



S E M I C O N D U C T O R Products Catalog

SANSHA ELECTRIC MFG. CO., LTD.

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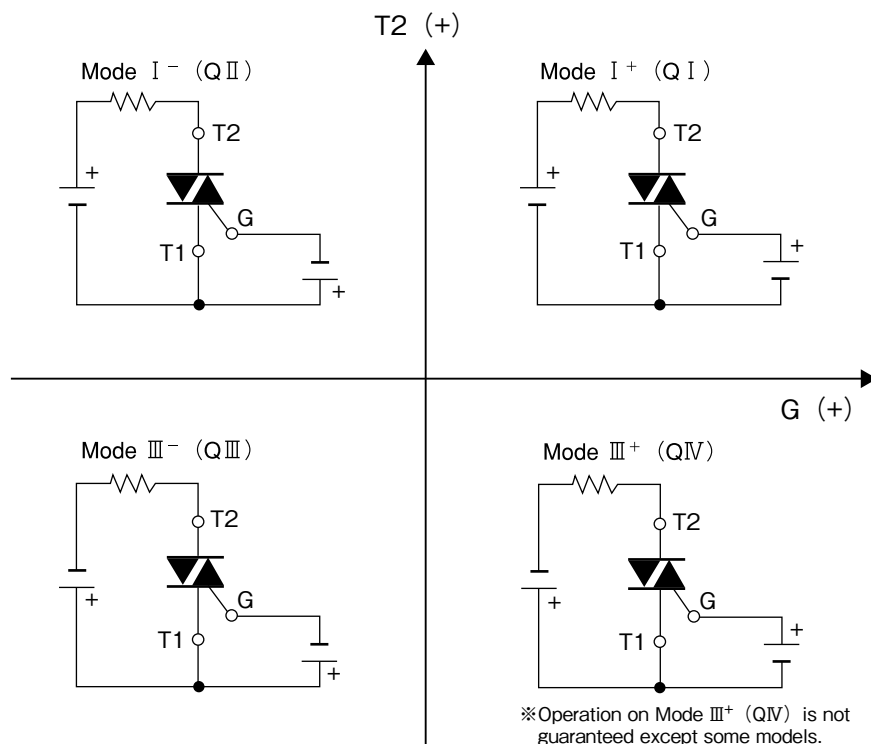
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SYMBOLS & TERMS

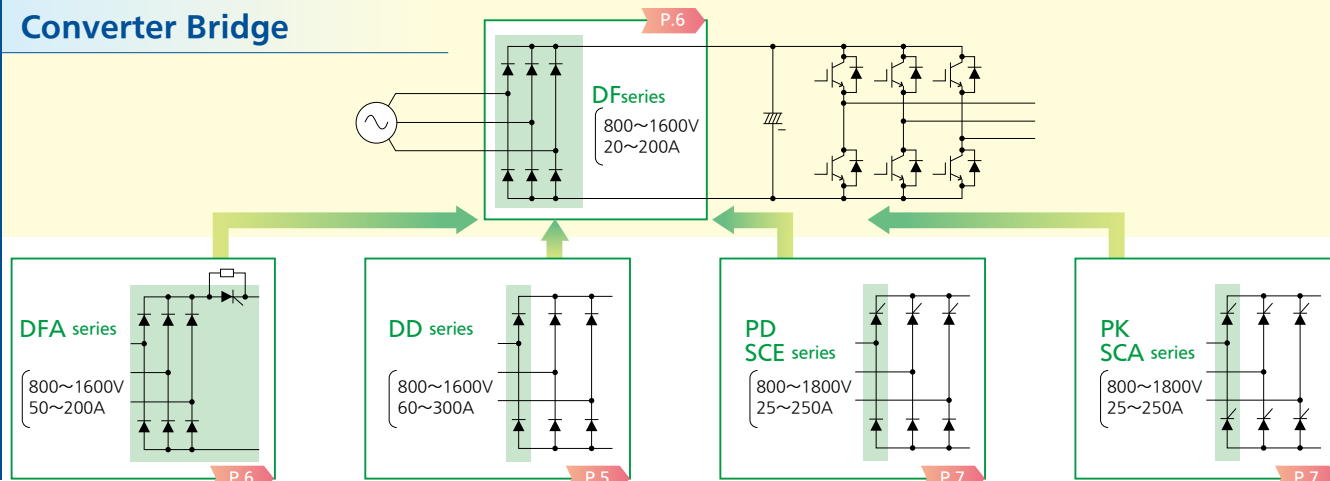
FRD		DIODE		THYRISTOR		TRIAC	
Symbol	Terminology	Symbol	Terminology	Symbol	Terminology	Symbol	Terminology
V_{RRM}	Repetitive Peak Reverse Voltage	V_{RRM}	Repetitive Peak Reverse Voltage	V_{DRM}	Repetitive Peak Off-State Voltage	V_{DRM}	Repetitive Peak Off-State Voltage
$I_{F(AV)}$	Average Forward Current	$I_{F(AV)}$	Average Forward Current	V_{RRM}	Repetitive Peak Reverse Voltage	$I_T(RMS)$	RMS On-State Current
I_{FSM}	Surge Forward Current	I_D	Output Current (D.C.)	$I_{T(AV)}$	Average On-State Current	I_{DRM}	Repetitive Peak Off-State Current
I^2t	I^2t (for fusing)	I_{FSM}	Surge Forward Current	$I_T(RMS)$	RMS On-State Current	V_{TM}	Peak On-State Voltage
V_{FM}	Forward Voltage Drop	I^2t	I^2t (for fusing)	I_{TSM}	Surge On-State Current	I_{GT}	Gate Trigger Current
I_{RRM}	Repetitive Peak Reverse Current	V_{FM}	Forward Voltage Drop	I^2t	I^2t (for fusing)	V_{GT}	Gate Trigger Voltage
t_{rr}	Reverse Recovery Time	I_{RRM}	Repetitive Peak Reverse Current	I_{GT}	Gate Trigger Current	T_j	Operating Junction Temperature
T_j	Operating Junction Temperature	T_j	Operating Junction Temperature	V_{GT}	Gate Trigger Voltage	$[dv/dt]_c$	Critical Rate of Rise of Off-State Voltage at Commutation
$R_{th(j-c)}$	Thermal Impedance	$R_{th(j-c)}$	Thermal Impedance	I_{DRM}	Repetitive Peak Off-State Current	$R_{th(j-c)}$	Thermal Impedance
				I_{RRM}	Repetitive Peak Reverse Current		
				dv/dt	Critical Rate of Rise of Off-State Voltage		
				di/dt	Critical Rate of Rise of On-State Current		
				T_j	Operating Junction Temperature		
				$R_{th(j-c)}$	Thermal Impedance		

