60	30.0	200	15.00	0.65	15.0	-40 to +150	1.50	1.90		
	FCQ10A03L	30	10.0	120	5.00	0.47	5.0	-40 to +150	3.00	1.75	A-17	E
TO-220 Full-Mold	FCQ20A03L	30	20.0	180	10.00	0.49	10.0	-40 to +150	1.50	1.75		
	FCQ30A03L	30	30.0	250	15.00	0.49	15.0	-40 to +150	1.50	1.75		
	FCQS10A035	35	10.0	120	3.00	0.46	5.0	-40 to +150	3.00	1.75		
	FCQS10A045	45	10.0	120	0.35	0.57	5.0	-40 to +150	3.00	1.75		
	FCQS10AU045	45	10.0	120	0.20	0.59	5.0	-40 to +150	3.00	1.75		
	FCQS10AU045V	45	10.0	120	0.20	0.59	5.0	-40 to +150	3.00	1.75		
	FCQS20A045	45	20.0	180	0.60	0.57	10.0	-40 to +150	2.00	1.75	A-17	G
	FCQS30A045	45	30.0	200	1.00	0.55	15.0	-40 to +150	1.50	1.75		
	FCQS30AU045	45	30.0	180	0.60	0.60	15.0	-40 to +150	2.00	1.75		
	FCQS10A065	65	10.0	120	0.40	0.61	5.0	-40 to +150	3.00	1.75		
	FCQS20A065	65	20.0	180	1.00	0.63	10.0	-40 to +150	2.00	1.75		
	FCQS20BU065	65	20.0	120	0.40	0.74	10.0	-40 to +150	3.00	1.75		
	FCQS20BU065V	65	20.0	120	0.40	0.74	10.0	-40 to +150	3.00	1.75	A-17	G
	FCQS30A065	65	30.0	200	1.50	0.64	15.0	-40 to +150	1.50	1.75		
	FCQS30AU065	65	30.0	180	1.00	0.69	15.0	-40 to +150	2.00	1.75		
	FRQS20A045	45	20.0	180	0.60	0.57	10.0	-40 to +150	2.00	1.75		
	FRQS20A065	65	20.0	180	1.00	0.63	10.0	-40 to +150	2.00	1.75		
TO-262	TCQ20A03L-11A	30	20.0	180	10.00	0.45	10.0	-40 to +150	1.50	1.45	A-20	B
	TCQ10A04-11A	40	10.0	120	5.00	0.55	5.0	-40 to +150	3.00	1.45		
	TCQ20A04-11A	40	20.0	180	10.00	0.55	10.0	-40 to +150	1.50	1.45		
	TCQ30A04-11A	40	30.0	250	15.00	0.55	10.0	-40 to +150	1.50	1.45		
	TCQ30A06-11A	60	30.0	200	15.00	0.65	10.0	-40 to +150	1.50	1.45		
TO-263 (D2pak)	TCQ20A03L	30	20.0	180	10.00	0.45	10.0	-40 to +150	1.50	1.40	A-21	B
	TCQ10A04	40	10.0	120	5.00	0.55	5.0	-40 to +150	3.00	1.40		
	TCQ20A04	40	20.0	180	10.00	0.55	10.0	-40 to +150	1.50	1.40		
	TCQ30A04	40	30.0	250	15.00	0.55	10.0	-40 to +150	1.50	1.40		
	TCQ30A06	60	30.0	200	15.00	0.65	10.0	-40 to +150	1.50	1.40		
TO-263LP	UCQ30A03	30	30.0	230	1.50	0.50	15.0	-40 to +150	1.50	0.59	A-22	E
	UCQS20A045	45	20.0	220	0.60	0.54	10.0	-40 to +150	2.00	0.59		
	UCQS30A045	45	30.0	250	1.00	0.55	15.0	-40 to +150	1.50	0.59		
	UCQS10A065	65	10.0	120	0.40	0.61	5.0	-40 to +150	2.00	0.59		

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### 3-1-3. ショットキーバリアダイオード（複合）(2/2) Schottky Barrier Diodes (Multi chip) (2/2)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>jw</sub> , T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Outline No.	Connection type
TO-247	KCQ30A03L	30	30.0	250	15.00	0.49	15.0	-40 to +125	1.30	5.55	A-24	B
	KCQ60A03L	30	60.0	400	25.00	0.50	30.0	-40 to +150	1.00	5.55		
	KCQ20A04	40	20.0	180	10.00	0.55	10.0	-40 to +150	1.50	5.55		
	KCQ30A04	40	30.0	300	15.00	0.55	15.0	-40 to +150	1.30	5.55		
	KCQ60A04	40	60.0	400	25.00	0.58	30.0	-40 to +150	1.00	5.55		
	KCQ20A06	60	20.0	150	10.00	0.65	10.0	-40 to +150	1.50	5.55		
	KCQ30A06	60	30	200	15	0.65	15.0	-40 to +150	1.30	5.55		
	KCQ60A06	60	60	400	25	0.67	30.0	-40 to +150	1.00	5.55		

\* : 詳細な測定条件は、別途仕様書のご確認をお願い致します。 \*: For more specific condition of measurement, please check data sheet.

### 3-1-3. ショットキーバリアダイオード H シリーズ（低リーク）(複合) (1/2) Schottky Barrier Diodes H-Series <Low-IR type> (Multi chip) (1/2)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>jw</sub> , T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Outline No.	Connection type	
NB	NB06HSA065	65	6.0	80	0.07	0.66	3.0	-40 to +150	7.0 (j-l)	0.06	A-8	K	
	NB10HSA065	65	10.0	120	0.10	0.66	5.0	-40 to +150	7.0 (j-l)	0.06			
	NB06HSA08	80	6.0	80	0.10	0.70	3.0	-40 to +150	7.0 (j-l)	0.06			
	NB10HSA08	80	10.0	120	0.10	0.70	5.0	-40 to +150	7.0 (j-l)	0.06			
	NB06HSA12	120	6.0	60	0.07	0.86	3.0	-40 to +150	7.0 (j-l)	0.06			
	NB10HSA12	120	10.0	100	0.10	0.86	5.0	-40 to +150	7.0 (j-l)	0.06			
TO-251	EA60QC10	100	6.0	45	1.00	0.85	3.0	-40 to +150	5.00	0.35	A-11	B	
TO-252 (Dpak)	ECHS10A08-F	80	10.0	100	0.10	0.70	5.0	-40 to +150	4.00	0.30	A-12		
	EA60QC10-F	100	6.0	45	1.00	0.85	3.0	-40 to +150	5.00	0.30			
	ECH06A20-F	200	6.0	60	0.20	0.90	3.0	-40 to +150	5.00	0.30			
TO-220	GCHS30A08	80	30.0	200	0.20	0.75	15.0	-40 to +150	1.50	1.90	A-14		
	GCH10A10	100	10.0	120	1.00	0.85	5.0	-40 to +150	3.00	1.90			
	GCH20A10	100	20.0	180	1.00	0.88	10.0	-40 to +150	1.50	1.90			
	GCH30A10	100	30.0	250	2.00	0.88	15.0	-40 to +150	1.50	1.90			
TO-220 Full-Mold	FCH10A03L	30	10.0	120	1.00	0.57	5.0	-40 to +150	3.00	1.75	A-17	E	
	FCH20A03L	30	20.0	180	1.00	0.54	10.0	-40 to +150	1.50	1.75			
	FCH30A03L	30	30.0	250	1.00	0.56	15.0	-40 to +150	1.50	1.75			
	FCHS10A045	45	10.0	120	0.10	0.59	5.0	-40 to +150	3.00	1.75			
	FCHS20A045	45	20.0	180	0.10	0.58	10.0	-40 to +150	2.00	1.75			
	FCHS30A045	45	30.0	250	0.20	0.60	15.0	-40 to +150	1.50	1.75			
	FCHS10A065	65	10.0	120	0.10	0.66	5.0	-40 to +150	3.00	1.75			
	FCHS20A065	65	20.0	180	0.15	0.68	10.0	-40 to +150	2.00	1.75			
	FCHS30A065	65	30.0	200	0.20	0.64	15.0	-40 to +150	1.50	1.75			
	FCHS10A08	80	10.0	120	0.10	0.72	5.0	-40 to +150	3.00	1.75			
	FCHS20A08	80	20.0	180	0.15	0.75	10.0	-40 to +150	2.00	1.75			
	FCHS30A08	80	30.0	200	0.20	0.75	15.0	-40 to +150	1.50	1.75			
	FCHS30AU08	80	30.0	180	0.15	0.81	15.0	-40 to +150	2.00	1.75			
	FCH08A10	100	8.0	100	1.00	0.88	4.0	-40 to +150	3.00	1.75			
	FCH10E10	100	10.0	120	0.10	0.77	5.0	-40 to +150	3.00	1.75			
	FCH10A10	100	10.0	120	1.00	0.86	5.0	-40 to +150	3.00	1.75			
	FCH10AU10V	100	10.0	120	0.10	0.91	5.0	-40 to +150	3.00	1.75	A-18		
	FCH20E10	100	20.0	180	0.10	0.80	10.0	-40 to +150	1.50	1.75			
	FCH20E10V	100	20.0	180	0.10	0.80	10.0	-40 to +150	1.50	1.75	A-18		
	FCH20A10	100	20.0	180	1.00	0.88	10.0	-40 to +150	1.50	1.75			
	FCH20AU10V	100	20.0	180	1.00	0.90	10.0	-40 to +150	2.30	1.75	A-17		
	FCH20BU10	100	20.0	120	0.10	1.00	10.0	-40 to +150	3.00	1.75			
	FCH30E10	100	30.0	250	0.10	0.80	15.0	-40 to +150	1.50	1.75	A-18		
	FCH30E10V	100	30.0	250	0.10	0.80	15.0	-40 to +150	1.50	1.75			
	FCH30A10	100	30.0	250	2.00	0.88	15.0	-40 to +150	1.50	1.75	A-17		
	FCH30AU10	100	30.0	200	0.20	0.94	15.0	-40 to +150	1.50	1.75			

### 3. 定格・特性表 Specifications

3-1-3. ショットキーバリアダイオード H シリーズ（低リーク）（複合）(2/2) Schottky Barrier Diodes H-Series <Low-IR type> (Multi chip) (2/2)

Outline	Parts No.	V <sub>RRM</sub> [V]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sub>R</sub> [mA]	V <sub>FM</sub> [V]	@IFM [A]	T <sub>jW</sub> , T <sub>stg</sub> [°C]	R <sub>th(jc)</sub> [°C/W]	Weight [g]	Outline No.	Connection type
TO-220 Full-Mold	FCHS08A12	120	8.0	100	0.10	0.89	4.0	-40 to +150	3.00	1.75	A-17 E	
	FCHS10A12	120	10.0	120	0.10	0.86	5.0	-40 to +150	3.00	1.75		
	FCHS20A12	120	20.0	180	0.10	0.89	10.0	-40 to +150	2.00	1.75		
	FCHS30A12	120	30.0	200	0.10	0.90	15.0	-40 to +150	1.50	1.75		
	FCH08A15	150	8.0	125	1.00	0.90	4.0	-40 to +150	3.00	1.75		
	FCH10A15	150	10.0	130	1.00	0.88	5.0	-40 to +150	3.00	1.75		
	FCH10A15V	150	10.0	130	1.00	0.88	5.0	-40 to +150	3.00	1.75	A-18	A-17 E
	FCH20A15	150	20.0	180	1.00	0.90	10.0	-40 to +150	1.50	1.75	A-17	
	FCH20BU15	150	20.0	130	0.10	1.00	10.0	-40 to +150	3.00	1.75	A-18	
	FCH20BU15V	150	20.0	130	0.10	1.00	10.0	-40 to +150	3.00	1.75	A-18	
	FCH30A15	150	30.0	250	2.00	0.91	15.0	-40 to +150	1.50	1.75	A-17	
	FCH10A20	200	10.0	100	0.20	0.90	5.0	-40 to +150	3.00	1.75	A-17	
	FCH10A20V	200	10.0	100	0.20	0.90	5.0	-40 to +150	3.00	1.75	A-18	
	FCH20A20	200	20.0	120	0.20	0.90	10.0	-40 to +150	1.50	1.75	A-17	
	FCH20A20V	200	20.0	120	0.20	0.90	10.0	-40 to +150	1.50	1.75	A-18	
	FCH20AU20	200	20.0	100	0.20	1.05	10.0	-40 to +150	3.00	1.75	A-17	
	FCH20AU20V	200	20.0	100	0.20	1.05	10.0	-40 to +150	3.00	1.75	A-18	
	FRH20A10	100	20.0	180	1.00	0.88	10.0	-40 to +150	1.50	1.75	A-17 G	
	FRH08A15	150	8.0	125	1.00	0.90	4.0	-40 to +150	3.00	1.75		
	FRH10A15	150	10.0	130	1.00	0.88	5.0	-40 to +150	3.00	1.75		
	FRH20A15	150	20.0	180	1.00	0.90	10.0	-40 to +150	1.50	1.75		
	FRH10A20	200	10.0	100	0.20	0.90	5.0	-40 to +150	3.00	1.75		
	FRH20A20	200	20.0	120	0.20	0.90	10.0	-40 to +150	1.50	1.75		
TO-262	TCH30A06-11A	60	30.0	200	1.00	0.69	15.0	-40 to +150	1.50	1.45	A-20 B	
	TCH10A10-11A	100	10.0	120	1.00	0.85	5.0	-40 to +150	3.00	1.45		
	TCH20A10-11A	100	20.0	180	1.00	0.88	10.0	-40 to +150	1.50	1.45		
	TCH10A15-11A	150	10.0	130	1.00	0.88	5.0	-40 to +150	3.00	1.45		
	TCH20A15-11A	150	20.0	180	1.00	0.90	10.0	-40 to +150	1.50	1.45		
	TCH30A15-11A	150	30.0	250	2.00	0.91	15.0	-40 to +150	1.50	1.45		
	TCH20A20-11A	200	20.0	120	0.20	0.90	10.0	-40 to +150	1.50	1.45		
TO-263 (D2pak)	TCH30A06	60	30.0	200	1.00	0.69	15.0	-40 to +150	1.50	1.40	A-21 B	
	TCH10A10	100	10.0	120	1.00	0.85	5.0	-40 to +150	3.00	1.40		
	TCH20A10	100	20.0	180	1.00	0.88	10.0	-40 to +150	1.50	1.40		
	TCH10A15	150	10.0	130	1.00	0.88	5.0	-40 to +150	3.00	1.40		
	TCH20A15	150	20.0	180	1.00	0.90	10.0	-40 to +150	1.50	1.40		
	TCH30A15	150	30.0	250	2.00	0.91	15.0	-40 to +150	1.50	1.40		
	TCH20A20	200	20.0	120	0.20	0.90	10.0	-40 to +150	1.50	1.40		
TO-263LP	UCHS10A065	65	10.0	120	0.10	0.63	5.0	-40 to +150	2.00	0.59	A-22 E	
	UCHS10A08	80	10.0	120	0.10	0.69	5.0	-40 to +150	2.00	0.59		
	UCHS20A08	80	20.0	220	0.15	0.71	10.0	-40 to +150	2.00	0.59		
	UCHS30A08	80	30.0	250	0.10	0.79	15.0	-40 to +150	1.50	0.59		
	UCHS10A12	120	10.0	120	0.10	0.84	5.0	-40 to +150	2.00	0.59		
	UCHS20A12	120	20.0	220	0.10	0.87	10.0	-40 to +150	2.00	0.59		
	UCHS30A12	120	30.0	250	0.10	0.90	15.0	-40 to +150	1.50	0.59		
TO-247	KCH60A03L	30	60.0	400	2.00	0.59	30.0	-40 to +150	1.00	5.55	A-24 B	
	KCH60A04	40	60.0	400	2.00	0.63	30.0	-40 to +150	1.00	5.55		
	KCH30A06	60	30.0	200	1.00	0.69	15.0	-40 to +150	1.50	5.55		
	KCH20A10	100	20.0	180	1.00	0.88	10.0	-40 to +150	1.50	5.55		
	KCH30A10	100	30.0	250	2.00	0.88	15.0	-40 to +150	1.30	5.55		
	KCH30A15	150	30.0	250	2.00	0.91	15.0	-40 to +150	1.30	5.55		
	KCH20A20	200	20.0	120	0.20	0.90	10.0	-40 to +150	1.50	5.55		
	KCH30A20	200	30.0	150	0.30	0.92	15.0	-40 to +150	1.30	5.55		

☑ : AEC-Q101準拠 AEC-Q101 qualified

\* : 詳細な測定条件は、別途仕様書のご確認をお願い致します。 \*: For more specific condition of measurement, please check data sheet.

3-1-3. ショットキーバリアダイオードGシリーズ〈超低リーク品〉（複合）Schottky Barrier Diodes G-Series <Ultra-Low-IR type> (Multi chip)

Outline	Parts No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$I_R$ [mA]	$V_{FM}$ [V]	@IFM [A]	$T_{jw}, T_{sig}$ [°C]	$R_{th(j-c)}$ [°C/W]	Weight [g]	Outline No.	Connection type
TO-220 Full-Mold	FCG10AU15	150	10.0	120	0.01	0.86	5.0	-55 to +175	3.00	1.75	A-17	E
	FCG20BU15	150	20.0	130	0.01	0.88	10.0	-55 to +175	3.00	1.75		
	FCG30AU15	150	30.0	210	0.01	0.87	15.0	-55 to +175	2.00	1.75		
	FCG30AU15V	150	30.0	210	0.01	0.87	15.0	-55 to +175	2.00	1.75	A-18	

\* : 詳細な測定条件は、別途仕様書のご確認をお願い致します。 \*: For more specific condition of measurement, please check data sheet.

3-1-4. アバランシェ保証型ショットキーバリアダイオード Avalanche Guaranteed Schottky Barrier Diode

Outline	Parts No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$I_R$ [mA]	$V_{FM}$ [V]	@IFM [A]	$P_{RRSM}$ [W]	$T_{jw}, T_{sig}$ [°C]	$R_{th(j-c)}$ [°C/W]	Weight [g]	Outline No.	Connec- tion type
TO-263LP	UCHD30A09	90	30.0	250	0.10	0.79	15.0	195	-40 to +150	1.50	0.59	A-22	E

☑ : AEC-Q101準拠 AEC-Q101 qualified

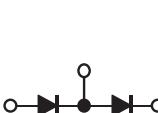
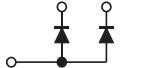
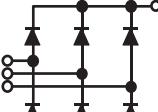
### 3. 定格・特性表 Specifications

#### 3-2. モジュール製品 Module Products

##### 3-2-1. 一般整流ダイオードモジュール (1/2) Rectifier Diode Modules (1/2)

Series	Circuit	Type No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$T_{JW}$ [°C]	Weight [g]	Outline No.	Safty STD UL
PH		PH1508	800	150	3200	-40 to +150	220	E-1	○
		PH2508	800	250	5000	-40 to +150	220	E-1	○
		PH400N8	800	400	8000	-40 to +150	480	E-35	○
		PH400N16	1600	400	7200	-40 to +125	480	E-35	○
PC		PC308	800	30	600	-40 to +150	155	E-2	○
		PC608	800	60	1200	-40 to +150	155	E-2	○
		PC1008	800	100	2000	-40 to +150	155	E-2	○
		PC1508	800	150	3200	-40 to +150	480	E-4	○
		PC2008	800	200	4000	-40 to +150	480	E-4	○
		PC2508	800	250	5000	-40 to +150	530	E-4	○
		PC400N8	800	400	8000	-40 to +150	960	E-34	○
		PC3016	1600	30	600	-40 to +125	155	E-3	○
		PC6016	1600	60	1200	-40 to +125	155	E-3	○
		PC10016	1600	100	2000	-40 to +125	155	E-3	○
		PC15016	1600	150	3200	-40 to +125	480	E-4	○
		PC20016	1600	200	4000	-40 to +125	480	E-4	○
		PC25016	1600	250	5000	-40 to +125	530	E-4	○
		PC400N16	1600	400	7200	-40 to +125	960	E-34	○
PD		PD308	800	30	600	-40 to +150	155	E-2	○
		PD30KN8	800	30	600	-40 to +150	100	E-60	○
		PD608	800	60	1200	-40 to +150	155	E-2	○
		PD60KN8	800	60	1200	-40 to +150	100	E-60	○
		PD100N8C	800	100	2000	-40 to +150	125	E-65	○
		PD100KN8	800	100	2000	-40 to +150	100	E-60	○
		PD1508	800	150	3200	-40 to +150	480	E-5	○
		PD1518	800	150	3200	-40 to +150	280	E-44	○
		PD150S8	800	150	3200	-40 to +150	200	E-58	○
		PD150KN8	800	150	3200	-40 to +150	150	E-61	○
		PD2008	800	200	4000	-40 to +150	480	E-5	○
		PD2018	800	200	4000	-40 to +150	280	E-44	○
		PD200S8	800	200	4000	-40 to +150	200	E-58	○
		PD200KN8	800	200	4000	-40 to +150	150	E-61	○
		PD230S8	800	230	4500	-40 to +150	200	E-58	○
		PD2508	800	250	5000	-40 to +150	480	E-5	○
		PD250KN8A	800	250	4000	-40 to +150	150	E-61	○
		PD400N8	800	400	8000	-40 to +125	960	E-34	○
		PD3016	1600	30	600	-40 to +125	155	E-3	○
		PD30KN16	1600	30	600	-40 to +150	100	E-60	○
		PD6016	1600	60	1200	-40 to +125	155	E-3	○
		PD60KN16	1600	60	1200	-40 to +150	100	E-60	○
		PD100N16	1600	100	2000	-40 to +150	125	E-65	○
		PD100KN16	1600	100	2000	-40 to +150	100	E-60	○
		PD100MYN16	1600	100	2000	-40 to +150	80	E-79	○
		PD15016	1600	150	3200	-40 to +125	480	E-5	○
		PD15116	1600	150	3200	-40 to +150	280	E-44	○
		PD15216	1600	150	3200	-40 to +150	125	E-65	
		PD150S16	1600	150	3200	-40 to +150	200	E-58	○
		PD150KN16	1600	150	3200	-40 to +150	150	E-61	○
		PD20016	1600	200	4000	-40 to +125	480	E-5	○
		PD20116	1600	200	4500	-40 to +150	280	E-44	○
		PD200S16	1600	200	4500	-40 to +150	200	E-58	○
		PD200KN16	1600	200	4500	-40 to +150	150	E-61	○
		PD200MYN16	1600	200	5000	-40 to +150	150	E-80	○
		PD230S16	1600	230	4500	-40 to +150	200	E-58	○

3-2-1. 一般整流ダイオードモジュール (2/2) Rectifier Diode Modules (2/2)

Series	Circuit	Type No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$T_{JW}$ [°C]	Weight [g]	Outline No.	Safty STD UL
PD		PD25016	1600	250	5000	-40 to +125	480	E-5	○
		PD250KN16A	1600	250	4000	-40 to +150	150	E-61	○
		PD260MYN16	1600	260	7600	-40 to +150	400	E-81	○
		PD380MYN16	1600	380	7600	-40 to +150	400	E-81	○
		PD400N16	1600	400	7200	-40 to +125	960	E-34	○
		PD700MYN16	1600	700	13000	-40 to +150	640	E-82	○
		PD100MYN18	1800	100	2000	-40 to +150	80	E-79	○
		PD200MYN18	1800	200	5000	-40 to +150	150	E-80	○
		PD260MYN18	1800	260	7600	-40 to +150	400	E-81	○
		PD380MYN18	1800	380	7600	-40 to +150	400	E-81	○
PR		PR250KN8N	800	250	4500	-40 to +150	150	E-73	
		PR300N16	1600	300	4500	-40 to +150	180	E-73	
PE		PE30SN8	800	30	600	-40 to +150	180	E-64	
		PE100SN8	800	100	2000	-40 to +150	155	E-2	○
		PE100SN16	1600	100	2000	-40 to +150	180	E-64	○
		PE150SN8	800	150	3200	-40 to +150	315	E-6	○
		PE30SN16	1600	30	600	-40 to +150	180	E-64	
PF		PF30SN8	800	30	600	-40 to +150	180	E-64	
		PF100SN8	800	100	2000	-40 to +150	155	E-2	○
		PF100SN16	1600	100	2000	-40 to +150	180	E-64	○
		PF30SN16	1600	30	600	-40 to +150	180	E-64	
PT		PT50SN8	800	50	450	-40 to +150	180	E-64	○
		PT50KN8	800	50	400	-40 to +150	140	E-62	○
		PT76SN8	800	75	600	-40 to +150	180	E-64	○
		PT75KN8	800	75	600	-40 to +150	140	E-62	○
		PT100SN8	800	100	1000	-40 to +150	180	E-64	○
		PT100KN8	800	100	1000	-40 to +150	140	E-62	○
		PT151S8	800	150	1200	-40 to +150	180	E-17	○
		PT150N8	800	150	1200	-40 to +150	280	E-18	○
		PT150KN8	800	150	1200	-40 to +150	210	E-63	○
		PT200N8	800	200	2000	-40 to +150	280	E-18	○
		PT200KN8	800	200	2000	-40 to +150	210	E-63	○
		PT300S8	800	300	1800	-40 to +150	370	E-51	○
		PT50SN16	1600	50	450	-40 to +150	180	E-64	○
		PT50KN16	1600	50	400	-40 to +150	140	E-62	○
		PT76SN16	1600	75	600	-40 to +150	180	E-64	○
		PT75KN16	1600	75	600	-40 to +150	140	E-62	○
		PT80MYN16	1600	80	800	-40 to +150	130	E-77	○
		PT100SN16	1600	100	800	-40 to +150	180	E-64	○
		PT100KN16	1600	100	1200	-40 to +150	210	E-63	○
		PT150N16	1600	150	1200	-40 to +150	280	E-18	○
		PT150KN16	1600	150	1200	-40 to +150	210	E-63	○
		PT150MYN16	1600	150	1500	-40 to +150	250	E-78	○
		PT200N16	1600	200	2000	-40 to +150	280	E-18	○
		PT200KN16	1600	200	2000	-40 to +150	210	E-63	○
		PT200MYN16	1600	200	2000	-40 to +150	250	E-78	○
		PT300S16	1600	300	1850	-40 to +150	370	E-51	○
		PT80MYN18	1800	80	800	-40 to +150	130	E-77	○
		PT150MYN18	1800	150	1500	-40 to +150	250	E-78	○
		PT200MYN18	1800	200	2000	-40 to +150	250	E-78	○

### 3. 定格・特性表 Specifications

#### 3-2-2. ファストリカバリダイオードモジュール Fast Recovery Diode Modules

Series	Circuit	Type No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$V_{FM(max.)}$ [V]	$t_{rr(max.)}$ [ns]	$T_{JW}$ [°C]	Weight [g]	Outline	Safty STD UL
PH-F		PH270F2	200	270	3000	0.97	150	-40 to +150	280	E-24	
		PH300F6	600	300	3000	1.5	170	-40 to +150	280	E-24	
PC-F		PC50F2	200	50	800	1	80	-40 to +150	105	E-10	○
		PC100F2	200	100	1800	1	90	-40 to +150	205	E-11	○
		PC50F4	400	50	800	1.2	80	-40 to +150	105	E-10	○
		PC100FYN6	600	100	2000	1.5	110	-40 to +150	80	E-79	○
		PC100FYN6C	600	100	2000	1.5	110	-40 to +150	80	E-79	○
		PC150FYN6	600	150	3000	1.5	140	-40 to +150	150	E-80	○
		PC150FYN6C	600	150	3000	1.5	140	-40 to +150	150	E-80	○
		PC151FYN6	600	150	3000	1.5	140	-40 to +150	80	E-79	○
		PC151FYN6C	600	150	3000	1.5	140	-40 to +150	80	E-79	○
		PC201FKN6	600	200	2000	1.4	110	-40 to +150	150	E-61	
		PC200FYN6	600	200	3400	1.5	150	-40 to +150	150	E-80	○
		PC200FYN6C	600	200	3400	1.5	150	-40 to +150	150	E-80	○
		PC300FN6	600	300	3000	1.5	170	-40 to +150	225	E-75	○
PD-F		PD50F2	200	50	800	1	80	-40 to +150	105	E-10	○
		PD100F2	200	100	1800	1	90	-40 to +150	205	E-11	○
		PD50F4	400	50	800	1.2	80	-40 to +150	105	E-10	○
		PD100FYN6	600	100	2000	1.5	110	-40 to +150	80	E-79	○
		PD150FYN6	600	150	3000	1.5	140	-40 to +150	150	E-80	○
		PD151FYN6	600	150	3000	1.5	140	-40 to +150	80	E-79	○
		PD201FKN6	600	200	2000	1.4	110	-40 to +150	150	E-61	
		PD200FYN6	600	150	3400	1.5	150	-40 to +150	80	E-80	○
P2H-F		P2H30F2	200	30	300	1.08	50	-40 to +150	35	E-38	
		P2H60F2	200	60	600	1.08	50	-40 to +150	35	E-38	
		P2H80F2	200	80	800	1.05	50	-40 to +150	35	E-38	
		P2H30F4	400	30	300	1.33	60	-40 to +150	35	E-38	
		P2H60F4	400	60	600	1.33	60	-40 to +150	35	E-38	
		P2H80F4	400	80	800	1.31	60	-40 to +150	35	E-38	
		P2H50F12	1200	50	450	2.2	300	-40 to +150	35	E-38	○

#### 3-2-3. ショットキーバリアダイオードモジュール Schottky Barrier Diode Modules

Series	Circuit	Type No.	$V_{RRM}$ [V]	$I_o$ [A]	$I_{FSM}$ [A]	$V_{FM(max.)}$ [V]	$T_{JW}$ [°C]	Weight [g]	Outline No.	Safty STD UL
PC-Q		PC60QL03N	30	60	800	0.5	-40 to +125	65	E-12	○
		PC80QL03N	30	80	1600	0.46	-40 to +125	65	E-12	○
		PC60Q04N	40	60	800	0.58	-40 to +125	65	E-12	○
		PC80Q04N	40	80	1600	0.52	-40 to +125	65	E-12	○
PE-Q		PE80QL03N	30	80	1600	0.46	-40 to +150	70	E-13	○
PQ-Q		PQ160QH04N	40	160	2800	0.58	-40 to +150	250	E-14	
		PQ160QH06N	60	160	2800	0.62	-40 to +150	250	E-14	
P2H-Q		P2H30QH10	100	30	150	1.00	-40 to +150	35	E-38	
		P2H60QH10	100	60	300	1.00	-40 to +150	35	E-38	
		P2H80QH10	100	80	400	0.97	-40 to +150	35	E-38	
		P2H30QH15	150	30	150	1.05	-40 to +150	35	E-38	
		P2H60QH15	150	60	300	1.05	-40 to +150	35	E-38	
		P2H80QH15	150	80	400	1.02	-40 to +150	35	E-38	
		P2H30QH20	200	30	300	1.09	-40 to +150	35	E-38	
		P2H60QH20	200	60	600	1.09	-40 to +150	35	E-38	
		P2H80QH20	200	80	800	1.05	-40 to +150	35	E-38	

PC-Q, PE-Q, PQ-Q 型は非絶縁型です。 (P2H は絶縁型) PC-Q, PE-Q, PQ-Q is non-isolated type. (P2H is isolated type)

### 3-2-4. アバランシェ保証型ショットキーバリアダイオードモジュール Avalanche Guaranteed Schottky Barrier Diode Modules

Series	Circuit	Type No.	$V_{RRM}$ [V]	$I_o$ [A]	$P_{RRSM}$ [W]	$V_{FM}$ [V]	$T_{JW}$ [°C]	Weight [g]	Outline No.	Safty STD UL
MR		MR80QZ09N	90	80	1054	0.98	-40 to +150	25	E-70	-
		MR80QZ12N	120	80	1054	0.98	-40 to +150	25	E-70	-

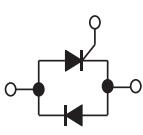
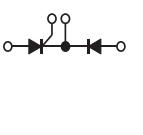
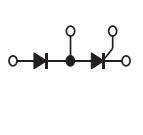
PC-Q、PE-Q、PQ-Q 型は非絶縁型です。 (P2H は絶縁型) PC-Q, PE-Q, PQ-Q is non-isolated type. (P2H is isolated type)

### 3-2-5. サイリスタモジュール (1/3) Thyristor Modules (1/3)

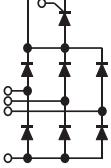
Series	Circuit	Type No.	$V_{DRM}$ $V_{RRM}$ [V]	$I_o$ [A]	$I_{TSM}$ [A]	$I_{GT}$ [mA]	$V_{GT}$ [V]	$T_{JW}$ [°C]	Weight [g]	Outline	Safty STD UL
PHT		PHT308C	800	30	500	100	2.5	-40 to +125	35	E-38	
		PHT608C	800	60	1000	100	2.5	-40 to +125	35	E-38	
		PHT608AC	800	60	1000	100	2.5	-40 to +125	35	E-38	○
		PHT6016AC	1600	60	1000	100	2.5	-40 to +125	35	E-38	○
		PHT250N8	800	250	4000	150	3.0	-40 to +125	250	E-42	○
		PHT400N8	800	400	7500	150	3.0	-40 to +125	480	E-35	○
		PHT250N16	1600	250	4000	150	3	-40 to +125	250	E-42	○
		PHT400N16	1600	400	7200	150	3	-40 to +125	480	E-35	○
PDT		PDT308	800	30	600	100	2.5	-40 to +125	155	E-2	○
		PDT608	800	60	1200	100	2.5	-40 to +125	155	E-2	○
		PDT1008	800	100	2000	100	2.5	-40 to +125	155	E-2	○
		PDT1508	800	150	3200	150	3.0	-40 to +125	480	E-5	○
		PDT1518	800	150	3200	150	3.0	-40 to +125	280	E-44	○
		PDT2008	800	200	4000	150	3.0	-40 to +125	480	E-5	○
		PDT2018	800	200	4000	150	3	-40 to +125	280	E-44	○
		PDT400N8	800	400	7500	150	3	-40 to +125	960	E-34	○
		PDT3016	1600	30	600	100	2.5	-40 to +125	155	E-3	○
		PDT6016	1600	60	1200	100	2.5	-40 to +125	155	E-3	○
		PDT10016	1600	100	2000	100	2.5	-40 to +125	155	E-3	○
		PDT15016	1600	150	3200	150	3.0	-40 to +125	480	E-5	○
		PDT15116	1600	150	3200	150	3.0	-40 to +125	280	E-44	○
		PDT20016	1600	200	4000	150	3.0	-40 to +125	480	E-5	○
		PDT20116	1600	200	4000	150	3.0	-40 to +125	280	E-44	○
		PDT25016	1600	250	4000	150	3.0	-40 to +125	480	E-5	
		PDT400N16	1600	400	7200	150	3	-40 to +125	960	E-34	○
		PDT400G16W	1600	400	8000	150	3	-40 to +125	1200	E-67	
PAT		PAT308	800	30	600	100	2.5	-40 to +125	155	E-2	○
		PAT608	800	60	1200	100	2.5	-40 to +125	155	E-2	○
		PAT1008	800	100	2000	100	2.5	-40 to +125	155	E-2	○
		PAT1508	800	150	3200	150	3.0	-40 to +125	500	E-37	○
		PAT2008	800	200	4000	150	3	-40 to +125	500	E-37	○
		PAT400N8	800	400	7500	150	3	-40 to +125	960	E-34	○
		PAT3016	1600	30	600	100	2.5	-40 to +125	155	E-3	○
		PAT6016	1600	60	1200	100	2.5	-40 to +125	155	E-3	○
		PAT10016	1600	100	2000	100	2.5	-40 to +125	155	E-3	○
		PAT15016	1600	150	3200	150	3.0	-40 to +125	500	E-37	○
		PAT20016	1600	200	4000	150	3	-40 to +125	500	E-37	○
		PAT400N16	1600	400	7200	150	3	-40 to +125	960	E-34	○

### 3. 定格・特性表 Specifications

3-2-5. サイリスタモジュール (2/3) Thyristor Modules (2/3)

Series	Circuit	Type No.	$V_{DRM}$ $V_{RRM}$ [V]	$I_o$ [A]	$I_{TSM}$ [A]	$I_{GT}$ [mA]	$V_{GT}$ [V]	$T_{JW}$ [° C]	Weight [g]	Outline	Safty STD UL
PAH		PAH308	800	30	600	100	2.5	-40 to +125	155	E-2	○
		PAH30N8CM	800	30	600	100	2.5	-40 to +125	150	E-66	○
		PAH608	800	60	1200	100	2.5	-40 to +125	155	E-2	○
		PAH60N8CM	800	60	1200	100	2.5	-40 to +125	150	E-66	○
		PAH60LN8	800	60	1200	100	2.5	-40 to +150	70	E-71	○
		PAH1008	800	100	2000	100	2.5	-40 to +125	155	E-2	○
		PAH100N8CM	800	100	2000	100	2.5	-40 to +125	150	E-66	○
		PAH100LN8	800	100	2000	100	2.5	-40 to +150	70	E-71	○
		PAH1508	800	150	3200	150	3.0	-40 to +125	500	E-37	○
		PAH2008	800	200	4000	150	3.0	-40 to +125	500	E-37	○
		PAH200N8	800	200	4000	150	3.0	-40 to +150	200	E-72	○
		PAH250N8	800	250	5000	150	3	-40 to +150	200	E-72	○
		PAH300N8	800	300	5000	150	3	-40 to +150	200	E-72	○
		PAH400N8	800	400	7500	150	3	-40 to +125	960	E-34	○
		PAH3016	1600	30	600	100	2.5	-40 to +125	155	E-3	○
		PAH30N16CM	1600	30	600	100	2.5	-40 to +125	150	E-66	○
		PAH6016	1600	60	1200	100	2.5	-40 to +125	155	E-3	○
		PAH60N16CM	1600	60	1200	100	2.5	-40 to +125	150	E-66	○
		PAH60LN16	1600	60	1200	100	2.5	-40 to +150	70	E-71	○
		PAH10016	1600	100	2000	100	2.5	-40 to +125	155	E-3	○
		PAH100N16	1600	100	2000	100	2.5	-40 to +150	200	E-72	○
		PAH15016	1600	150	3200	150	3.0	-40 to +125	500	E-37	○
		PAH150N16	1600	150	3200	150	3	-40 to +150	200	E-72	○
		PAH20016	1600	200	4000	150	3	-40 to +125	500	E-37	○
		PAH400N16	1600	400	7200	150	3	-40 to +125	960	E-34	○
PCH		PCH308	800	30	600	100	2.5	-40 to +125	155	E-2	○
		PCH608	800	60	1200	100	2.5	-40 to +125	155	E-2	○
		PCH1008	800	100	2000	100	2.5	-40 to +125	155	E-2	○
		PCH1508	800	150	3200	150	3	-40 to +125	480	E-4	○
		PCH2008	800	200	4000	150	3	-40 to +125	480	E-4	○
		PCH400N8	800	400	7500	150	3	-40 to +125	960	E-34	○
		PCH3016	1600	30	600	100	2.5	-40 to +125	155	E-3	○
		PCH6016	1600	60	1200	100	2.5	-40 to +125	155	E-3	○
		PCH15016	1600	150	3200	150	3	-40 to +125	480	E-4	○
		PCH20016	1600	200	4000	150	3	-40 to +125	480	E-4	○
PDH		PDH308	800	30	600	100	2.5	-40 to +125	155	E-2	○
		PDH608	800	60	1200	100	2.5	-40 to +125	155	E-2	○
		PDH1008	800	100	2000	100	2.5	-40 to +125	155	E-2	○
		PDH1508	800	150	3200	150	3	-40 to +125	480	E-5	○
		PDH1518	800	150	3200	150	3	-40 to +125	280	E-44	○
		PDH2008	800	200	4000	150	3	-40 to +125	480	E-5	○
		PDH2018	800	200	4000	150	3	-40 to +125	280	E-44	○
		PDH400N8	800	400	7500	150	3	-40 to +125	960	E-34	○
		PDH3016	1600	30	600	100	2.5	-40 to +125	155	E-3	○
		PDH6016	1600	60	1200	100	2.5	-40 to +125	155	E-3	○
		PDH10016	1600	100	2000	100	2.5	-40 to +125	155	E-3	○
		PDH15016	1600	150	3200	150	3	-40 to +125	480	E-5	○
		PDH15116	1600	150	3200	150	3	-40 to +125	280	E-44	○
		PDH20016	1600	200	4000	150	3	-40 to +125	480	E-5	○
		PDH20116	1600	200	4000	150	3	-40 to +125	280	E-44	○
		PDH400N16	1600	400	7200	150	3.0	-40 to +125	960	E-34	○

### 3-2-5. サイリスタモジュール (3/3) Thyristor Modules (3/3)

Series	Circuit	Type No.	$V_{DRM}$ $V_{RRM}$ [V]	$I_o$ [A]	$I_{TSM}$ [A]	$I_{GT}$ [mA]	$V_{GT}$ [V]	$T_{JW}$ [°C]	Weight [g]	Outline	Safty STD UL
PGH		PGH50N8	800	50	1200	100	2.5	-40 to +150	225	E-68	○
		PGH75N8	800	75	1200	100	2.5	-40 to +150	225	E-68	○
		PGH100N8	800	100	2000	100	2.5	-40 to +150	225	E-68	○
		PGH101N8	800	100	2000	100	2.5	-40 to +150	225	E-68	○
		PGH150N8	800	150	3200	150	3.0	-40 to +150	450	E-69	○
		PGH200N8	800	200	4000	150	3.0	-40 to +150	450	E-69	○
		PGH50N16	1600	50	1200	100	2.5	-40 to +150	225	E-68	○
		PGH75N16	1600	75	1200	100	2.5	-40 to +150	225	E-68	○
		PGH100N16	1600	100	2000	100	2.5	-40 to +150	225	E-68	○
		PGH150N16	1600	150	3200	150	3.0	-40 to +150	450	E-69	○
		PGH200N16	1600	200	4000	150	3.0	-40 to +150	450	E-69	○
PFT		PFT2004N	400	200	4400	150	3.0	-40 to +150	480	E-6	○
		PFT2014N	400	200	5000	150	3.0	-40 to +150	280	E-44	
		PFT1506N	600	150	3200	100	2.5	-40 to +150	350	E-6	○

### 3-2-6. IGBT モジュール (1/2) IGBT Modules (1/2)

Series	Circuit	Type No.	$V_{CES}$ [V]	$I_c$ [A]	$V_{CE(sat)(typ)}$ [V]	$t_{on(typ)}$ [μs]	$t_{off(typ)}$ [μs]	Diode			IGBT $R_{thj-c(max.)}$ [°C/W]	FRD $R_{thj-c(max.)}$ [°C/W]	Weight [g]	Outline No.	Safty STD UL
								$I_F$ [A]	$V_F(typ)$ [V]	$t_{r(typ)}$ [μs]					
PHMB		PHMB50W12CL	1200	50	1.50	0.170	0.680	-	-	-	0.540	-	35	E-38	○
PDMB		PDMB50W6	650	50	1.45	0.212	0.419	50	1.70	0.140	0.690	1.660	150	E-74	○
		PDMB75W6	650	75	1.45	0.201	0.399	75	1.70	0.140	0.490	1.300	150	E-74	○
		PDMB100W6	650	100	1.45	0.189	0.380	100	1.70	0.140	0.390	0.960	150	E-74	○
		PDMB150W6	650	150	1.45	0.190	0.370	150	1.70	0.140	0.280	0.670	150	E-74	○
		PDMB200W6	650	200	1.45	0.176	0.358	200	1.70	0.145	0.210	0.480	150	E-74	○
		PDMB300W6	650	300	1.45	0.310	0.495	300	1.70	0.175	0.130	0.330	225	E-75	○
		PDMB400W6	650	400	1.45	0.315	0.580	400	1.70	0.185	0.110	0.240	225	E-75	○
		PDMB50W12	1200	50	1.50	0.170	0.680	50	2.00	0.130	0.540	0.970	150	E-74	○
		PDMB75W12	1200	75	1.50	0.170	0.680	75	2.00	0.150	0.430	0.800	150	E-74	○
		PDMB100W12	1200	100	1.50	0.170	0.690	100	2.00	0.170	0.310	0.720	150	E-74	○
		PDMB150W12	1200	150	1.50	0.170	0.700	150	2.00	0.190	0.190	0.300	225	E-75	○
		PDMB200W12	1200	200	1.50	0.170	0.700	200	2.00	0.200	0.130	0.210	225	E-75	○
		PDMB300W12	1200	300	1.50	0.310	1.090	300	2.00	0.250	0.095	0.150	450	E-56	○
		PDMB400W12	1200	400	1.50	0.310	1.090	400	2.00	0.250	0.065	0.105	450	E-56	○
PCHMB		PCHMB50W6	650	50	1.45	0.212	0.419	50	1.70	0.140	0.690	1.660	150	E-74	○
		PCHMB75W6	650	75	1.45	0.201	0.399	75	1.70	0.140	0.490	1.300	150	E-74	○
		PCHMB100W6	650	100	1.45	0.189	0.380	100	1.70	0.140	0.390	0.960	150	E-74	○
		PCHMB150W6	650	150	1.45	0.190	0.370	150	1.70	0.140	0.280	0.670	150	E-74	○
		PCHMB200W6	650	200	1.45	0.176	0.358	200	1.70	0.145	0.210	0.480	150	E-74	○
		PCHMB300W6	650	300	1.45	0.310	0.495	300	1.70	0.175	0.130	0.330	225	E-75	○
		PCHMB400W6	650	400	1.45	0.315	0.580	400	1.70	0.185	0.110	0.240	225	E-75	○
		PCHMB50W12	1200	50	1.50	0.170	0.680	50	2.00	0.130	0.540	0.970	150	E-74	○
		PCHMB75W12	1200	75	1.50	0.170	0.680	75	2.00	0.150	0.430	0.800	150	E-74	○
		PCHMB100W12	1200	100	1.50	0.170	0.690	100	2.00	0.170	0.310	0.720	150	E-74	○
		PCHMB150W12	1200	150	1.50	0.170	0.700	150	2.00	0.190	0.190	0.300	225	E-75	○
		PCHMB200W12	1200	200	1.50	0.170	0.700	200	2.00	0.200	0.130	0.210	225	E-75	○
		PCHMB300W12	1200	300	1.50	0.310	1.090	300	2.00	0.250	0.095	0.150	450	E-56	○
		PCHMB400W12	1200	400	1.50	0.310	1.090	400	2.00	0.250	0.065	0.105	450	E-56	○

### 3. 定格・特性表 Specifications

3-2-6. IGBT モジュール (2/2) IGBT Modules (2/2)

Series	Circuit	Type No.	$V_{CES}$ [V]	$I_C$ [A]	$V_{CE(sat)(typ)}$ [V]	$t_{on(typ)}$ [μs]	$t_{off(typ)}$ [μs]	Diode			IGBT $R_{thj-c(\text{Max})}$ [°C/W]	FRD $R_{thj-c(\text{Max})}$ [°C/W]	Weight [g]	Outline	Safty STD UL
								$I_F$ [A]	$V_F(\text{typ})$ [V]	$t_{r(\text{typ})}$ [μs]					
PCFMB		PCFMB50W6	650	50	1.45	0.212	0.419	50	1.70	0.140	0.690	1.660	150	E-74	○
		PCFMB75W6	650	75	1.45	0.201	0.399	75	1.70	0.140	0.490	1.300	150	E-74	○
		PCFMB100W6	650	100	1.45	0.189	0.380	100	1.70	0.140	0.390	0.960	150	E-74	○
		PCFMB150W6	650	150	1.45	0.190	0.370	150	1.70	0.140	0.280	0.670	150	E-74	○
		PCFMB200W6	650	200	1.45	0.176	0.358	200	1.70	0.145	0.210	0.480	150	E-74	○
		PCFMB300W6	650	300	1.45	0.310	0.495	300	1.70	0.175	0.130	0.330	225	E-75	○
		PCFMB400W6	650	400	1.45	0.315	0.580	400	1.70	0.185	0.110	0.240	225	E-75	○
		PCFMB50W12	1200	50	1.50	0.170	0.680	50	2.00	0.130	0.540	0.970	150	E-74	○
		PCFMB75W12	1200	75	1.50	0.170	0.680	75	2.00	0.150	0.430	0.800	150	E-74	○
		PCFMB100W12	1200	100	1.50	0.170	0.690	100	2.00	0.170	0.310	0.720	150	E-74	○
		PCFMB150W12	1200	150	1.50	0.170	0.700	150	2.00	0.190	0.190	0.300	225	E-75	○
		PCFMB200W12	1200	200	1.50	0.170	0.700	200	2.00	0.200	0.130	0.210	225	E-75	○
		PCFMB300W12	1200	300	1.50	0.310	1.090	300	2.00	0.250	0.095	0.150	450	E-56	○
		PCFMB400W12	1200	400	1.50	0.310	1.090	400	2.00	0.250	0.065	0.105	450	E-56	○
PRHMB		PRHMB50W6	650	50	1.45	0.212	0.419	50	1.70	0.140	0.690	1.660	150	E-74	○
		PRHMB75W6	650	75	1.45	0.201	0.399	75	1.70	0.140	0.490	1.300	150	E-74	○
		PRHMB100W6	650	100	1.45	0.189	0.380	100	1.70	0.140	0.390	0.960	150	E-74	○
		PRHMB150W6	650	150	1.45	0.190	0.370	150	1.70	0.140	0.280	0.670	150	E-74	○
		PRHMB200W6	650	200	1.45	0.176	0.358	200	1.70	0.145	0.210	0.480	150	E-74	○
		PRHMB300W6	650	300	1.45	0.310	0.495	300	1.70	0.175	0.130	0.330	225	E-75	○
		PRHMB400W6	650	400	1.45	0.315	0.580	400	1.70	0.185	0.110	0.240	225	E-75	○
		PRHMB50W12	1200	50	1.50	0.170	0.680	50	2.00	0.130	0.540	0.970	150	E-74	○
		PRHMB75W12	1200	75	1.50	0.170	0.680	75	2.00	0.150	0.430	0.800	150	E-74	○
		PRHMB100W12	1200	100	1.50	0.170	0.690	100	2.00	0.170	0.310	0.720	150	E-74	○
		PRHMB150W12	1200	150	1.50	0.170	0.700	150	2.00	0.190	0.190	0.300	225	E-75	○
		PRHMB200W12	1200	200	1.50	0.170	0.700	200	2.00	0.200	0.130	0.210	225	E-75	○
		PRHMB300W12	1200	300	1.50	0.310	1.090	300	2.00	0.250	0.095	0.150	450	E-56	○
		PRHMB400W12	1200	400	1.50	0.310	1.090	400	2.00	0.250	0.065	0.105	450	E-56	○
PRFMB		PRFMB50W6	650	50	1.45	0.212	0.419	50	1.70	0.140	0.690	1.660	150	E-74	○
		PRFMB75W6	650	75	1.45	0.201	0.399	75	1.70	0.140	0.490	1.300	150	E-74	○
		PRFMB100W6	650	100	1.45	0.189	0.380	100	1.70	0.140	0.390	0.960	150	E-74	○
		PRFMB150W6	650	150	1.45	0.190	0.370	150	1.70	0.140	0.280	0.670	150	E-74	○
		PRFMB200W6	650	200	1.45	0.176	0.358	200	1.70	0.145	0.210	0.480	150	E-74	○
		PRFMB300W6	650	300	1.45	0.310	0.495	300	1.70	0.175	0.130	0.330	225	E-75	○
		PRFMB400W6	650	400	1.45	0.315	0.580	400	1.70	0.185	0.110	0.240	225	E-75	○
		PRFMB50W12	1200	50	1.50	0.170	0.680	50	2.00	0.130	0.540	0.970	150	E-74	○
		PRFMB75W12	1200	75	1.50	0.170	0.680	75	2.00	0.150	0.430	0.800	150	E-74	○
		PRFMB100W12	1200	100	1.50	0.170	0.690	100	2.00	0.170	0.310	0.720	150	E-74	○
		PRFMB150W12	1200	150	1.50	0.170	0.700	150	2.00	0.190	0.190	0.300	225	E-75	○
		PRFMB200W12	1200	200	1.50	0.170	0.700	200	2.00	0.200	0.130	0.210	225	E-75	○
		PRFMB300W12	1200	300	1.50	0.310	1.090	300	2.00	0.250	0.095	0.150	450	E-56	○
		PRFMB400W12	1200	400	1.50	0.310	1.090	400	2.00	0.250	0.065	0.105	450	E-56	○

3-2-7. ソリッドステートリレー Solid State Relays (SSR)  
 AC リレー / 非ゼロ電圧スイッチング AC Relays/Non Zero-Cross Switching Type  
 シングルライン型・L シリーズ SIP Type · L-Series

Type No.	V <sub>AC</sub> V <sub>RMS</sub>	V <sub>DRM</sub> V <sub>PEAK</sub>	V <sub>opr</sub> V <sub>RMS</sub>	I <sub>L</sub> A <sub>RMS</sub>	I <sub>SM</sub> A <sub>PEAK</sub>	I <sub>OM</sub> mA <sub>RMS</sub>	V <sub>ISO</sub> V <sub>RMS</sub>	V <sub>IN2</sub> V <sub>DC</sub>	R <sub>IN</sub> [Ω]	T <sub>opr</sub> [°C]	T <sub>tsg</sub> [°C]	Weight [g]	Outline No.	Safety Standard		
	UL	CSA	TÜV													
D2N201LD	240	600	60 to 280	1	10	20	1500 *** <sup>1</sup>	3 to 6	180	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N201LE	240	600	60 to 280	1	10	20	1500 *** <sup>1</sup>	7 to 14	750	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N201LF	240	600	60 to 280	1	10	20	1500 *** <sup>1</sup>	10 to 18	1,200	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N201LG	240	600	60 to 280	1	10	20	1500 *** <sup>1</sup>	18 to 30	2,150	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N202LD	240	600	60 to 280	2	20	20	1500 *** <sup>1</sup>	3 to 6	180	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N202LE	240	600	60 to 280	2	20	20	1500 *** <sup>1</sup>	7 to 14	750	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N202LF	240	600	60 to 280	2	20	20	1500 *** <sup>1</sup>	10 to 18	1,200	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N202LG	240	600	60 to 280	2	20	20	1500 *** <sup>1</sup>	18 to 30	2,150	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N203LD	240	600	60 to 280	3	30	20	1500 *** <sup>1</sup>	3 to 6	180	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N203LE	240	600	60 to 280	3	30	20	1500 *** <sup>1</sup>	7 to 14	750	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N203LF	240	600	60 to 280	3	30	20	1500 *** <sup>1</sup>	10 to 18	1,200	-20 to +80	-25 to +85	10	C-2	○	○	○
D2N203LG	240	600	60 to 280	3	30	20	1500 *** <sup>1</sup>	18 to 30	2,150	-20 to +80	-25 to +85	10	C-2	○	○	○

注 1. \*\*\*<sup>1</sup> : 定格基準電圧 240V の製品には絶縁耐压 4,000V の強化絶縁型があります。その場合には型名末尾に数字 18 が付記されます。

例 : D2N201LD 型の強化絶縁型型名 → D2N201LD18

4,000volts reinforced insulation type are available for all 240volts series, add suffix code "18" to standard type number.  
 (example "D2N201LD18")

DIN レール型・P シリーズ DIN Rail Mounting Type · P-Series

Type No.	V <sub>AC</sub> V <sub>RMS</sub>	V <sub>DRM</sub> V <sub>PEAK</sub>	V <sub>opr</sub> V <sub>RMS</sub>	I <sub>L</sub> A <sub>RMS</sub>	I <sub>SM</sub> A <sub>PEAK</sub>	I <sub>OM</sub> mA <sub>RMS</sub>	V <sub>ISO</sub> V <sub>RMS</sub>	V <sub>IN2</sub> V <sub>DC</sub>	T <sub>opr</sub> [°C]	T <sub>tsg</sub> [°C]	Weight [g]	Outline No.	Safety Standard		
	UL	CSA	TÜV												
PHA15DW2RP	240	600	60 to 240	15	150	100	2,500	4.5 to 30	-30 to +80	-35 to +100	220	C-5	○	○	○
PHA25DW2RP	240	600	60 to 240	25	250	100	2,500	4.5 to 30	-30 to +80	-35 to +100	220	C-5	○	○	○
PHA35DW2RP	240	600	60 to 240	35	350	500	2,500	4.5 to 30	-30 to +80	-35 to +100	220	C-6	○	○	○
PHA45DW2RP	240	600	60 to 240	45	450	500	2,500	4.5 to 30	-30 to +80	-35 to +100	220	C-6	○	○	○

### 3-3. ハイパワー製品 Hi Power Products

#### 3-3-1. 一般整流ダイオード Rectifier Diodes

##### 中・大電力用（スタッド型・M シリーズ） Power Rectifier Diodes (Stud Type · M-Series)

Type No.	V <sub>RRM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>F(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>RM</sub> [mA]	V <sub>FM</sub> [V]	T <sub>JW</sub> [°C]	T <sub>stg</sub> [°C]	R <sub>th(f-c)</sub> [°C/W]	Weight [g]	Torque [N · m]	Outline No.
151M60	600	800	235	150 (T <sub>c</sub> = 114°C)	3,000	45,000	20 (T <sub>j</sub> = 175°C) V <sub>RRM</sub> )	1.4 (I <sub>FM</sub> =500A)	-40 to +175	-40 to +175	0.3	110	20 17	B-4
151M80	800	1000	235		3,000	45,000			-40 to +175	-40 to +175	0.3	110		
151M100	1000	1200	235		3,000	45,000			-40 to +175	-40 to +175	0.3	110		
151M120	1200	1400	235		3,000	45,000			-40 to +175	-40 to +175	0.3	110		
151M140	1400	1600	235		3,000	45,000			-40 to +175	-40 to +175	0.3	110		
151M160	1600	1800	235		3,000	45,000			-40 to +175	-40 to +175	0.3	110		
251M60	600	800	390	250 (T <sub>c</sub> = 105°C)	4,000	80,000	30 (T <sub>j</sub> = 175°C) V <sub>RRM</sub> )	1.5 (I <sub>FM</sub> =500A)	-40 to +175	-40 to +175	0.2	220	28 22	B-6
251M80	800	1000	390		4,000	80,000			-40 to +175	-40 to +175	0.2	220		
251M100	1000	1200	390		4,000	80,000			-40 to +175	-40 to +175	0.2	220		
251M120	1200	1400	390		4,000	80,000			-40 to +175	-40 to +175	0.2	220		
251M140	1400	1600	390		4,000	80,000			-40 to +175	-40 to +175	0.2	220		
251M160	1600	1800	390		4,000	80,000			-40 to +175	-40 to +175	0.2	220		

□ : 推奨値 Recommended Value

##### 中・大電力用（スタッド型・MA シリーズ） Power Rectifier Diodes (Stud Type · MA-Series)

Type No.	V <sub>RRM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>F(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>RM</sub> [mA]	V <sub>FM</sub> [V]	T <sub>JW</sub> [°C]	T <sub>stg</sub> [°C]	R <sub>th(f-c)</sub> [°C/W]	Weight [g]	Torque [N · m]	Outline No.	
15MA300	3000	3300	39	150 (T <sub>c</sub> = 114°C)	25	450	1,000	10	1.85 (I <sub>FM</sub> =80A)	-40 to +150	-40 to +175	0.6	19	2.9 2.4	B-1
15MA400	4000	4400	39		25	450	1,000	10		-40 to +150	-40 to +175	0.6	19		
45MA10	100	200	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
45MA20	200	300	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
45MA40	400	600	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
45MA60	600	800	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
45MA80	800	1000	235	250 (T <sub>c</sub> = 105°C)	150	2,700	36,400	20	1.5 (I <sub>FM</sub> =500A)	-60 to +150	-60 to +175	0.34	110	20.3 17	B-4
45MA100	1000	1200	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
45MA120	1200	1400	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
45MA140	1400	1600	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
45MA160	1600	1800	235		150	2,700	36,400	20		-60 to +150	-60 to +175	0.34	110		
70MA10	100	200	390		250	4,000	80,000	20		-60 to +150	-60 to +175	0.24	220		
70MA20	200	300	390	250 (T <sub>c</sub> = 114°C)	250	4,000	80,000	20	1.5 (I <sub>FM</sub> =800A)	-60 to +150	-60 to +175	0.24	220	28 22	B-6
70MA40	400	600	390		250	4,000	80,000	20		-60 to +150	-60 to +175	0.24	220		
70MA60	600	800	390		250	4,000	80,000	20		-60 to +150	-60 to +175	0.24	220		
70MA80	800	1000	390		250	4,000	80,000	20		-60 to +150	-60 to +175	0.24	220		
70MA100	1000	1200	390		250	4,000	80,000	20		-60 to +150	-60 to +175	0.24	220		
70MA120	1200	1400	390		250	4,000	80,000	20		-60 to +150	-60 to +175	0.24	220		
70MA140	1400	1600	390	250 (T <sub>c</sub> = 105°C)	250	4,000	80,000	20	1.57 (I <sub>FM</sub> =2,200A)	-60 to +150	-60 to +175	0.24	220	43 35	B-9
70MA160	1600	1800	390		250	4,000	80,000	20		-60 to +150	-60 to +175	0.24	220		
250MA60	600	800	1100		700	9,000	405,000	50		-40 to +175	-40 to +175	0.07	600		
250MA80	800	1000	1100		700	9,000	405,000	50		-40 to +175	-40 to +175	0.07	600		
250MA100	1000	1200	1100		700	9,000	405,000	50		-40 to +175	-40 to +175	0.07	600		
250MA120	1200	1400	1100		700	9,000	405,000	50		-40 to +175	-40 to +175	0.07	600		
250MA140	1400	1600	1100	250 (T <sub>c</sub> = 105°C)	700	9,000	405,000	50	43 35	-40 to +175	-40 to +175	0.07	600	B-9	
250MA160	1600	1800	1100		700	9,000	405,000	50		-40 to +175	-40 to +175	0.07	600		
250MA180	1800	2000	1100		700	9,000	405,000	50		-40 to +175	-40 to +175	0.07	600		

□ : 推奨値 Recommended Value

大電力用（スタッド型・MAB シリーズ） Power Rectifier Diodes (Stud Type · MAB-Series)

Type No.	V <sub>RRM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>F(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>RM</sub> [mA]	V <sub>FM</sub> [V]	T <sub>jw</sub> [°C]	T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Torque [N · m]	Outline No.
100MAB180	1,800	2,000	160	100	2,000	20,000	20	1.6 (I <sub>FM</sub> =314A)	-40 to +150	-40 to +150	0.3	105	17 13.5	B-12
100MAB200	2,000	2,200	160	100	2,000	20,000	20		-40 to +150	-40 to +150	0.3	105		
100MAB250	2,500	2,750	160	100	2,000	20,000	20		-40 to +150	-40 to +150	0.3	105		
100MAB300	3,000	3,300	160	100	2,000	20,000	20		-40 to +150	-40 to +150	0.3	105		
200MAB180	1,800	2,000	310	200	5,000	125,000	30	1.6 (I <sub>FM</sub> =630A)	-40 to +150	-40 to +150	0.15	200	34 27	B-11
200MAB200	2,000	2,200	310	200	5,000	125,000	30		-40 to +150	-40 to +150	0.15	200		
200MAB250	2,500	2,750	310	200	5,000	125,000	30		-40 to +150	-40 to +150	0.15	200		
200MAB300	3,000	3,300	310	200	5,000	125,000	30		-40 to +150	-40 to +150	0.15	200		
400MAB180	1,800	2,000	630	400	7,500	281,000	40	1.7 (I <sub>FM</sub> =1,260A)	-40 to +150	-40 to +150	0.1	455	43 35	B-13
400MAB200	2,000	2,200	630	400	7,500	281,000	40		-40 to +150	-40 to +150	0.1	455		
400MAB250	2,500	2,750	630	400	7,500	281,000	40		-40 to +150	-40 to +150	0.1	455		
400MAB300	3,000	3,300	630	400	7,500	281,000	40		-40 to +150	-40 to +150	0.1	455		

□ : 推奨値 Recommended Value

大電力用（平型・PJA シリーズ） Power Rectifier Diodes (Flat Package Type · PJA-Series)

Type No.	V <sub>RRM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>F(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>RM</sub> [mA]	V <sub>FM</sub> [V]	T <sub>jw</sub> [°C]	T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Mounting Force [kN]	Outline No.
253PJA60	600	800	390	250	2,700	36,400	20	1.8 (I <sub>FM</sub> =800A)	-60 to +150	-60 to +175	0.18	45	8 6	B-14
253PJA80	800	1,000	390	250	2,700	36,400	20		-60 to +150	-60 to +175	0.18	45		
253PJA100	1,000	1,200	390	250	2,700	36,400	20		-60 to +150	-60 to +175	0.18	45		
253PJA120	1,200	1,400	390	250	2,700	36,400	20		-60 to +150	-60 to +175	0.18	45		
253PJA140	1,400	1,600	390	250	2,700	36,400	20	1.93 (I <sub>FM</sub> =940A)	-60 to +150	-60 to +175	0.18	45	12 6	B-14
253PJA160	1,600	1,800	390	250	2,700	36,400	20		-60 to +150	-60 to +175	0.18	45		
303PJA180	1,800	2,000	470	300	5,000	125,000	30		-40 to +150	-40 to +150	0.1	70		
303PJA200	2,000	2,200	470	300	5,000	125,000	30		-40 to +150	-40 to +150	0.1	70		
303PJA250	2,500	2,750	470	300	5,000	125,000	30	1.84 (I <sub>FM</sub> =1,500A)	-40 to +150	-40 to +150	0.1	70	15 10	B-14
403PJA60	600	800	630	400	4,000	80,000	20		-60 to +150	-60 to +175	0.1	70		
403PJA80	800	1,000	630	400	4,000	80,000	20		-60 to +150	-60 to +175	0.1	70		
403PJA120	1,200	1,400	630	400	4,000	80,000	20		-60 to +150	-60 to +175	0.1	70		
403PJA140	1,400	1,600	630	400	4,000	80,000	20	1.84 (I <sub>FM</sub> =1,260A)	-60 to +150	-60 to +175	0.1	70	15 10	B-14
403PJA160	1,600	1,800	630	400	4,000	80,000	20		-60 to +150	-60 to +175	0.1	70		
503PJA180	1,800	2,000	785	500	7,500	281,000	40		-40 to +150	-40 to +150	0.06	120		
503PJA200	2,000	2,200	785	500	7,500	281,000	40		-40 to +150	-40 to +150	0.06	120		
503PJA250	2,500	2,750	785	500	7,500	281,000	40	1.85 (I <sub>FM</sub> =1,900A)	-40 to +150	-40 to +150	0.06	120	B-15	B-14
603PJA250	2,500	2,750	940	600	10,000	500,000	30		-40 to +150	-40 to +150	0.05	240		
603PJA400	4,000	4,400	940	600	10,000	500,000	30		-40 to +150	-40 to +150	0.05	240		
703PJA60	600	800	1,100	700	9,000	405,000	50	1.67 (I <sub>FM</sub> =2,200A)	-60 to +150	-60 to +175	0.06	120	15 12	B-14
703PJA80	800	1,000	1,100	700	9,000	405,000	50		-60 to +150	-60 to +175	0.06	120		
703PJA100	1,000	1,200	1,100	700	9,000	405,000	50		-60 to +150	-60 to +175	0.06	120		
703PJA120	1,200	1,400	1,100	700	9,000	405,000	50		-60 to +150	-60 to +175	0.06	120		
703PJA140	1,400	1,600	1,100	700	9,000	405,000	50	1.56 (I <sub>FM</sub> =4,700A)	-60 to +150	-60 to +175	0.06	120	35 30	B-16
703PJA160	1,600	1,800	1,100	700	9,000	405,000	50		-60 to +150	-60 to +175	0.06	120		
801PJA250	2,500	2,750	1,250	800	16,000	$1.28 \times 10^6$	60		-40 to +150	-40 to +150	0.03	400	35 30	B-17
801PJA400	4,000	4,400	1,250	800	16,000	$1.28 \times 10^6$	60		-40 to +150	-40 to +150	0.03	400		
1003PJA250	2,500	2,750	1,570	1,000	20,000	$2 \times 10^6$	50	1.43 (I <sub>FM</sub> =3,140A)	-40 to +150	-40 to +150	0.03	430	15 10	B-18
1003PJA300	3,000	3,300	1,570	1,000	20,000	$2 \times 10^6$	50		-40 to +150	-40 to +150	0.03	430		
1500PJA10	100	120	2,350	1,500	18,000	$1.62 \times 10^6$	50		-40 to +150	-40 to +150	0.03	85	15 10	B-18
1500PJA20	200	240	2,350	1,500	18,000	$1.62 \times 10^6$	50		-40 to +150	-40 to +150	0.03	85		
1500PJA40	400	480	2,350	1,500	18,000	$1.62 \times 10^6$	50	1.60 (I <sub>FM</sub> =5,000A)	-40 to +150	-40 to +150	0.03	85	35 30	B-17
1603PJA250	2,500	2,750	2,500	1,600	32,000	$5.1 \times 10^6$	50		-40 to +150	-40 to +150	0.025	430		
1603PJA300	3,000	3,300	2,500	1,600	32,000	$5.1 \times 10^6$	50		-40 to +150	-40 to +150	0.025	430		
3500PJA10	100	120	5,500	3,500	35,000	$6.12 \times 10^6$	50	1.35 (I <sub>FM</sub> =11,000A)	-40 to +175	-40 to +175	0.025	180	22 20	B-19
3500PJA20	200	240	5,500	3,500	35,000	$6.12 \times 10^6$	50		-40 to +175	-40 to +175	0.025	180		
3500PJA40	400	480	5,500	3,500	35,000	$6.12 \times 10^6$	50		-40 to +175	-40 to +175	0.025	180		

□ : 推奨値 Recommended Value

### 3. 定格・特性表 Specifications

3-3-2. ファストリカバリーダイオード スタッド型 Fast Recovery Diodes Stud Type

Type No.	V <sub>RRM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>F(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>FSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>RM</sub> [mA]	V <sub>FM</sub> [V]	T <sub>jw</sub> [°C]	T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Q <sub>r</sub> [μC]	t <sub>rr</sub> [μs]	Weight [g]	Torque [N · m]	Outline No.
15MLA160	1,600	1,800	39	25	600	1,800	10	1.85 (I <sub>FM</sub> =80A)	-40 to +125	-40 to +125	0.6	105	3.5	19	2.9 2.4	B-1
15MLA180	1,800	2,000	39	25	600	1,800	10		-40 to +125	-40 to +125	0.6	105	3.5	19		
15MLA200	2,000	2,200	39	25	600	1,800	10		-40 to +125	-40 to +125	0.6	105	3.5	19		
15MLS160	1,600	1,600	39	25	600	1,800	10		-40 to +125	-40 to +125	0.6	105	3.5	19		
15MLS200	2,000	2,000	39	25	600	1,800	10		-40 to +125	-40 to +125	0.6	105	3.5	19		
15MLS250	2,500	2,500	39	25	600	1,800	10		-40 to +125	-40 to +125	0.6	105	3.5	19		
100MLAB160	1,600	1,800	160	100	2,000	20,000	20	1.65 (I <sub>FM</sub> =314A)	-40 to +125	-40 to +125	0.3	125	4	105	17 13.5	B-12 B-10
100MLS160	1,600	1,600	160	100	2,000	20,000	20		-40 to +125	-40 to +125	0.3	125	4	105		
100MLS200	2,000	2,000	160	100	2,000	20,000	20		-40 to +125	-40 to +125	0.3	125	4	105		
100MLS250	2,500	2,500	160	100	2,000	20,000	20		-40 to +125	-40 to +125	0.3	125	4	105		
120FLAS300	3,000	3,000	185	120	3,000	45,000	40	4.00 (I <sub>FM</sub> =380A)	-40 to +125	-40 to +125	0.16	200	4.5	105	2.9 2.0	B-2 B-8
120FLAS400	4,000	4,000	185	120	3,000	45,000	40		-40 to +125	-40 to +125	0.16	200	4.5	105		
120FLAS450	4,500	4,500	185	120	3,000	45,000	40		-40 to +125	-40 to +125	0.16	200	4.5	105		
120FLCS300	3,000	3,000	185	120	3,000	45,000	40		-40 to +125	-40 to +125	0.16	200	4.5	105		
120FLCS400	4,000	4,000	185	120	3,000	45,000	40		-40 to +125	-40 to +125	0.16	200	4.5	105		
120FLCS450	4,500	4,500	185	120	3,000	45,000	40		-40 to +125	-40 to +125	0.16	200	4.5	105		
200FLAB200	2,000	2,200	310	200	6,000	180,000	40	1.60 (I <sub>FM</sub> =630A)	-40 to +125	-40 to +125	0.16	1,100	5.5	250	2.9 2.0	B-2 B-8
200FLAB250	2,500	2,750	310	200	6,000	180,000	40		-40 to +125	-40 to +125	0.16	1,100	5.5	250		
200FLAB300	3,000	3,300	310	200	6,000	180,000	40		-40 to +125	-40 to +125	0.16	1,100	5.5	250		
200FLCB250	2,500	2,750	310	200	6,000	180,000	40		-40 to +125	-40 to +125	0.16	1,100	5.5	250		
200FLCB300	3,000	3,300	310	200	6,000	180,000	40		-40 to +125	-40 to +125	0.16	1,100	5.5	250		

□ : 推奨値 Recommended Value

### 3-3-3. サイリスタ Thyristors

#### スタッド型・RP シリーズ Stud Type · RP-Series

Type No.	$V_{RRM}$ $V_{DRM}$ [V]	$V_{DSM}$ [V]	$V_{RSM}$ [V]	$I_{T(RMS)}$ [A]	$I_o$ [A]	$I_{TSM}$ [A]	$I^2t$ [A <sup>2</sup> s]	$I_{DM}$ $I_{RM}$ [mA]	$V_{TM}$ [V]	dv/dt [V/μs]	di/dt [A/μs]	$I_{GT}$ [mA]	$V_{GT}$ [V]	$T_{JW}$ $T_{Stg}$ [°C]	$R_{Th(j-c)}$ [°C/W]	Weight [g]	Torque [N · m]	Outline No.
68RP10	100	150	150	94	60	1,200	7,200	15	1.83 ( $I_{TM}$ =180A)	200	100	150	3	-40 to +125	0.45	105	B-21 17 [13.5]	
68RP20	200	300	300	94	60	1,200	7,200	15		200	100	150	3	-40 to +125	0.45	105		
68RP40	400	500	500	94	60	1,200	7,200	15		200	100	150	3	-40 to +125	0.45	105		
68RP60	600	700	700	94	60	1,200	7,200	15		200	100	150	3	-40 to +125	0.45	105		
68RP80	800	900	900	94	60	1,200	7,200	15		200	100	150	3	-40 to +125	0.45	105		
88RP20	200	300	300	125	80	1,500	11,200	15	1.7 ( $I_{TM}$ =250A)	200	100	150	3	-40 to +125	0.3	105	B-21 17 [13.5]	
88RP40	400	500	500	125	80	1,500	11,200	15		200	100	150	3	-40 to +125	0.3	105		
88RP60	600	700	700	125	80	1,500	11,200	15		200	100	150	3	-40 to +125	0.3	105		
88RP80	800	900	900	125	80	1,500	11,200	15		200	100	150	3	-40 to +125	0.3	105		
108RP10	100	150	150	160	100	2,000	20,000	15	1.50 ( $I_{TM}$ =314A)	200	100	150	3	-40 to +125	0.3	105	B-21 17 [13.5]	
108RP20	200	300	300	160	100	2,000	20,000	15		200	100	150	3	-40 to +125	0.3	105		
108RP40	400	500	500	160	100	2,000	20,000	15		200	100	150	3	-40 to +125	0.3	105		
108RP60	600	700	700	160	100	2,000	20,000	15		200	100	150	3	-40 to +125	0.3	105		
108RP80	800	900	900	160	100	2,000	20,000	15		200	100	150	3	-40 to +125	0.3	105		
158RP10	100	150	150	235	150	3,500	61,200	20	1.56 ( $I_{TM}$ =470A)	200	100	150	3	-40 to +125	0.15	200	B-22 34 [27]	
158RP20	200	300	300	235	150	3,500	61,200	20		200	100	150	3	-40 to +125	0.15	200		
158RP40	400	500	500	235	150	3,500	61,200	20		200	100	150	3	-40 to +125	0.15	200		
158RP60	600	700	700	235	150	3,500	61,200	20		200	100	150	3	-40 to +125	0.15	200		
158RP80	800	900	900	235	150	3,500	61,200	20		200	100	150	3	-40 to +125	0.15	200		
208RP10	100	150	150	310	200	4,000	80,000	20	1.45 ( $I_{TM}$ =630A)	200	100	150	3	-40 to +125	0.15	200	B-22 34 [27]	
208RP20	200	300	300	310	200	4,000	80,000	20		200	100	150	3	-40 to +125	0.15	200		
208RP40	400	500	500	310	200	4,000	80,000	20		200	100	150	3	-40 to +125	0.15	200		
208RP60	600	700	700	310	200	4,000	80,000	20		200	100	150	3	-40 to +125	0.15	200		
208RP80	800	900	900	310	200	4,000	80,000	20		200	100	150	3	-40 to +125	0.15	200		
308RP10	100	150	150	470	300	7,000	245,000	30	1.68 ( $I_{TM}$ =940A)	200	100	200	3	-40 to +125	0.1	455	B-23 43 [35]	
308RP20	200	300	300	470	300	7,000	245,000	30		200	100	200	3	-40 to +125	0.1	455		
308RP40	400	500	500	470	300	7,000	245,000	30		200	100	200	3	-40 to +125	0.1	455		
308RP60	600	700	700	470	300	7,000	245,000	30		200	100	200	3	-40 to +125	0.1	455		
308RP80	800	900	900	470	300	7,000	245,000	30		200	100	200	3	-40 to +125	0.1	455		
408RP10	100	150	150	630	400	8,000	320,000	30	1.50 ( $I_{TM}$ =1,260A)	200	100	200	3	-40 to +125	0.1	455	B-23 43 [35]	
408RP20	200	300	300	630	400	8,000	320,000	30		200	100	200	3	-40 to +125	0.1	455		
408RP40	400	500	500	630	400	8,000	320,000	30		200	100	200	3	-40 to +125	0.1	455		
408RP60	600	700	700	630	400	8,000	320,000	30		200	100	200	3	-40 to +125	0.1	455		
408RP80	800	900	900	630	400	8,000	320,000	30		200	100	200	3	-40 to +125	0.1	455		
508RP20	200	300	300	785	500	10,000	500,000	30	1.40 ( $I_{TM}$ =1,500A)	300	100	100	2.5	-40 to +125	0.08	455	B-23 43 [35]	
508RP40	400	500	500	785	500	10,000	500,000	30		300	100	100	2.5	-40 to +125	0.08	455		

□ : 推奨値 Recommended Value

### 3. 定格・特性表 Specifications

スタッド型・RS シリーズ Stud Type・RS-Series

Type No.	$V_{RRM}$ $V_{DRM}$ [V]	$V_{DSM}$ [V]	$V_{RSM}$ [V]	$I_{T(RMS)}$ [A]	$I_o$ [A]	$I_{TSM}$ [A]	$I^2t$ [A <sup>2</sup> s]	$I_{DM}$ $I_{RM}$ [mA]	$V_{TM}$ [V]	dv/dt [V/μs]	di/dt [A/μs]	$I_{GT}$ [mA]	$V_{GT}$ [V]	$T_{JW}$ $T_{stg}$ [°C]	$R_{th(jc)}$ [°C/W]	Weight [g]	Torque [N · m]	Outline No.
68RS100	1,000	1,200	1,200	94	60	1,200	7,200	30	1.83 ( $I_{TM} = 180A$ )	200	200	150	3	-40 to +125	0.45	105	17 13.5 B-21	
68RS120	1,200	1,400	1,400	94	60	1,200	7,200	30		200	200	150	3	-40 to +125	0.45	105		
68RS140	1,400	1,600	1,600	94	60	1,200	7,200	30		200	200	150	3	-40 to +125	0.45	105		
68RS160	1,600	1,750	1,800	94	60	1,200	7,200	30		200	200	150	3	-40 to +125	0.45	105		
88RS100	1,000	1,200	1,200	125	80	1,500	11,200	30	1.7 ( $I_{TM} = 250A$ )	200	200	150	3	-40 to +125	0.3	105	34 27 B-22	
88RS120	1,200	1,400	1,400	125	80	1,500	11,200	30		200	200	150	3	-40 to +125	0.3	105		
88RS140	1,400	1,600	1,600	125	80	1,500	11,200	30		200	200	150	3	-40 to +125	0.3	105		
88RS160	1,600	1,750	1,800	125	80	1,500	11,200	30		200	200	150	3	-40 to +125	0.3	105		
128RS100	1,000	1,200	1,200	185	120	2,500	31,200	45	1.76 ( $I_{TM} = 380A$ )	200	200	150	3	-40 to +125	0.2	200	43 35 B-23	
128RS120	1,200	1,400	1,400	185	120	2,500	31,200	45		200	200	150	3	-40 to +125	0.2	200		
128RS140	1,400	1,600	1,600	185	120	2,500	31,200	45		200	200	150	3	-40 to +125	0.2	200		
128RS160	1,600	1,750	1,800	185	120	2,500	31,200	45		200	200	150	3	-40 to +125	0.2	200		
178RS100	1,000	1,200	1,200	275	175	3,500	61,200	45	1.65 ( $I_{TM} = 550A$ )	200	200	150	3	-40 to +125	0.15	200	34 27 B-22	
178RS120	1,200	1,400	1,400	275	175	3,500	61,200	45		200	200	150	3	-40 to +125	0.15	200		
178RS140	1,400	1,600	1,600	275	175	3,500	61,200	45		200	200	150	3	-40 to +125	0.15	200		
178RS160	1,600	1,750	1,800	275	175	3,500	61,200	45		200	200	150	3	-40 to +125	0.15	200		
278RS100	1,000	1,200	1,200	420	270	5,500	150,000	60	1.95 ( $I_{TM} = 850A$ )	200	200	200	3	-40 to +125	0.12	455	43 35 B-23	
278RS120	1,200	1,400	1,400	420	270	5,500	150,000	60		200	200	200	3	-40 to +125	0.12	455		
278RS140	1,400	1,600	1,600	420	270	5,500	150,000	60		200	200	200	3	-40 to +125	0.12	455		
278RS160	1,600	1,750	1,800	420	270	5,500	150,000	60		200	200	200	3	-40 to +125	0.12	455		
358RS100	1,000	1,200	1,200	550	350	7,000	245,000	60	1.80 ( $I_{TM} = 1,100A$ )	200	200	200	3	-40 to +125	0.1	455	43 35 B-23	
358RS120	1,200	1,400	1,400	550	350	7,000	245,000	60		200	200	200	3	-40 to +125	0.1	455		
358RS140	1,400	1,600	1,600	550	350	7,000	245,000	60		200	200	200	3	-40 to +125	0.1	455		
358RS160	1,600	1,750	1,800	550	350	7,000	245,000	60		200	200	200	3	-40 to +125	0.1	455		

□ : 推奨値 Recommended Value

スタッド型・RT シリーズ Stud Type・RT-Series

Type No.	$V_{RRM}$ $V_{DRM}$ [V]	$V_{DSM}$ [V]	$V_{RSM}$ [V]	$I_{T(RMS)}$ [A]	$I_o$ [A]	$I_{TSM}$ [A]	$I^2t$ [A <sup>2</sup> s]	$I_{DM}$ $I_{RM}$ [mA]	$V_{TM}$ [V]	dv/dt [V/μs]	di/dt [A/μs]	$I_{GT}$ [mA]	$V_{GT}$ [V]	$T_{JW}$ $T_{stg}$ [°C]	$R_{th(jc)}$ [°C/W]	Weight [g]	Torque [N · m]	Outline No.
78RT180	1,800	2,000	2,000	110	70	1,300	8,400	30	1.88 ( $I_{TM} = 220A$ )	200	200	150	3	-40 to +125	0.3	105	17 13.5 B-21	
78RT200	2,000	2,200	2,200	110	70	1,300	8,400	30		200	200	150	3	-40 to +125	0.3	105		
78RT250	2,500	2,500	2,750	110	70	1,300	8,400	30		200	200	150	3	-40 to +125	0.3	105		
158RT180	1,800	2,000	2,000	235	150	2,800	39,000	45	1.80 ( $I_{TM} = 470A$ )	200	200	150	3	-40 to +125	0.15	200	34 27 B-22	
158RT200	2,000	2,200	2,200	235	150	2,800	39,000	45		200	200	150	3	-40 to +125	0.15	200		
158RT250	2,500	2,500	2,750	235	150	2,800	39,000	45		200	200	150	3	-40 to +125	0.15	200		
258RT180	1,800	2,000	2,000	390	250	4,600	105,000	80	1.76 ( $I_{TM} = 785A$ )	200	200	200	3	-40 to +125	0.1	455	43 35 B-23	
258RT200	2,000	2,200	2,200	390	250	4,600	105,000	80		200	200	200	3	-40 to +125	0.1	455		
258RT250	2,500	2,500	2,750	390	250	4,600	105,000	80		200	200	200	3	-40 to +125	0.1	455		

□ : 推奨値 Recommended Value

平型・PA, PAB シリーズ Flat Package Type・PA, PAB-Series

Type No.	$V_{RRM}$ $V_{DRM}$ [V]	$V_{DSM}$ [V]	$V_{RSM}$ [V]	$I_{T(RMS)}$ [A]	$I_o$ [A]	$I_{TSM}$ [A]	$I^2t$ [A <sup>2</sup> s]	$I_{DM}$ $I_{RM}$ [mA]	$V_{TM}$ [V]	$dv/dt$ [V/ $\mu$ s]	$di/dt$ [A/ $\mu$ s]	$I_{GT}$ [mA]	$V_{GT}$ [V]	$T_{JW}$ $T_{STG}$ [°C]	$R_{(n-c)}$ [°C/W]	Weight [g]	Torque [N·m]	Outline No.
253PA100	1,000	1,150	1,150	390	250	4,000	80,000	45	2.25 ( $I_{TM}$ =780A)	500	150	150	3	-40 to +125	0.1	80	12 6	B-28
253PA120	1,200	1,350	1,350	390	250	4,000	80,000	45		500	150	150	3	-40 to +125	0.1	80		
253PA140	1,400	1,550	1,550	390	250	4,000	80,000	45		500	150	150	3	-40 to +125	0.1	80		
253PA160	1,600	1,750	1,750	390	250	4,000	80,000	45		500	150	150	3	-40 to +125	0.1	80		
403PAB180	1,800	2,000	2,000	630	400	7,000	245,000	60	2.12 ( $I_{TM}$ =1,260A)	200	200	200	3	-40 to +125	0.05	250	15 12	B-30
403PAB200	2,000	2,200	2,200	630	400	7,000	245,000	60		200	200	200	3	-40 to +125	0.05	250		
403PAB250	2,500	2,500	2,750	630	400	7,000	245,000	60		200	200	200	3	-40 to +125	0.05	250		
503PA60	600	800	800	785	500	10,000	500,000	60	1.96 ( $I_{TM}$ =1,500A)	500	150	150	3	-40 to +125	0.06	135	15 10	B-28
503PA80	800	1,000	1,000	785	500	10,000	500,000	60		500	150	150	3	-40 to +125	0.06	135		
503PA100	1,000	1,200	1,200	785	500	10,000	500,000	60		500	150	150	3	-40 to +125	0.06	135		
503PA120	1,200	1,400	1,400	785	500	10,000	500,000	60		500	150	150	3	-40 to +125	0.06	135		
503PA140	1,400	1,600	1,600	785	500	10,000	500,000	60		500	150	150	3	-40 to +125	0.06	135		
503PA160	1,600	1,800	1,800	785	500	10,000	500,000	60	2.10 ( $I_{TM}$ =1,500A)	500	150	150	3	-40 to +125	0.06	135	15 12	B-30
503PAB180	1,800	2,000	2,000	785	500	7,000	245,000	60		200	200	200	3	-40 to +125	0.05	250		
503PAB200	2,000	2,200	2,200	785	500	7,000	245,000	60		200	200	200	3	-40 to +125	0.05	250		
503PAB250	2,500	2,500	2,750	785	500	7,000	245,000	60		200	200	200	3	-40 to +125	0.05	250		
553PA60	600	800	800	860	550	10,000	500,000	60	1.88 ( $I_{TM}$ =1,700A)	200	150	200	3	-40 to +125	0.06	135	15 12	B-28
553PA80	800	1,000	1,000	860	550	10,000	500,000	60		200	150	200	3	-40 to +125	0.06	135		
553PA100	1,000	1,200	1,200	860	550	10,000	500,000	60		200	150	200	3	-40 to +125	0.06	135		
553PA120	1,200	1,400	1,400	860	550	10,000	500,000	60		200	150	200	3	-40 to +125	0.06	135		
553PA140	1,400	1,600	1,600	860	550	10,000	500,000	60		200	150	200	3	-40 to +125	0.06	135		
553PA160	1,600	1,800	1,800	860	550	10,000	500,000	60	1.65 ( $I_{TM}$ =2,500A)	200	150	200	3	-40 to +125	0.06	135	15 12	B-28
803PA20	200	300	300	1,250	800	12,000	720,000	60		200	200	200	3	-40 to +125	0.045	135		
803PA40	400	500	500	1,250	800	12,000	720,000	60		200	200	200	3	-40 to +125	0.045	135		
803PA60	600	700	700	1,250	800	12,000	720,000	60		200	200	200	3	-40 to +125	0.045	135		
803PA80	800	900	900	1,250	800	12,000	720,000	60		200	200	200	3	-40 to +125	0.045	135		
803PA100	1,000	1,200	1,200	1,250	800	12,000	720,000	60	2.00 ( $I_{TM}$ =3,200A)	200	200	200	3	-40 to +125	0.045	135	35 30	B-31
803PA120	1,200	1,300	1,400	1,250	800	12,000	720,000	60		200	200	200	3	-40 to +125	0.045	135		
853PA160	1,600	1,800	1,800	1,330	850	15,000	$1,125 \times 10^6$	80	1.85 ( $I_{TM}$ =2,700A)	200	200	200	3	-40 to +125	0.025	360	55 50	B-33
853PAB180	1,800	2,000	2,000	1,330	850	14,000	$9.8 \times 10^5$	120		200	200	200	3	-40 to +125	0.025	360		
853PAB250	2,500	2,500	2,750	1,330	850	14,000	$9.8 \times 10^5$	120	1.7 ( $I_{TM}$ =3,200A)	200	200	200	3	-40 to +125	0.025	360	55 50	B-33
1003PA100	1,000	1,200	1,200	1,570	1,000	17,000	$1.44 \times 10^6$	80		200	200	200	3	-40 to +125	0.025	360		
1003PA120	1,200	1,400	1,400	1,570	1,000	17,000	$1.44 \times 10^6$	80		200	200	200	3	-40 to +125	0.025	360		
1003PA140	1,400	1,600	1,600	1,570	1,000	17,000	$1.44 \times 10^6$	80		200	200	200	3	-40 to +125	0.025	360		
1003PA160	1,600	1,750	1,800	1,570	1,000	17,000	$1.44 \times 10^6$	80		200	200	200	3	-40 to +125	0.025	360		
1003PAB180	1,800	2,000	2,000	1,570	1,000	16,000	$1.28 \times 10^6$	120	1.7 ( $I_{TM}$ =3,200A)	200	200	200	3	-40 to +125	0.025	460	55 50	B-33
1003PAB200	2,000	2,200	2,200	1,570	1,000	16,000	$1.28 \times 10^6$	120		200	200	200	3	-40 to +125	0.025	460		
1003PAB250	2,500	2,500	2,750	1,570	1,000	16,000	$1.28 \times 10^6$	120		200	200	200	3	-40 to +125	0.025	460		
1503PA40	400	500	500	2,350	1,500	25,000	$3.125 \times 10^6$	100	1.7 ( $I_{TM}$ =4,700A)	200	200	200	3	-40 to +125	0.025	460	55 50	B-33
1503PA60	600	700	700	2,350	1,500	25,000	$3.125 \times 10^6$	100		200	200	200	3	-40 to +125	0.025	460		
1503PA80	800	900	900	2,350	1,500	25,000	$3.125 \times 10^6$	100		200	200	200	3	-40 to +125	0.025	460		
1503PA100	1,000	1,200	1,200	2,350	1,500	25,000	$3.125 \times 10^6$	100		200	200	200	3	-40 to +125	0.025	460		
1503PA120	1,200	1,300	1,400	2,350	1,500	25,000	$3.125 \times 10^6$	100		200	200	200	3	-40 to +125	0.025	460		
1503PA160	1,600	1,750	1,800	2,350	1,500	25,000	$3.125 \times 10^6$	100	1.6 ( $I_{TM}$ =13,000A)	200	200	200	3	-40 to +125	0.025	460	55 50	B-33
3003PA40	400	500	500	4,700	3,000	50,000	$1.25 \times 10^7$	150		200	200	200	3	-40 to +125	0.01	740		
3003PA80	800	900	900	4,700	3,000	50,000	$1.25 \times 10^7$	150		200	200	200	3	-40 to +125	0.01	740		
3003PA100	1,000	1,200	1,200	4,700	3,000	45,000	$1.01 \times 10^7$	150	1.75 ( $I_{TM}$ =9,500A)	200	200	200	3	-40 to +125	0.01	740	55 50	B-33
3003PA120	1,200	1,400	1,400	4,700	3,000	45,000	$1.01 \times 10^7$	150		200	200	200	3	-40 to +125	0.01	740		
3003PA160	1,600	1,750	1,800	4,700	3,000	45,000	$1.01 \times 10^7$	150		200	200	200	3	-40 to +125	0.01	740		
4003PA40	400	500	500	6,300	4,000	60,000	$1.8 \times 10^7$	150	1.6 ( $I_{TM}$ =13,000A)	200	200	200	3	-40 to +125	0.01	740	55 50	B-33
4003PA60	600	700	700	6,300	4,000	60,000	$1.8 \times 10^7$	150		200	200	200	3	-40 to +125	0.01	740		
4003PA80	800	900	900	6,300	4,000	60,000	$1.8 \times 10^7$	150		200	200	200	3	-40 to +125	0.01	740		

□ : 推奨値 Recommended Value

### 3. 定格・特性表 Specifications

#### 3-3-4. 高速スイッチングサイリスタ Fast Turn-Off Thyristors

スタッド型・RLE シリーズ Stud Type · RLE-Series tq = 15μs

Type No.	V <sub>RRM</sub> V <sub>DRM</sub> [V]	V <sub>DSM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>T(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>TSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>DM</sub> I <sub>RM</sub> [mA]	V <sub>TM</sub> [V]	dv/dt [V/μs]	di/dt [A/μs]	I <sub>GT</sub> [mA]	V <sub>GT</sub> [V]	t <sub>q</sub> [μs]	T <sub>JW</sub> T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Torque [N · m]	Outline No.
88RLE60	600	700	700	125	80	1,500	11,200	15	2.15 (I <sub>TM</sub> =250A)	100	200	150	3	15	-40 to +125	0.3	105	17 13.5	B-21
88RLE80	800	900	900	125	80	1,500	11,200	15		100	200	150	3	15	-40 to +125	0.3	105		
178RLE60	600	700	700	270	175	3,500	61,200	20	2.20 (I <sub>TM</sub> =550A)	100	200	150	3	15	-40 to +125	0.15	200	34 27	B-22
178RLE80	800	900	900	270	175	3,500	61,200	20		100	200	150	3	15	-40 to +125	0.15	200		
208RLE20	200	300	300	310	200	4,000	80,000	20	1.65 (I <sub>TM</sub> =630A)	100	100	150	3	15	-40 to +125	0.15	200	34 27	B-22
208RLE40	400	500	500	310	200	4,000	80,000	20		100	100	150	3	15	-40 to +125	0.15	200		
308RLE60	600	700	700	470	300	6,000	180,000	40	2.24 (I <sub>TM</sub> =940A)	100	200	200	3	15	-40 to +125	0.1	455	43 35	B-23
308RLE80	800	900	900	470	300	6,000	180,000	40		100	200	200	3	15	-40 to +125	0.1	455		

□ : 推奨値 Recommended Value

スタッド型・RLF シリーズ Stud Type · RLF-Series tq = 20μs

Type No.	V <sub>RRM</sub> V <sub>DRM</sub> [V]	V <sub>DSM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>T(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>TSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>DM</sub> I <sub>RM</sub> [mA]	V <sub>TM</sub> [V]	dv/dt [V/μs]	di/dt [A/μs]	I <sub>GT</sub> [mA]	V <sub>GT</sub> [V]	t <sub>q</sub> [μs]	T <sub>JW</sub> T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Torque [N · m]	Outline No.
88RLF60	600	700	700	125	80	1500	11,200	15	1.87 (I <sub>TM</sub> =250A)	100	200	150	3	20	-40 to +125	0.3	105	17 13.5	B-21
88RLF80	800	900	900	125	80	1500	11,200	15		100	200	150	3	20	-40 to +125	0.3	105		
178RLF60	600	700	700	270	175	3500	61,200	20	1.90 (I <sub>TM</sub> =550A)	100	200	150	3	20	-40 to +125	0.15	200	34 27	B-22
178RLF80	800	900	900	270	175	3500	61,200	20		100	200	150	3	20	-40 to +125	0.15	200		
308RLF60	600	700	700	470	300	6000	180,000	40	1.94 (I <sub>TM</sub> =940A)	100	200	200	3	20	-40 to +125	0.1	455	43 35	B-23
308RLF80	800	900	900	470	300	6000	180,000	40		100	200	200	3	20	-40 to +125	0.1	455		

□ : 推奨値 Recommended Value

スタッド型・RLG シリーズ Stud Type · RLG-Series tq = 22 to 23μs

Type No.	V <sub>RRM</sub> V <sub>DRM</sub> [V]	V <sub>DSM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>T(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>TSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>DM</sub> I <sub>RM</sub> [mA]	V <sub>TM</sub> [V]	dv/dt [V/μs]	di/dt [A/μs]	I <sub>GT</sub> [mA]	V <sub>GT</sub> [V]	t <sub>q</sub> [μs]	T <sub>JW</sub> T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Torque [N · m]	Outline No.
88RLG100	1,000	1,200	1,200	125	80	1,500	11,200	30	2.59 (I <sub>TM</sub> =250A)	200	200	150	3	22	-40 to +125	0.3	105	17 13.5	B-21
88RLG120	1,200	1,300	1,400	125	80	1,500	11,200	30		200	200	150	3	22	-40 to +125	0.3	105		
178RLG100	1,000	1,200	1,200	270	175	3,500	61,200	45	2.61 (I <sub>TM</sub> =550A)	200	200	150	3	22	-40 to +125	0.15	200	34 27	B-22
178RLG120	1,200	1,300	1,400	270	175	3,500	61,200	45		200	200	150	3	22	-40 to +125	0.15	200		
258RLG100	1,000	1,200	1,200	390	250	5,500	150,000	60	2.70 (I <sub>TM</sub> =785A)	200	200	200	3	23	-40 to +125	0.1	455	43 35	B-23
258RLG120	1,200	1,300	1,400	390	250	5,500	150,000	60		200	200	200	3	23	-40 to +125	0.1	455		

□ : 推奨値 Recommended Value

スタッド型・RLHシリーズ Stud Type · RLH-Series tq = 30μs

Type No.	V <sub>RRM</sub> V <sub>DRM</sub> [V]	V <sub>DSM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>T(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>TSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>DM</sub> I <sub>RM</sub> [mA]	V <sub>TM</sub> [V]	dv/dt [V/μs]	di/dt [A/μs]	I <sub>GT</sub> [mA]	V <sub>GT</sub> [V]	t <sub>q</sub> [μs]	T <sub>JW</sub> T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Torque [N · m]	Outline No.
88RLH100	1,000	1,200	1,200	125	80	1,500	11,200	30	2.18 (I <sub>TM</sub> =250A)	200	200	150	3	30	-40 to +125	0.3	105	17 13.5	B-21
88RLH120	1,200	1,300	1,400	125	80	1,500	11,200	30		200	200	150	3	30	-40 to +125	0.3	105		
178RLH120	1,200	1,300	1,400	270	175	3,500	61,200	45	2.32 (I <sub>TM</sub> =550A)	200	200	150	3	30	-40 to +125	0.15	200	34 27	B-22
258RLH100	1,000	1,200	1,200	390	250	5,500	150,000	60		200	200	200	3	30	-40 to +125	0.1	455	43 35	B-23
258RLH120	1,200	1,300	1,400	390	250	5,500	150,000	60		200	200	200	3	30	-40 to +125	0.1	455		

□ : 推奨値 Recommended Value

平型・PLF シリーズ Flat Package Type · PLF-Series [tq = 20μs]

Type No.	V <sub>RRM</sub> V <sub>DRM</sub> [V]	V <sub>DSM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>T(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>TSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>DM</sub> I <sub>RM</sub> [mA]	V <sub>TM</sub> [V]	dv/dt [V/μs]	di/dt [A/μs]	I <sub>GT</sub> [mA]	V <sub>GT</sub> [V]	t <sub>q</sub> [μs]	T <sub>JW</sub> T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Mounting Force [kN]	Outline No.
1003PLF100	1,000	1,200	1,200	1,570	1,000	18,000	1.62 × 10 <sup>6</sup>	150	2.25 (I <sub>TM</sub> =3,200A)	500	200	200	3	20	-40 to +125	0.025	460	35 30	B-31
1003PLF120	1,200	1,300	1,400	1,570	1,000	18,000	1.62 × 10 <sup>6</sup>	150	500 (I <sub>TM</sub> =8,000A)	200	200	200	3	20	-40 to +125	0.025	460	35 30	B-31
2503PLF100	1,000	1,200	1,200	3,900	2,500	40,000	8 × 10 <sup>6</sup>	150	2.03 (I <sub>TM</sub> =8,000A)	200	200	200	3	20	-40 to +125	0.012	740	55 50	B-33

□ : 推奨値 Recommended Value

平型・PLH シリーズ Flat Package Type · PLH-Series [tq = 30μs]

Type No.	V <sub>RRM</sub> V <sub>DRM</sub> [V]	V <sub>DSM</sub> [V]	V <sub>RSM</sub> [V]	I <sub>T(RMS)</sub> [A]	I <sub>o</sub> [A]	I <sub>TSM</sub> [A]	I <sup>2</sup> t [A <sup>2</sup> s]	I <sub>DM</sub> I <sub>RM</sub> [mA]	V <sub>TM</sub> [V]	dv/dt [V/μs]	di/dt [A/μs]	I <sub>GT</sub> [mA]	V <sub>GT</sub> [V]	t <sub>q</sub> [μs]	T <sub>JW</sub> T <sub>stg</sub> [°C]	R <sub>th(j-c)</sub> [°C/W]	Weight [g]	Mounting Force [kN]	Outline No.
1003PLH120	1,200	1,300	1,400	1,570	1,000	16,000	1.28 × 10 <sup>6</sup>	120	2.3 (I <sub>TM</sub> =3,200A)	200	200	400	3	30	-40 to +125	0.03	460	35 30	B-31
2503PLH100	1,000	1,200	1,200	3,900	2,500	40,000	8 × 10 <sup>6</sup>	150	2.07 (I <sub>TM</sub> =8,000A)	200	200	200	3	30	-40 to +125	0.012	740	55 50	B-33
2503PLH120	1,200	1,300	1,400	3,900	2,500	40,000	8 × 10 <sup>6</sup>	150	2.07 (I <sub>TM</sub> =8,000A)	200	200	200	3	30	-40 to +125	0.012	740	55 50	B-33

□ : 推奨値 Recommended Value

### 3. 定格・特性表 Specifications

#### 3-4. スタック製品 Stack Products

##### 3-4-1. スタック Stack Assemblies

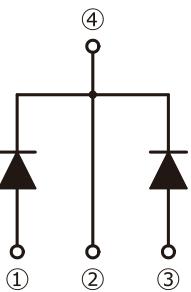
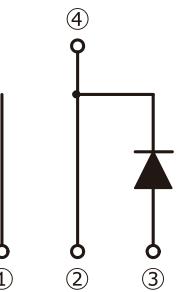
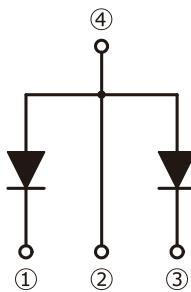
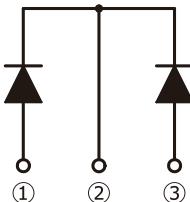
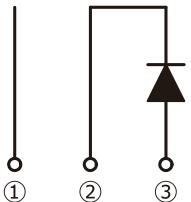
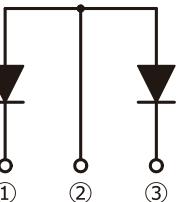
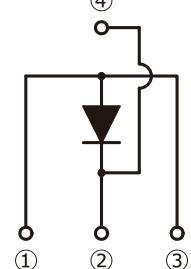
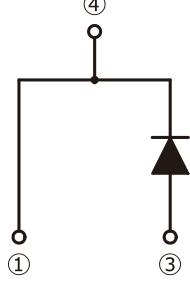
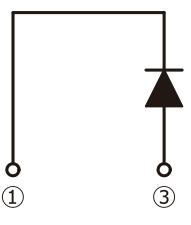
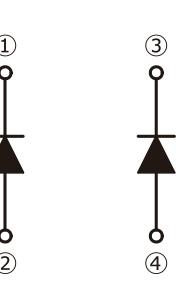
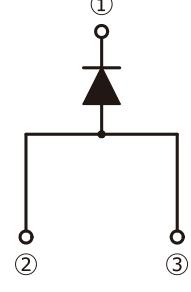
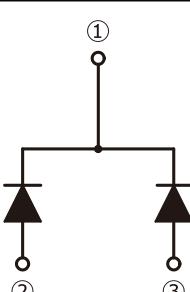
自己冷却型小電力用整流スタック P シリーズ Diode Stack P Series

Type No.	平均出力電流 Average Rectified Output Current $I_o$ (A)		繰り返し ピーク逆電圧 Repetitive Peak Reverse Voltage ( $V_{RRM}$ =)	結線回路 Circuit Schema	サーボ順電流 Surge Forward Current 400A	端子形状 Terminals	Outline No.
	Ta = 40°C	Ta = 50°C					
PB508AC	6A <sup>*1</sup>	5.8A <sup>*1</sup>	(800V)	単相ブリッジ	400A	ファストンタブ fast-on tab 250 相当	F-1
P9B80	9A	9A					F-2
P16B80	16A	14A					F-3
P20B80	20A	19A					F-4
PT308AC	6A <sup>*1</sup>	6A <sup>*1</sup>		三相ブリッジ	400A	ファストンタブ fast-on tab 250 相当	F-6

\* 1 □ 100×1.0t 鉄、アルミ or 銅板取付け。

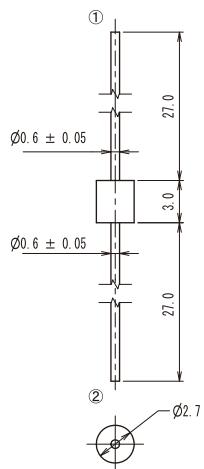
Mounted on 100×1.0t iron, aluminum or copper plate.

## 4. 結線図 (ディスクリート製品) Connection Type of Discrete Products

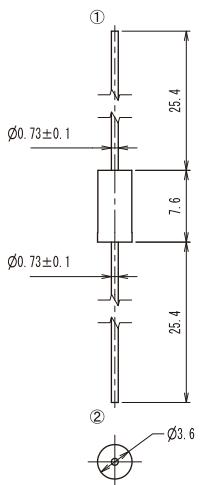
Type-A	Type-B	Type-C	Type-D
			
Type-E	Type-F	Type-G	Type-H
			
Type-I	Type-J	Type-K	Type-L
			
Type-M			
			

## 5. 外形寸法図 Outline

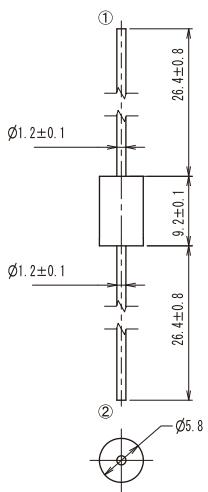
<A-1> 3Max × Ø2.7 (DO-41S)



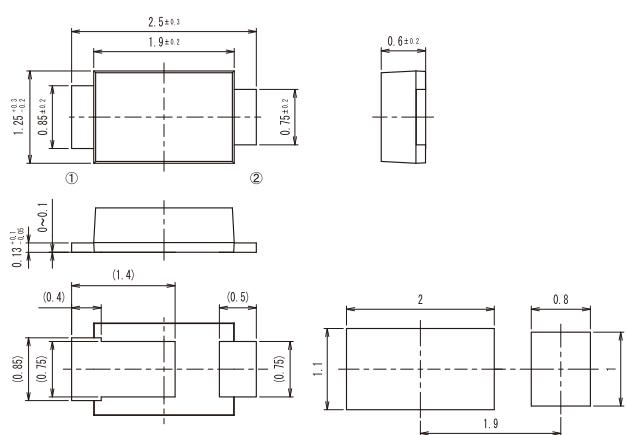
<A-2> DO-204AC (DO-15)



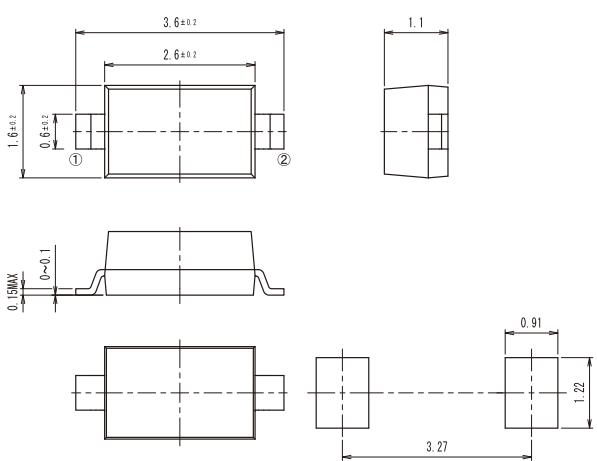
<A-3> DO-201AD



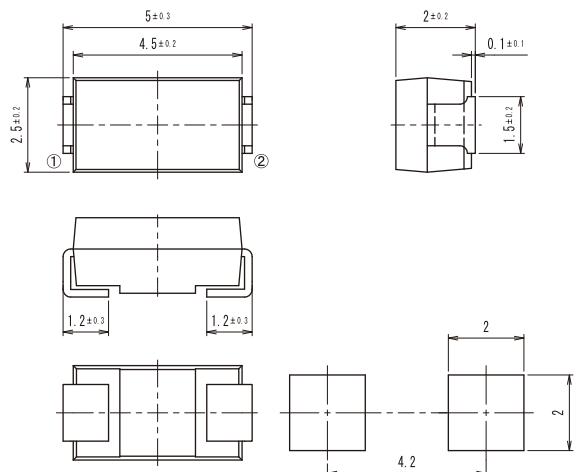
<A-4> SOD-323FL



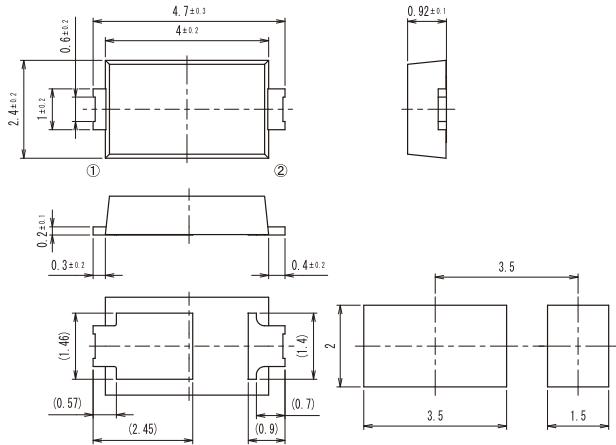
<A-5> SOD-123



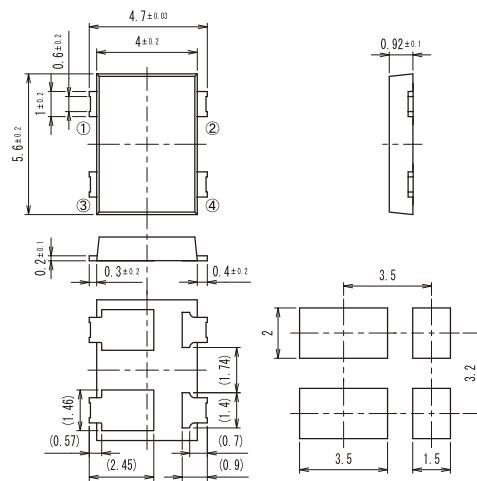
<A-6> DO-214AC (SMA)



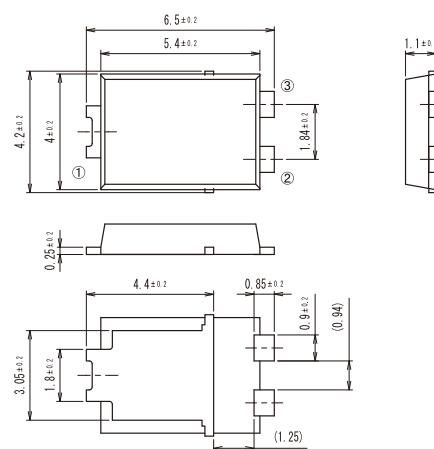
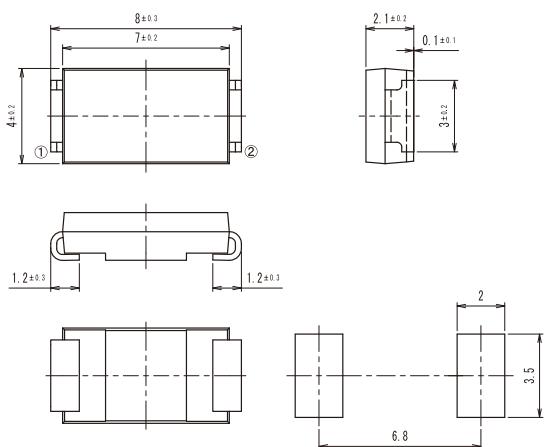
<A-7> NA (DO-221BC)



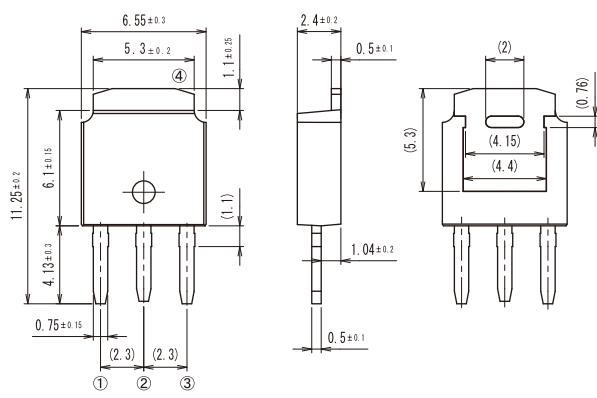
<A-8> NB



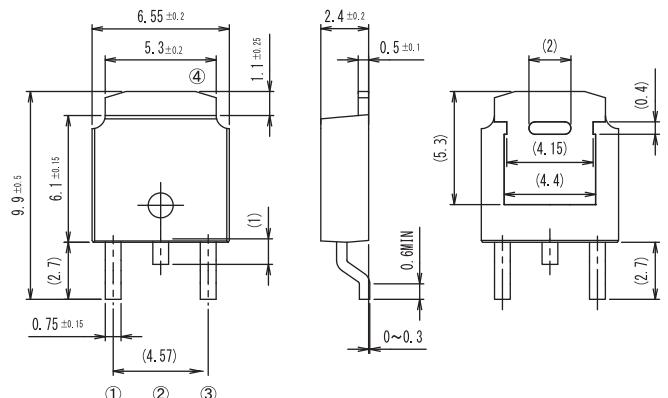
<A-9> nSMC



<A-11> TO-251

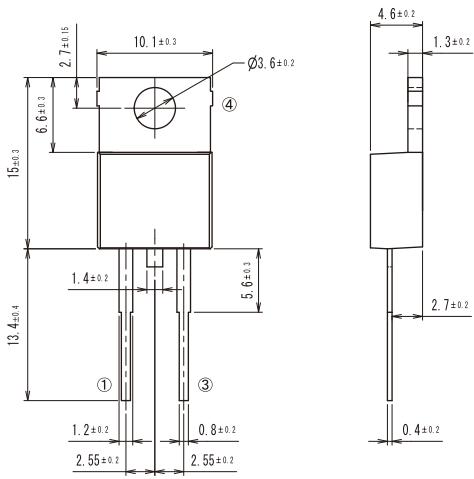


<A-12> TO-252 (Dpak)

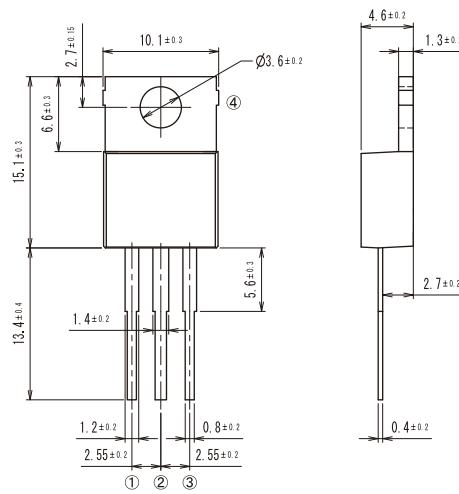


## 5. 外形寸法図 Outline

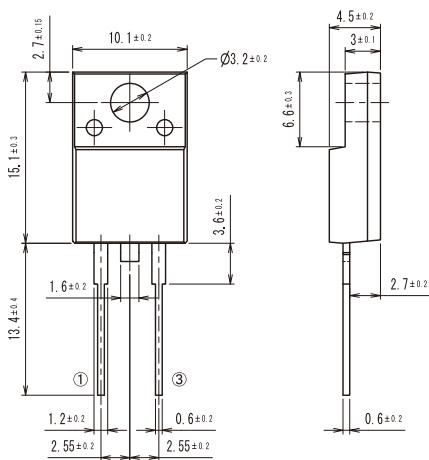
<A-13> TO-220 2pin



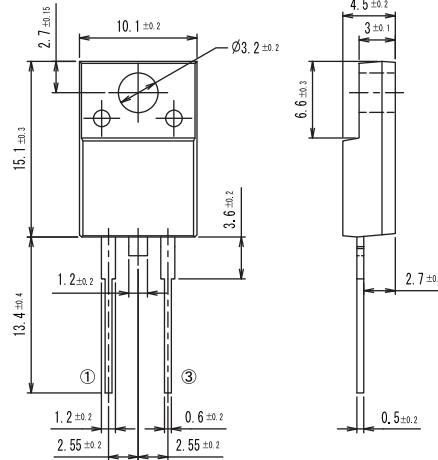
<A-14> TO-220



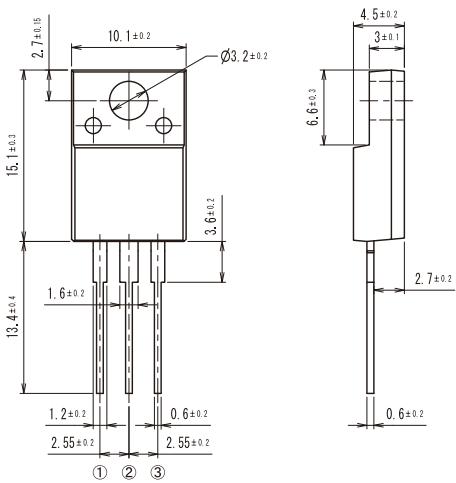
<A-15> TO-220 Full-Mold 2pin



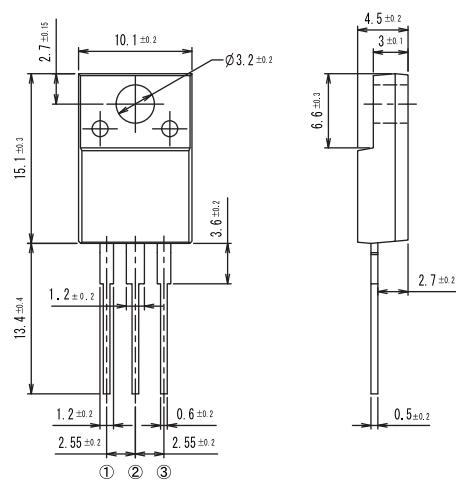
<A-16> TO-220 Full-Mold 2pin



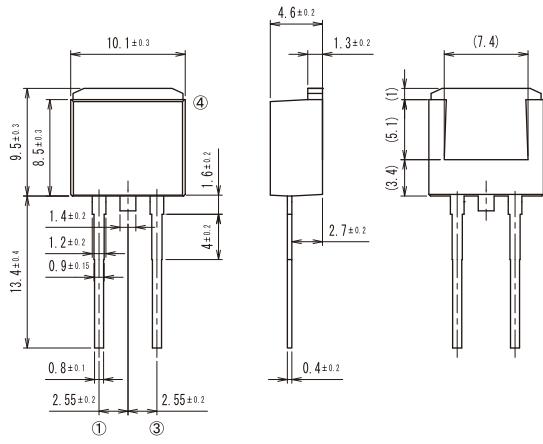
<A-17> TO-220 Full-Mold



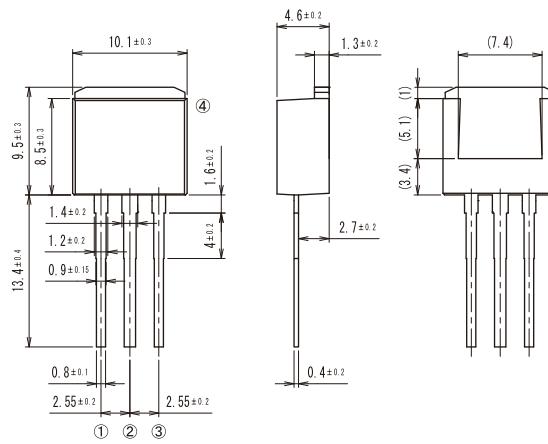
<A-18> TO-220 Full-Mold



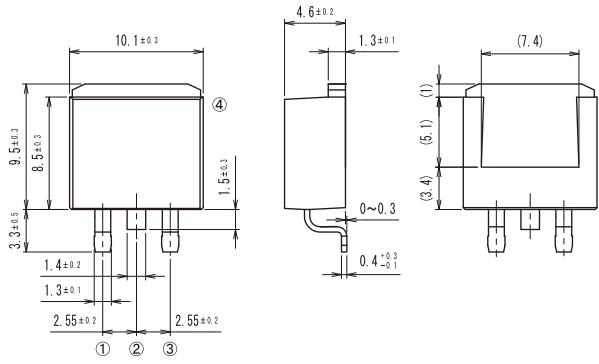
<A-19> TO-262 2pin



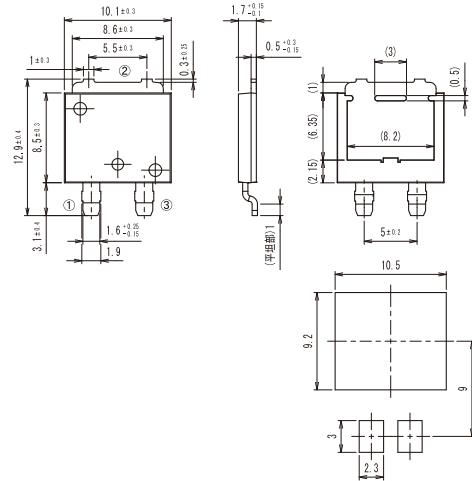
<A-20> TO-262



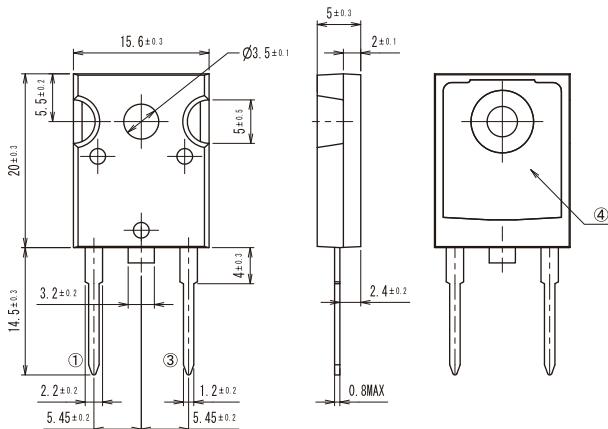
<A-21> TO-263 (D2pak)



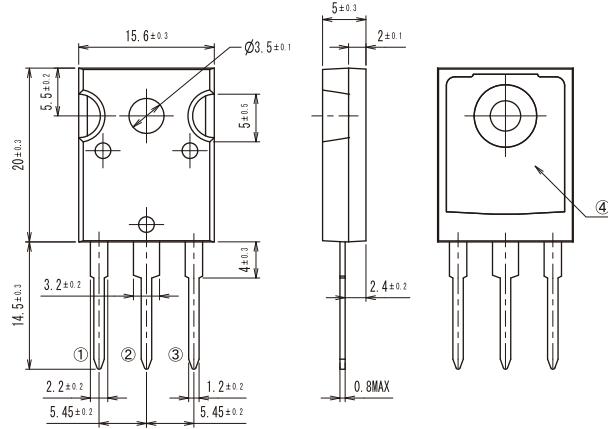
<A-22> TO-263LP



<A-23> TO-247 2pin

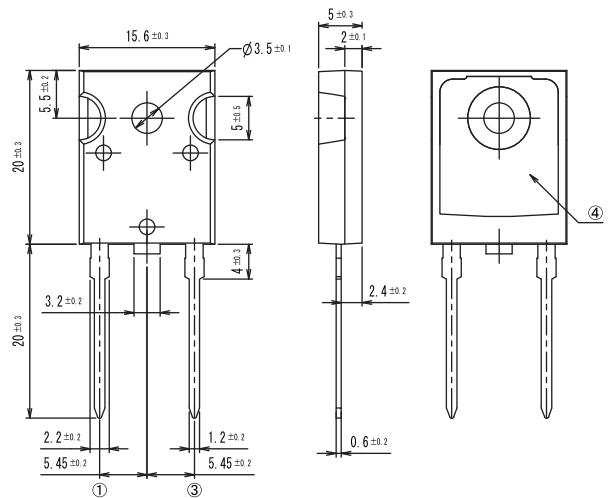


<A-24> TO-247

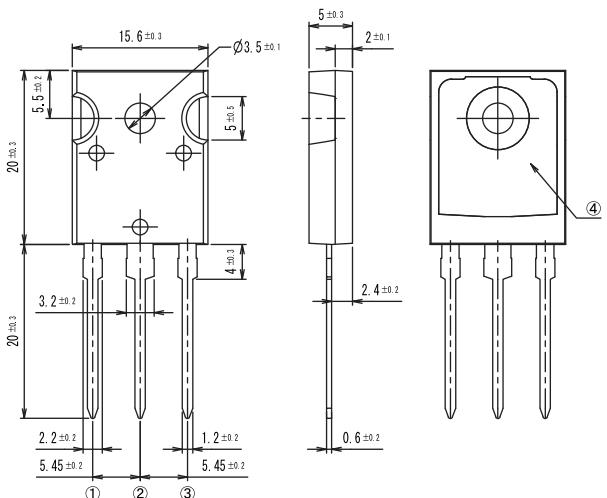


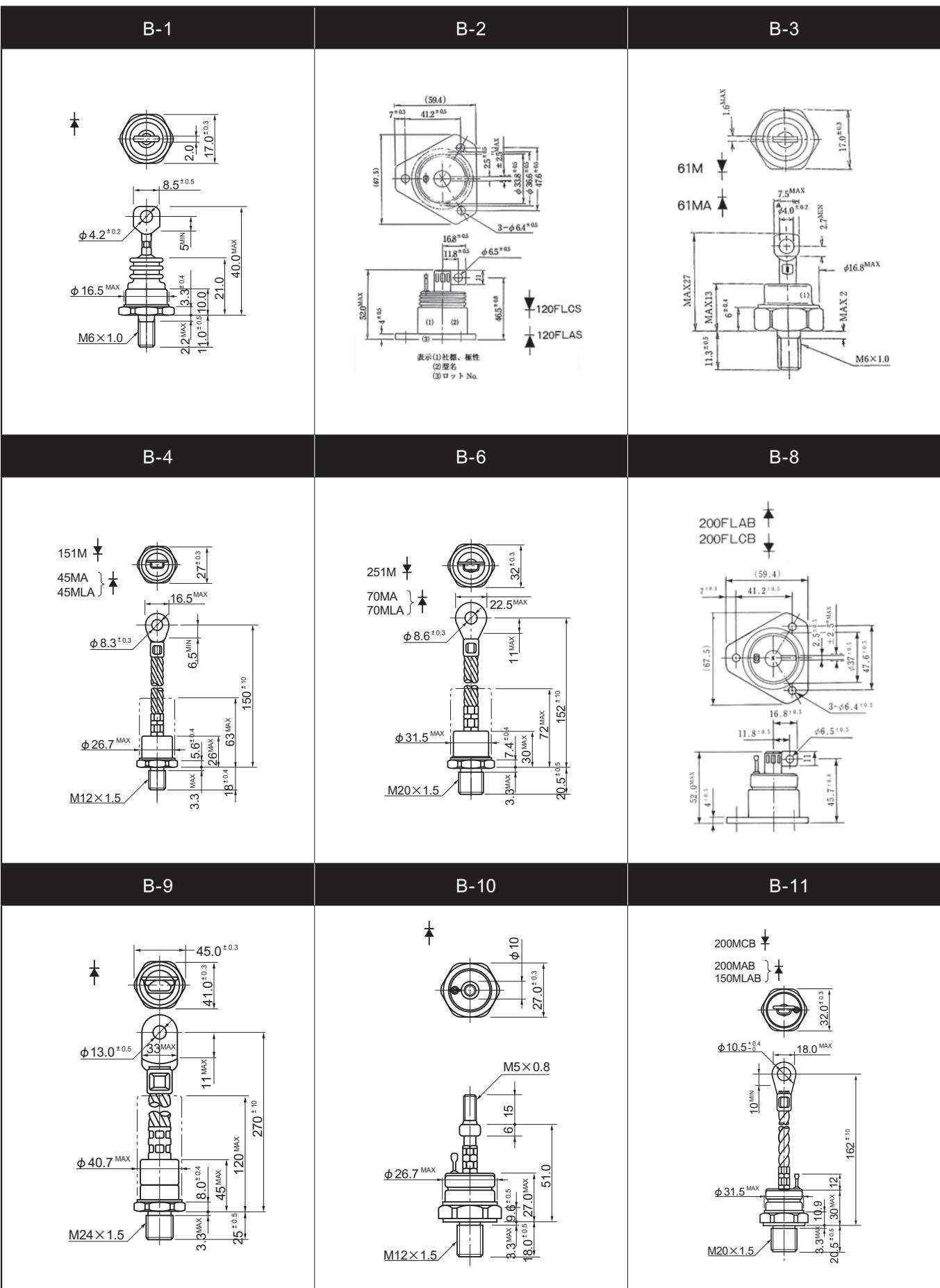
## 5. 外形寸法図 Outline

<A-25> TO-247 2pin (long lead)

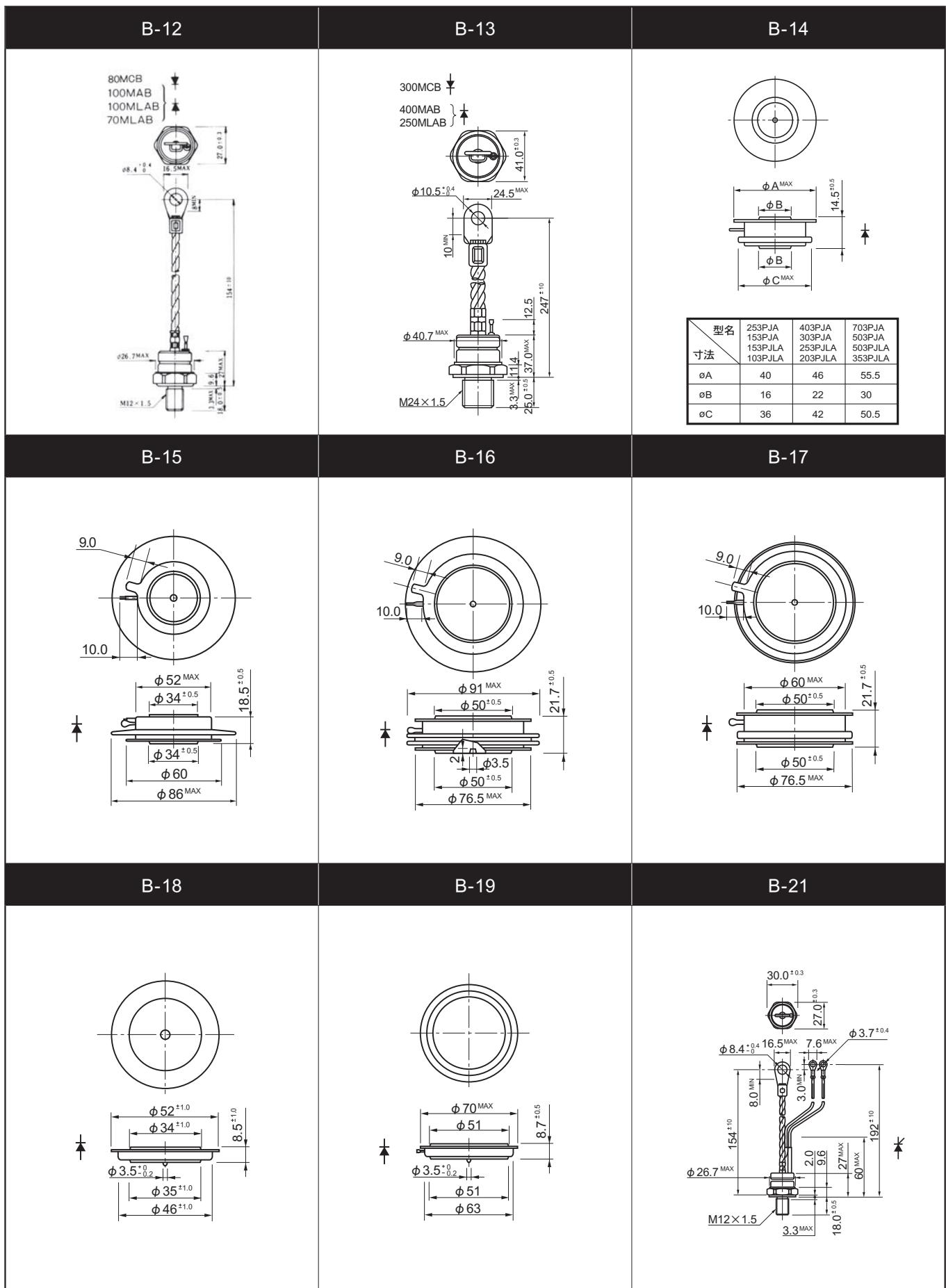


<A-26> TO-247 (long lead)

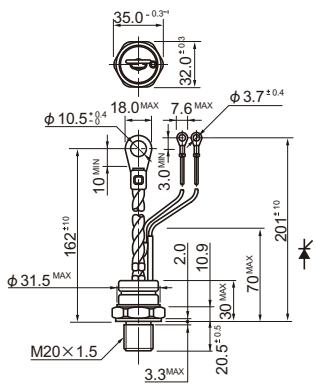




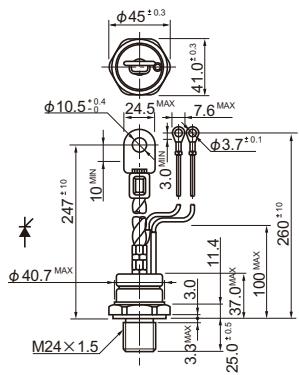
## 5. 外形寸法図 Outline



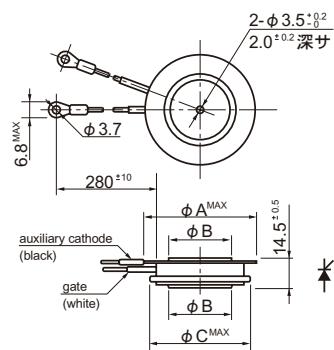
B-22



B-23

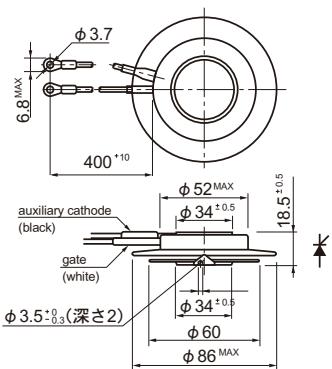


B-28

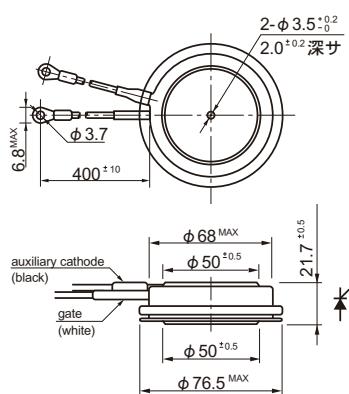


型名 寸法	103PA	235PA,453PA	503PA,553PA	803PA
A	40	46	55.5	55.5
B	16	22	30	32
C	36	42	50.5	50.5

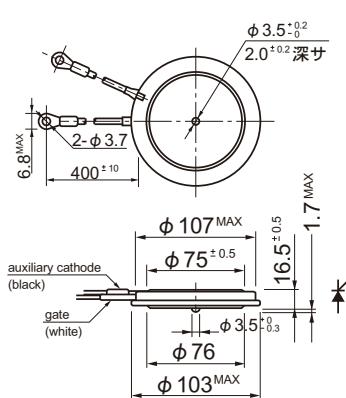
B-30



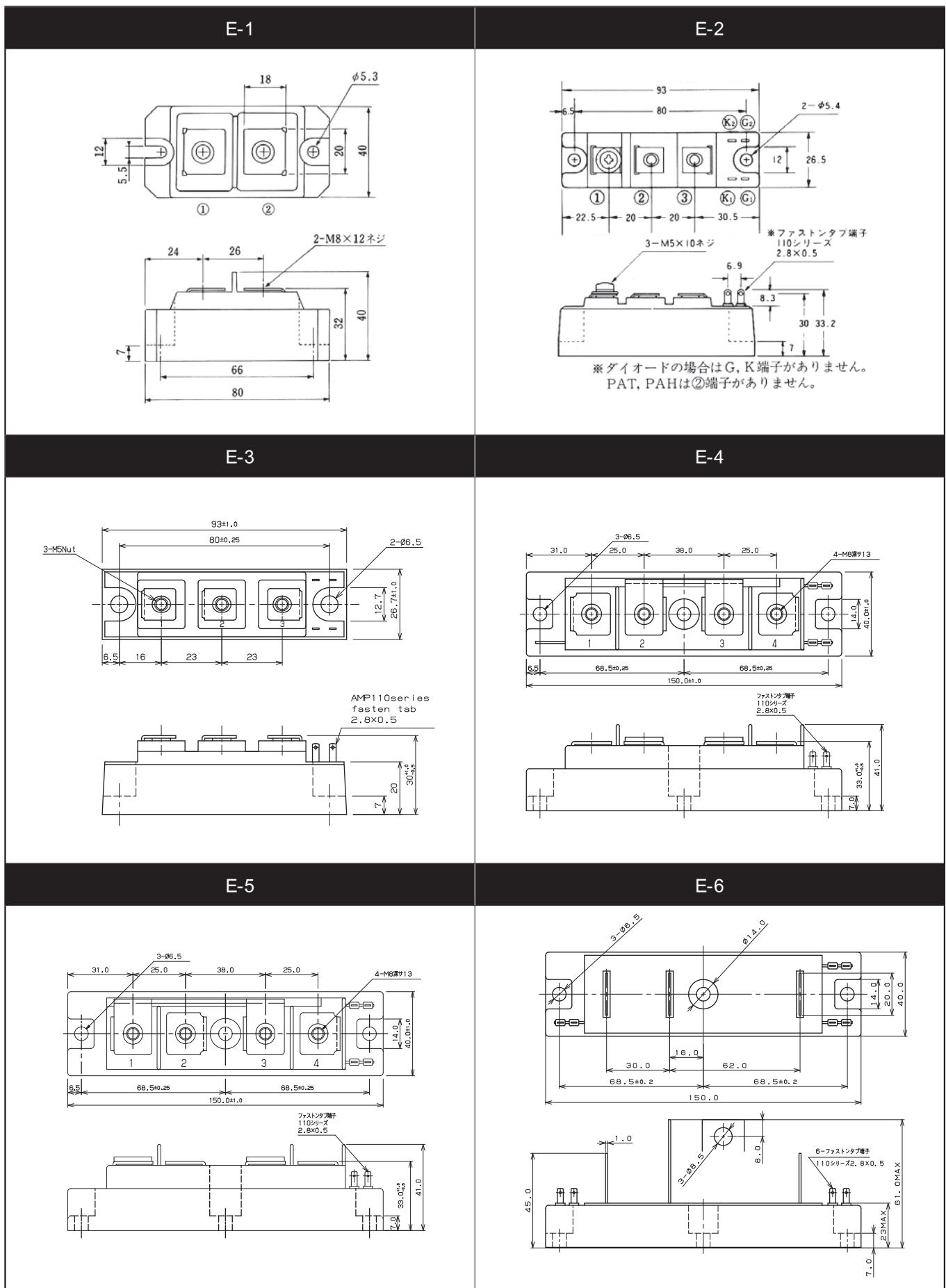
B-31



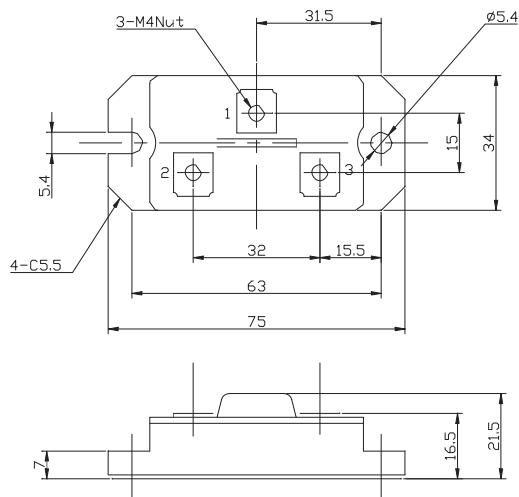
B-33



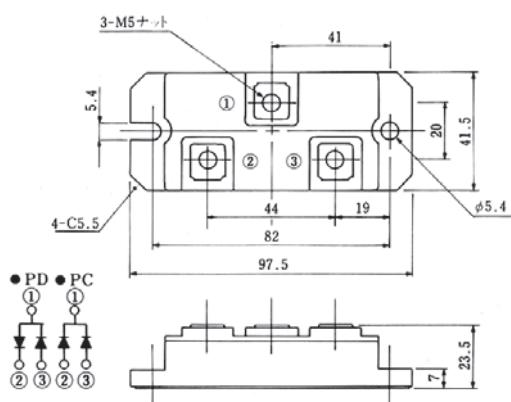
## 5. 外形寸法図 Outline



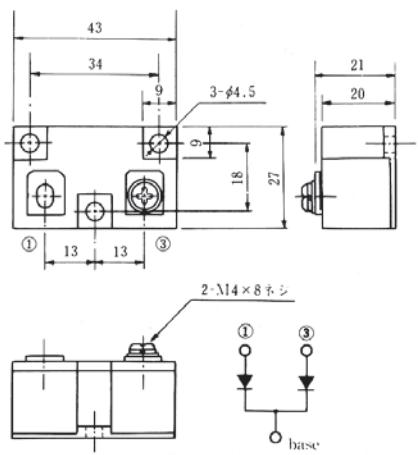
E-10



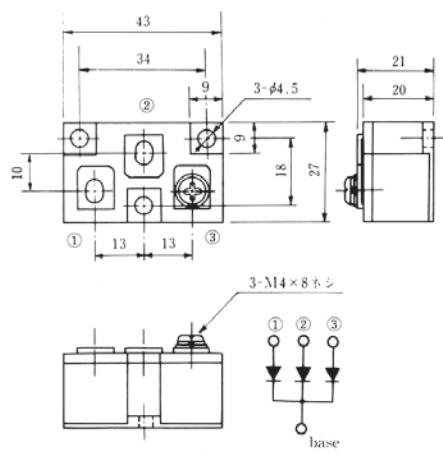
E-11



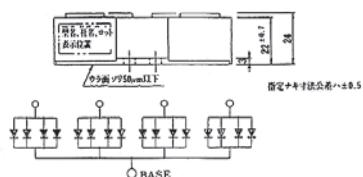
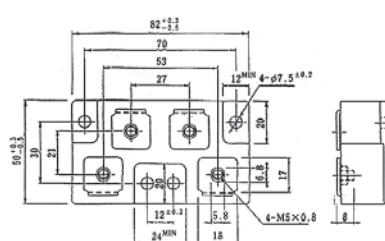
E-12



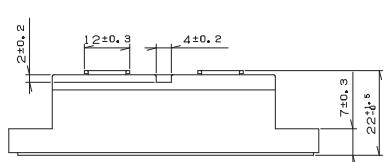
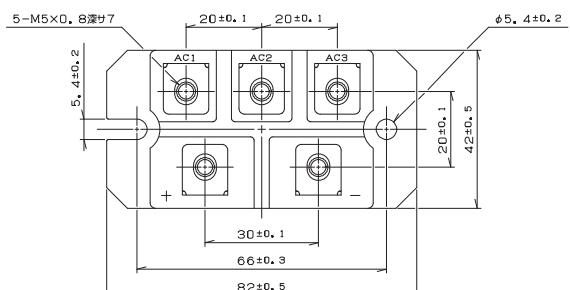
E-13



E-14

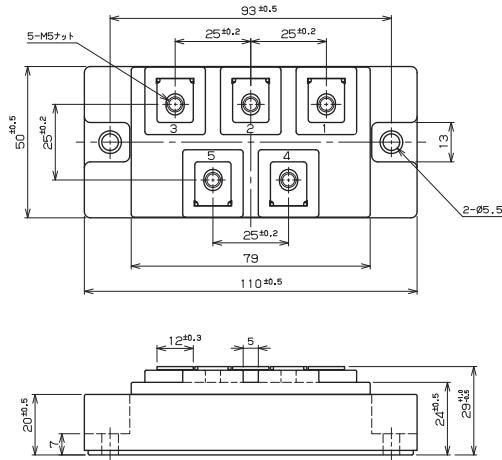


E-17

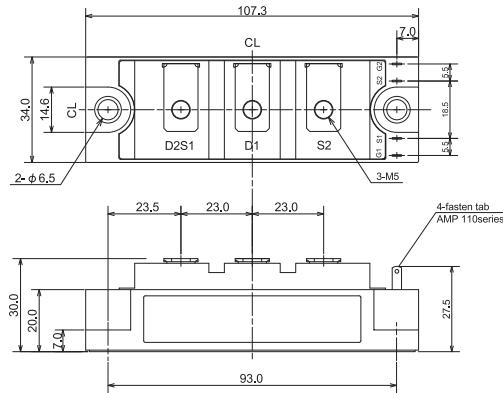


## 5. 外形寸法図 Outline

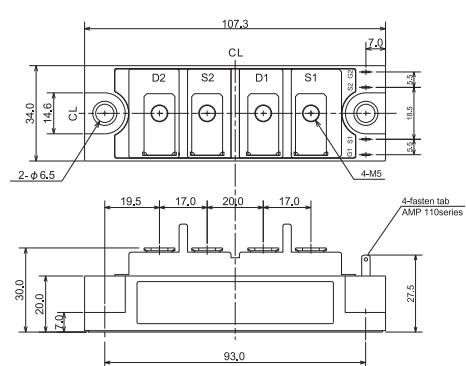
E-18



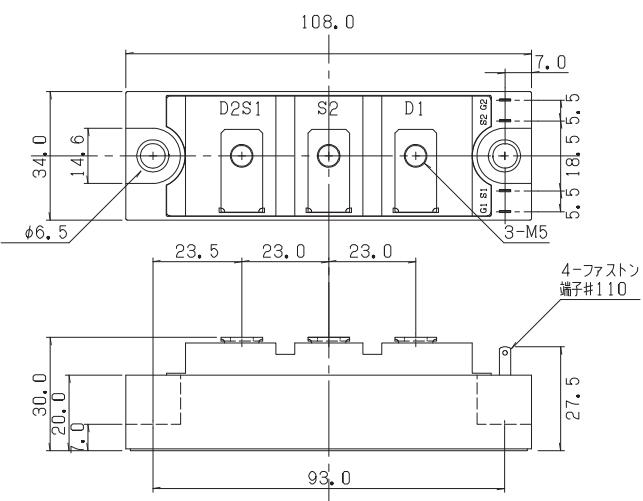
E-21



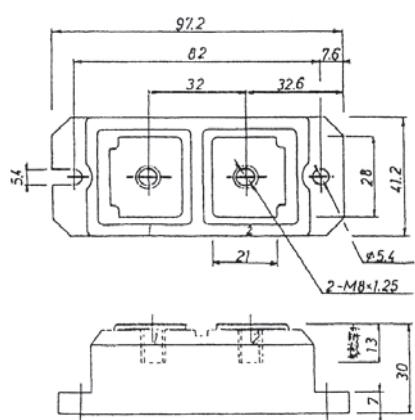
E-22



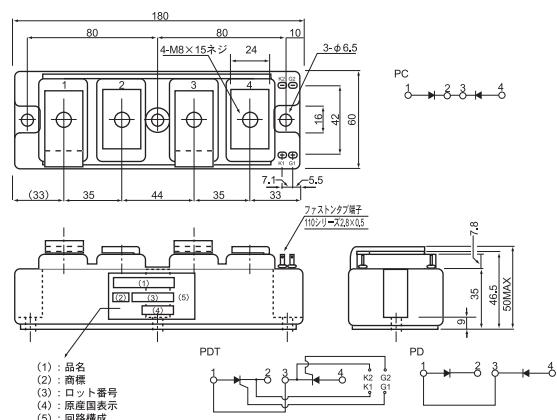
E-23



E-24

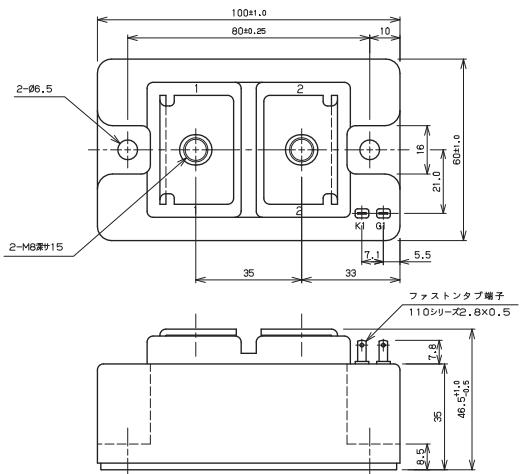


E-34

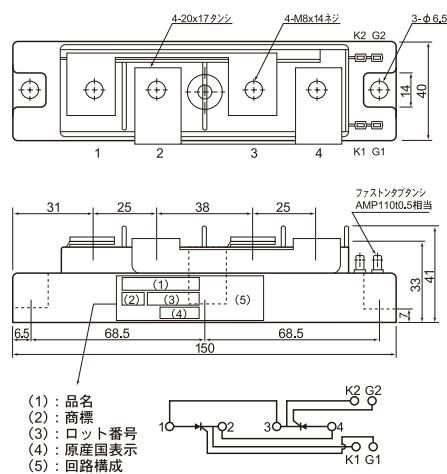


※ダイオードの場合はG・K端子がありません

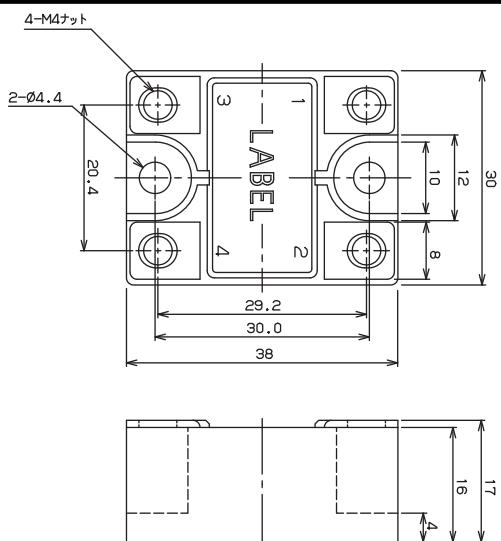
E-35



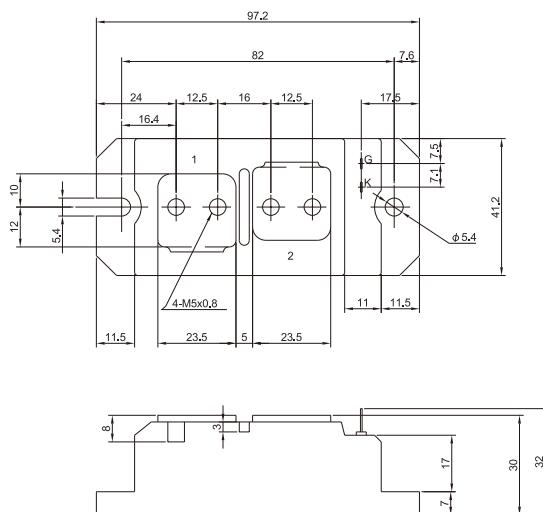
E-37



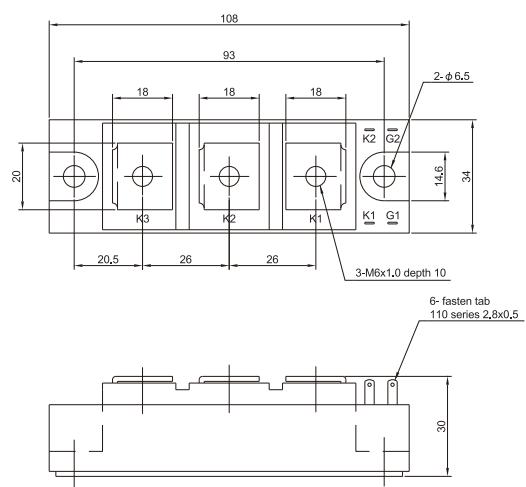
E-38



E-42

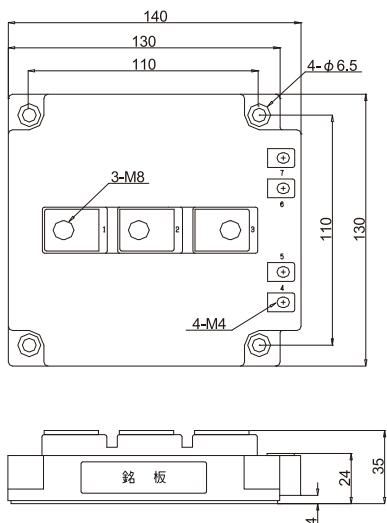


E-44



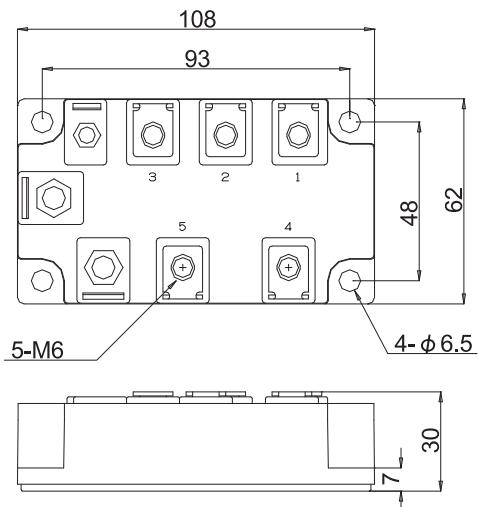
※ダイオードの場合は G・K 端子がありません

E-50

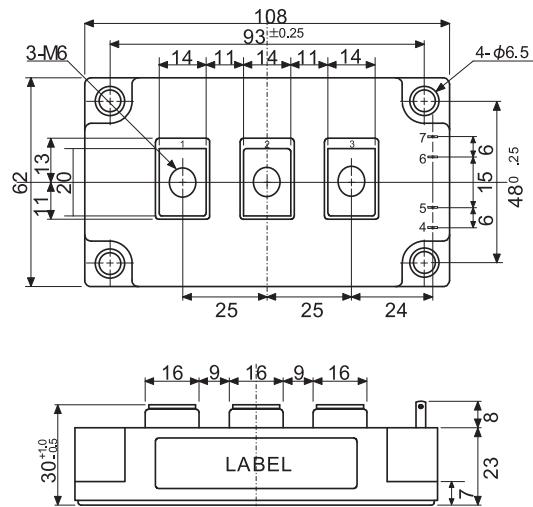


## 5. 外形寸法図 Outline

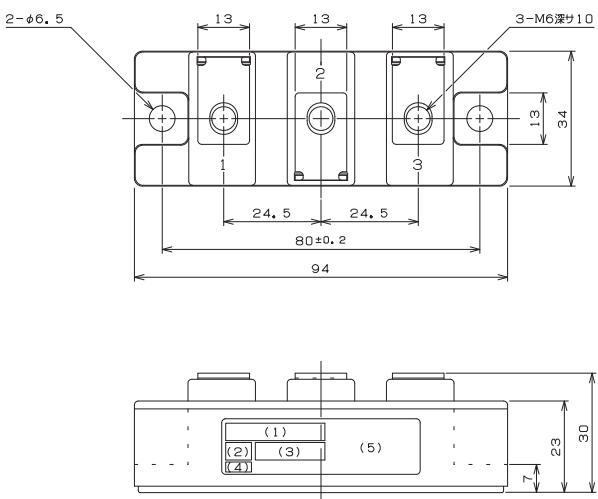
E-51



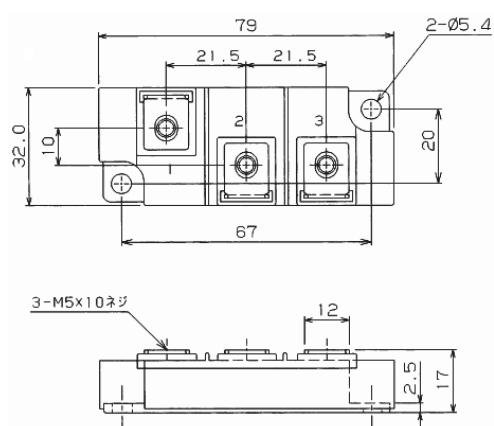
E-56



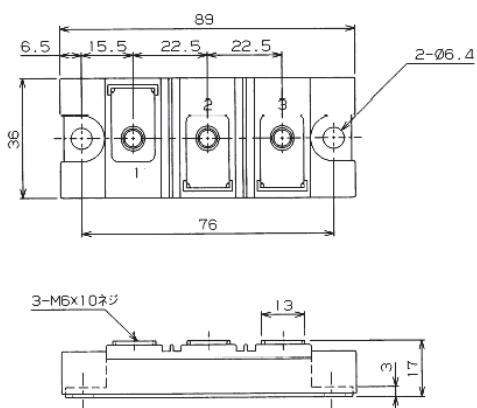
E-58



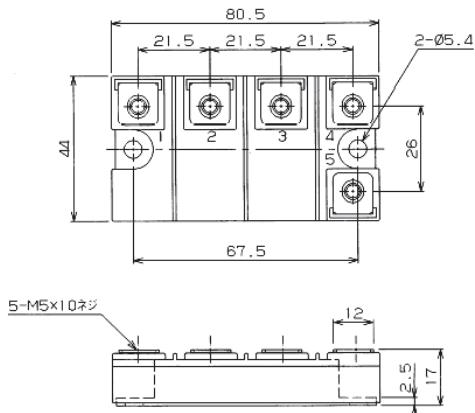
E-60



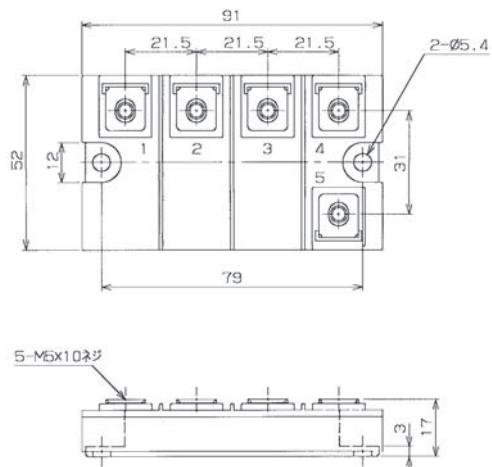
E-61



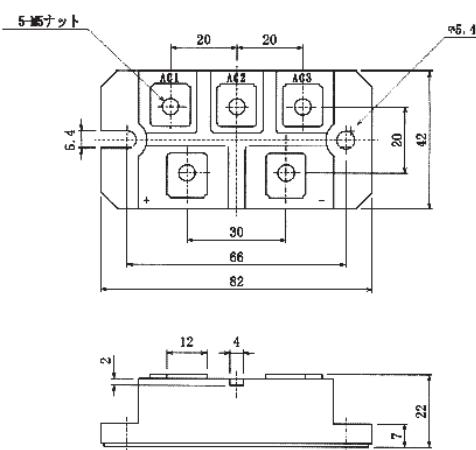
E-62



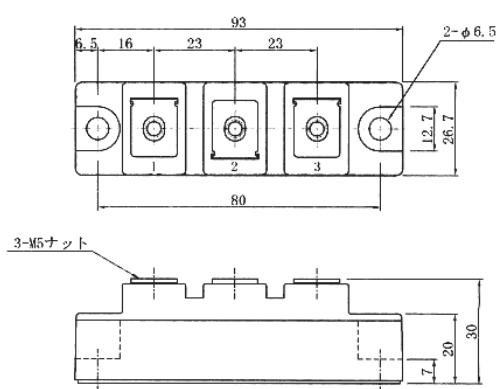
E-63



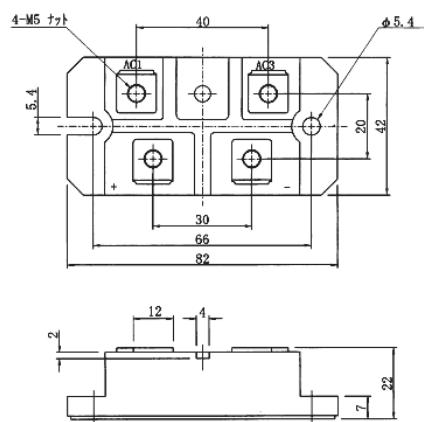
E-64



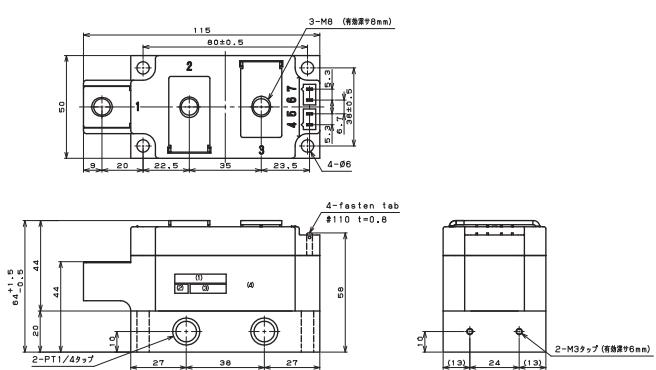
E-65



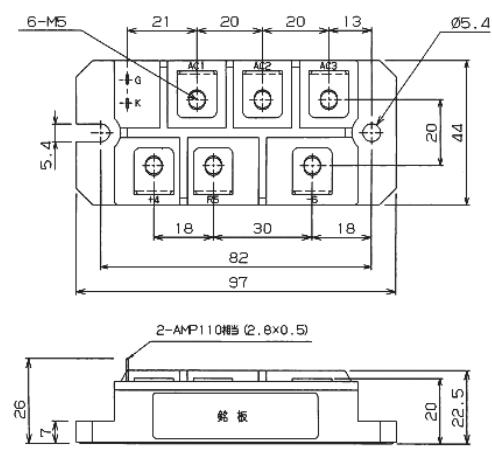
E-66



E-67

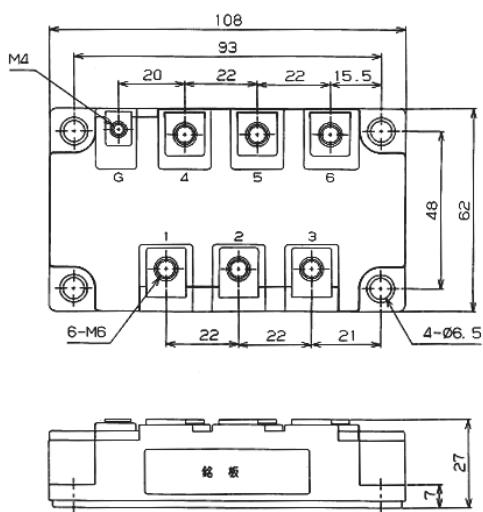


E-68

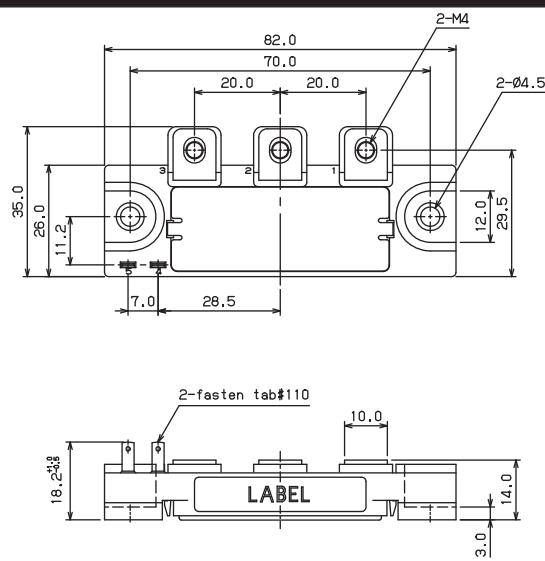


## 5. 外形寸法図 Outline

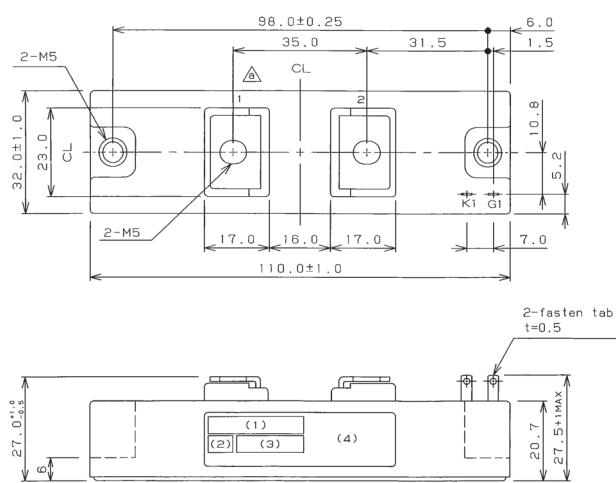
E-69



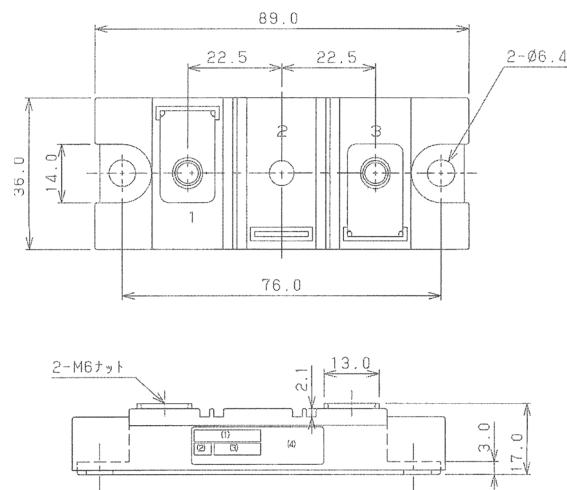
E-71



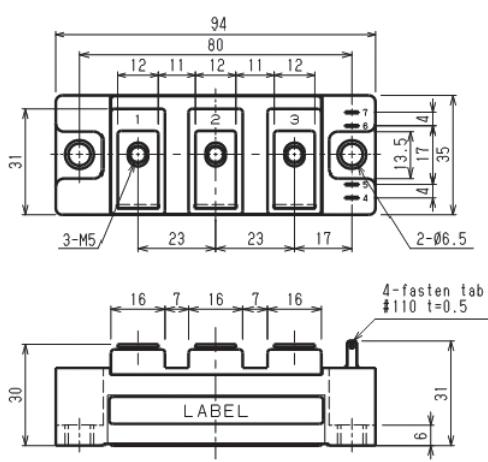
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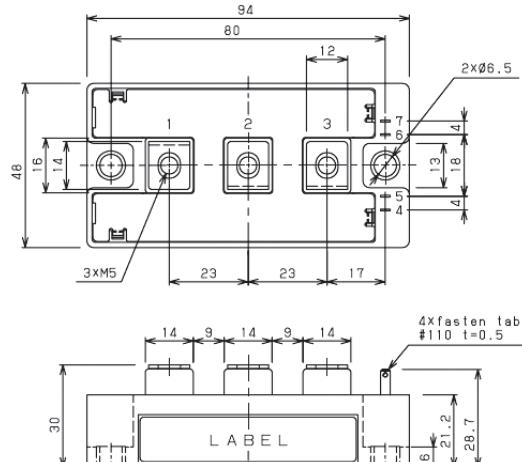
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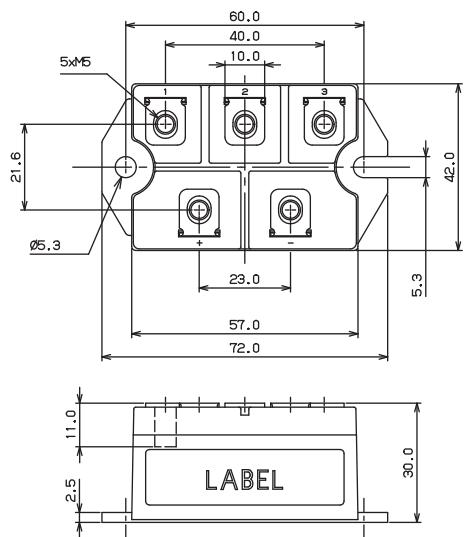
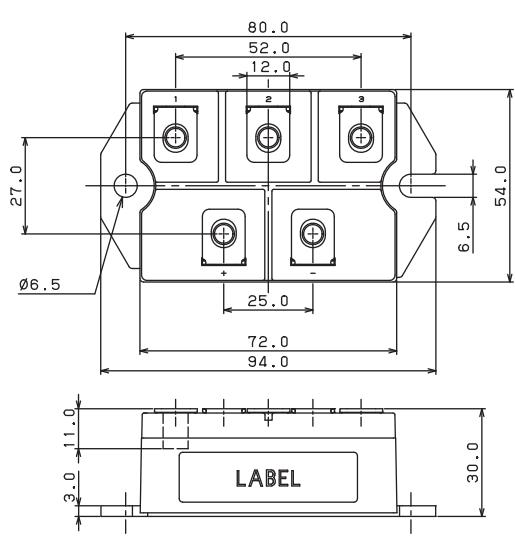
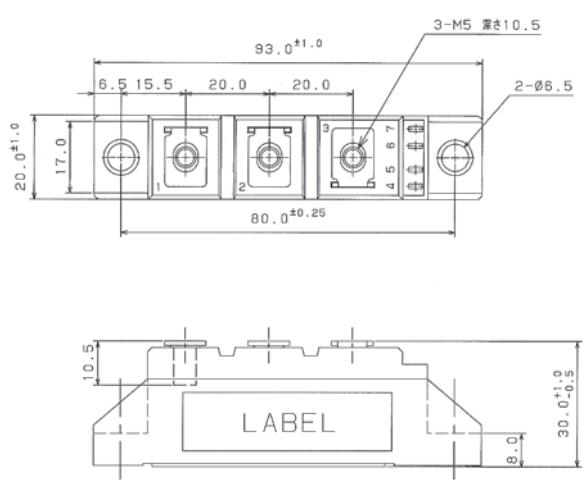
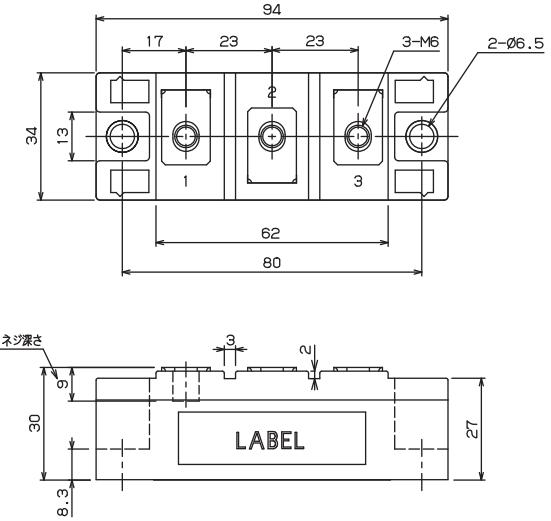
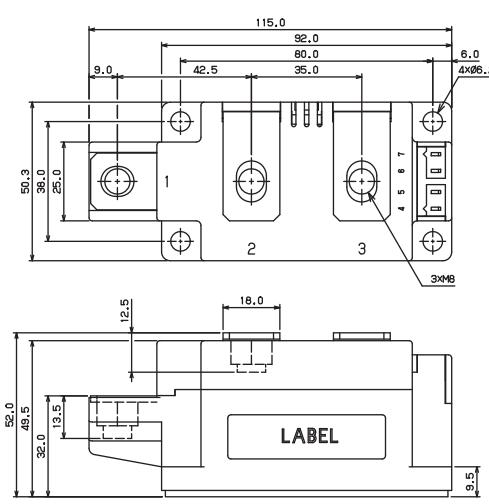
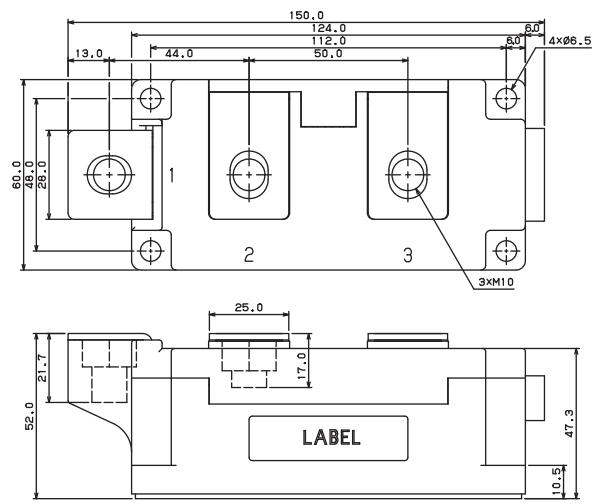


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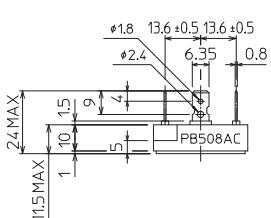
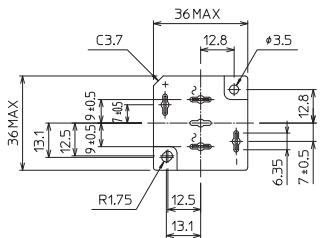
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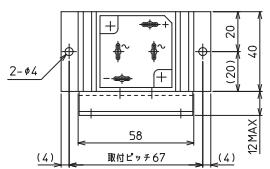
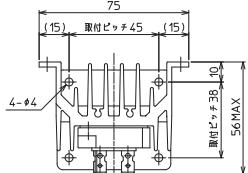
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## 5. 外形寸法図 Outline

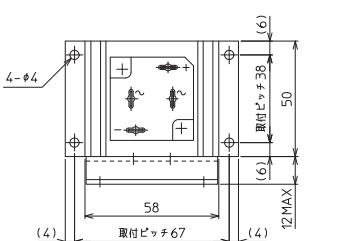
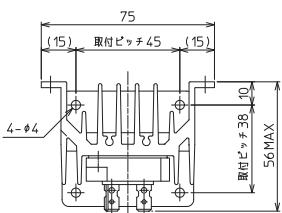
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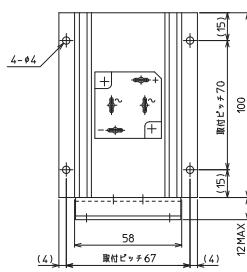
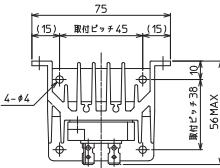
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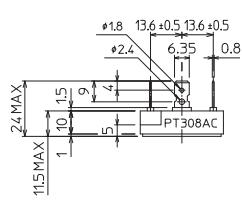
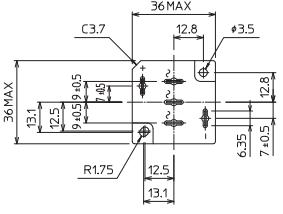
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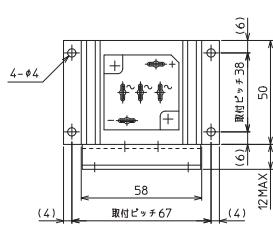
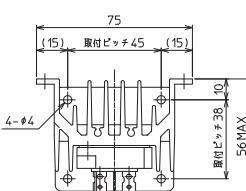
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F-5



F-6



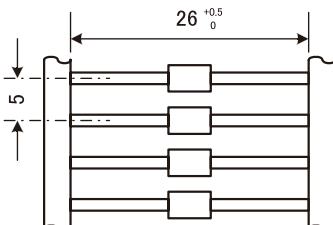
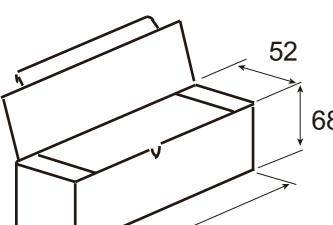
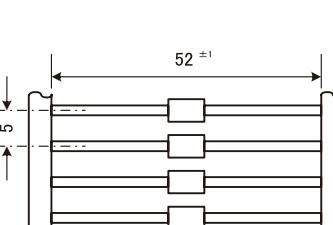
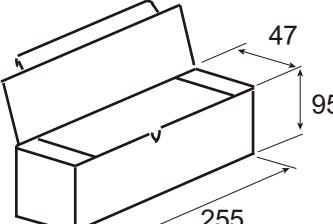
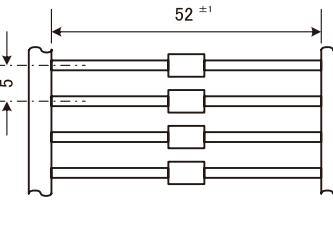
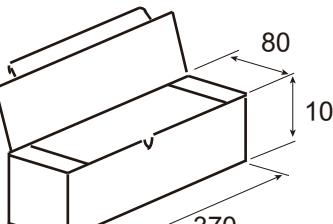
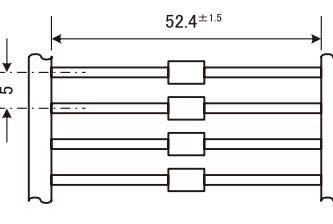
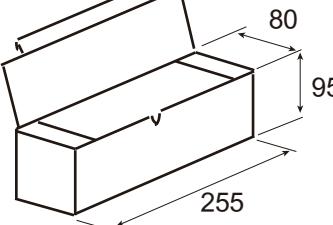
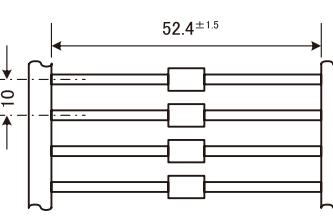
## 6. 梱包仕様 Packing Specifications

### 6-1. 最小発注単位 / 最小発注数量 Standard Packing Quantity / Minimum Order Quantity

Outline		梱包形態 Packaging Style	テーピング型名 Taping Code	最小発注単位[個] Standard Packing Quantity [pcs.]	最小発注数量[個] Minimum Order Quantity [pcs.]
Axial Lead Device	A-1 3Max × Ø2.7 (DO-41S)	バルク Bulk in Plastic Bag	-	2,000	2,000
		つづら折りテーピング Tape & Ammunition Box	TA1B2	2,000	2,000
			TA2B5	5,000	5,000
	A-2 DO-204AC (DO-15)	バルク Bulk in Plastic Bag	-	2,000	2,000
		つづら折りテーピング Tape & Ammunition Box	TA1B2	1,800	1,800
			TA2B5	2,000	2,000
Surface Mounting Device	A-3 DO-201AD	バルク Bulk in Plastic Bag	-	2,000	2,000
		つづら折りテーピング Tape & Ammunition Box	TA2B5	800	800
	A-4 SOD-323FL	リールテーピング Tape & Reel	TE8L3	3,000	3,000
	A-5 SOD-123	リールテーピング Tape & Reel	TE8L3	3,000	3,000
	A-6 DO-214AC (SMA)	リールテーピング Tape & Reel	TE12L	1,500	1,500
	A-7 NA (DO-221BC)	リールテーピング Tape & Reel	TE12L	3,000	3,000
	A-8 NB	リールテーピング Tape & Reel	TE12L	1,500	1,500
	A-9 nSMC	リールテーピング Tape & Reel	TE16L	3,000	3,000
	A-10 TO-277	リールテーピング Tape & Reel	TE16L3	3,000	3,000
	A-12 TO-252 (Dpak)	リールテーピング Tape & Reel	TE16L3	3,000	3,000
Through hole Device	A-21 TO-263 (D2pak)	スティック Plastic Tube	-	2,500 (50pcs. × 50tubes)	2,500
		リールテーピング Tape & Reel	TE24L1	1,000	1,000
	A-22 TO-263LP	リールテーピング Tape & Reel	TE24L2	2,000	2,000
	A-11 TO-251	スティック Plastic Tube	-	6,750 (75pcs. × 90tubes)	6,750
	A-19 A-20 TO-262	スティック Plastic Tube	-	2,500 (50pcs. × 50tubes)	2,500
	A-14 A-15 A-16 A-17 A-18 TO-220 TO-220 Full-Mold	スティック Plastic Tube	-	2,500 (50pcs. × 50tubes)	2,500
	A-23 A-24 TO-247	スティック Plastic Tube	-	1,000 (25pcs. × 40tubes)	1,000
	A-25 A-26 TO-247 (long lead)	スティック Plastic Tube	-	750 (25pcs. × 30tubes)	750

## 6. 梱包仕様 Packing Specifications

6-2. つづら折りテーピング仕様 Tape & Ammunition Box

テーピング型名 Taping Code	Outline	テーピング形状および寸法 Tape Demensions (mm)	包装形態および寸法 Box Dimensions (mm)	梱包単位 (個) Contents per units Package (pcs.) /pc.s)
TA1B2	A-1 3Max × ø2.7 (DO-41S)			2,000
	A-2 DO-204AC (DO-15)			1,800
TA2B5	A-1 3Max × ø2.7 (DO-41S)			5,000
	A-2 DO-204AC (DO-15)			2,000
	A-3 DO-201AD			800

6-3. リールテーピング仕様 (1/2) Embossed Carrier Tape & Reel (1/2)

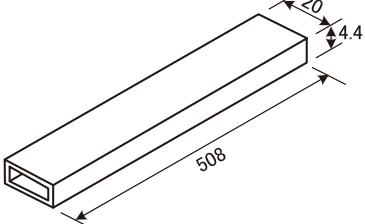
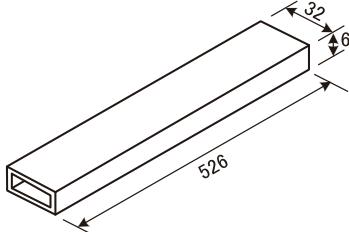
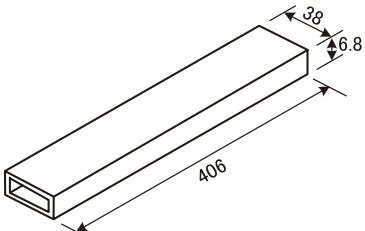
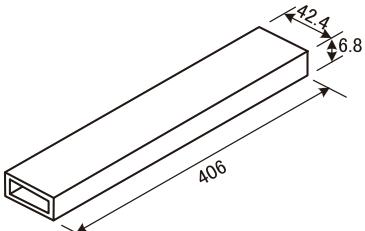
テーピング型名 Taping Code	Outline	テーピング形状および寸法 Tape Demensions (mm)	包装形態および寸法 Box Dimensions (mm)	梱包単位 (個) Contents per Package (pcs.)
TE8L3	A-4 SOD-323FL			3,000
TE8L3	A-5 SOD-123			3,000
TE12L	A-6 DO-214AC (SMA)			1,500
TE12L	A-7 NA (DO-221BC)			3,000
TE12L	A-8 NB			1,500

## 6. 梱包仕様 Packing Specifications

### 6-3. リールテーピング仕様 (2/2) Embossed Carrier Tape & Reel (2/2)

テーピング型名 Taping Code	Outline	テーピング形状および寸法 Tape Demensions (mm)	包装形態および寸法 Box Dimensions (mm)	梱包単位 (個) Contents per Package (pcs.)
TE16L	A-9 nSMC	<p>L type      Index hole <math>\phi 1.5^{+0.2}_{-0}</math>      R type      2.0<math>^{+0.1}_{-0}</math> 4.0<math>^{+0.1}_{-0}</math> 0.4<math>^{+0.05}_{-0}</math>      8.5<math>^{+0.1}_{-0}</math> 16.0<math>^{+2}_{-1}</math> 2.4<math>^{+0.1}_{-0}</math>      4.4<math>^{+0.1}_{-0}</math> 8.0<math>^{+0.1}_{-0}</math> 7.5<math>^{+0.1}_{-0}</math>      Direction of Feed →</p>	<p>21.5 ± 1.5      13.0 ± 0.5      330.0 ± 2      17.5 ± 1.5</p>	3,000
TE16L3	A-12 TO-252 (Dpak)	<p>Index hole <math>\phi 1.5^{+0.2}_{-0}</math>      16.0<math>^{+2}_{-1}</math> 2.4<math>^{+0.1}_{-0}</math>      8.5<math>^{+0.1}_{-0}</math> 16.0<math>^{+2}_{-1}</math> 2.4<math>^{+0.1}_{-0}</math>      4.4<math>^{+0.1}_{-0}</math> 8.0<math>^{+0.1}_{-0}</math> 7.5<math>^{+0.1}_{-0}</math>      Direction of Feed →</p>	<p>47.5 ± 1.5      13.0 ± 0.5      330.0 ± 2      17.5 ± 1.5</p>	3,000
TE16L3	A-10 TO-277	<p>Index hole <math>\phi 1.5^{+0.2}_{-0}</math>      16.0<math>^{+2}_{-1}</math> 2.4<math>^{+0.1}_{-0}</math>      8.5<math>^{+0.1}_{-0}</math> 16.0<math>^{+2}_{-1}</math> 2.4<math>^{+0.1}_{-0}</math>      4.4<math>^{+0.1}_{-0}</math> 8.0<math>^{+0.1}_{-0}</math> 7.5<math>^{+0.1}_{-0}</math>      Direction of Feed →</p>	<p>47.5 ± 1.5      13.0 ± 0.5      330.0 ± 2      17.5 ± 1.5</p>	3,000
TE24L1	A-21 TO-263 (D2pak)	<p>L type      Index hole <math>\phi 1.5^{+0.1}_{-0}</math>      R type      2.0<math>^{+0.1}_{-0}</math> 4.0<math>^{+0.1}_{-0}</math> 0.4<math>^{+0.05}_{-0}</math>      13.5<math>^{+0.1}_{-0}</math> 11.5<math>^{+0.1}_{-0}</math> 2.4<math>^{+0.1}_{-0}</math>      10.6<math>^{+0.1}_{-0}</math> 12.0<math>^{+0.1}_{-0}</math> 5.1<math>^{+0.1}_{-0}</math>      Direction of Feed →</p>	<p>29.5 ± 1.5      13.0 ± 0.5      330.0 ± 2      25.5 ± 1.5</p>	1,000
TE24L2	A-22 TO-263LP	<p>Index hole <math>\phi 1.5^{+0.1}_{-0}</math>      14.0<math>^{+0.1}_{-0}</math> 11.5<math>^{+0.1}_{-0}</math> 0.3<math>^{+0.05}_{-0}</math>      10.6<math>^{+0.1}_{-0}</math> 12.0<math>^{+0.1}_{-0}</math> 2.0<math>^{+0.1}_{-0}</math>      Direction of Feed →</p>	<p>29.5 ± 1.5      13.0 ± 0.5      330.0 ± 2      25.5 ± 1.5</p>	2,000

#### 6-4. スティック仕様 Plastic Tube

Outline		スティック形状および寸法 Tube Demensions (mm)	梱包単位 (個) Contents per Package (pcs.)
A-11 A-12	TO-251 TO-251(Dpak)		75
A-13 A-14 A-15 A-17 A-19 A-20	TO-220 TO-220 Full-Mold TO-262		50
A-23 A-24	TO-247		25
A-25 A-26	TO-247 (long lead)		25



当カタログに記載の情報は 2019 年 3 月時点のものです。

The information contained in this catalog is current as of March 2019.

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