GATE TRIGGER MODE for TRIACS (Quadrant definitions)

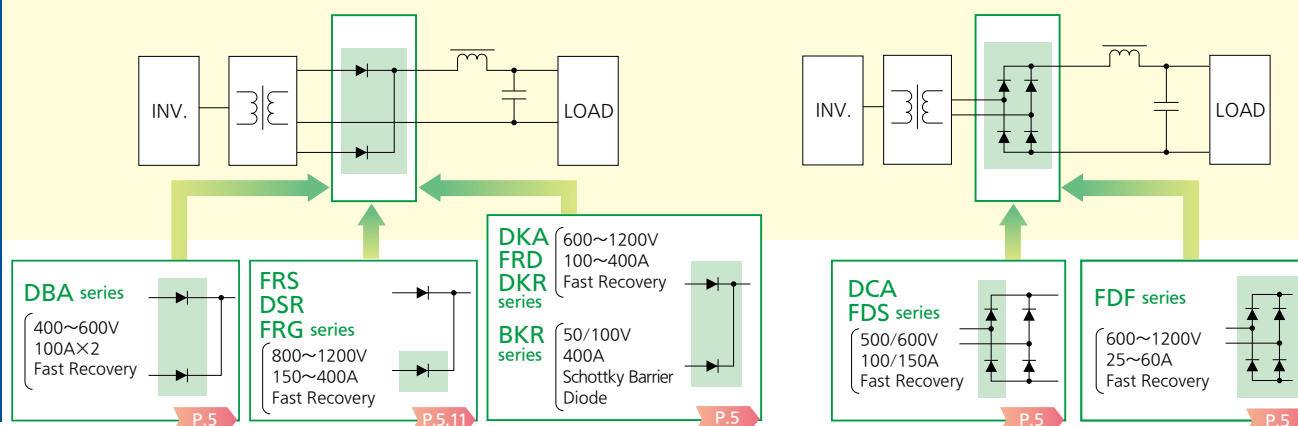


SELECTION GUIDE

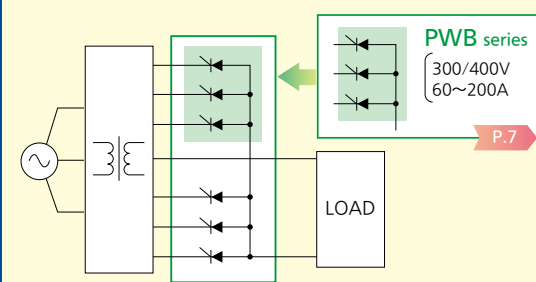
Converter Bridge



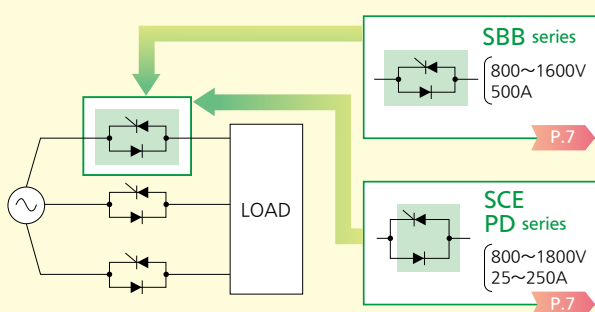
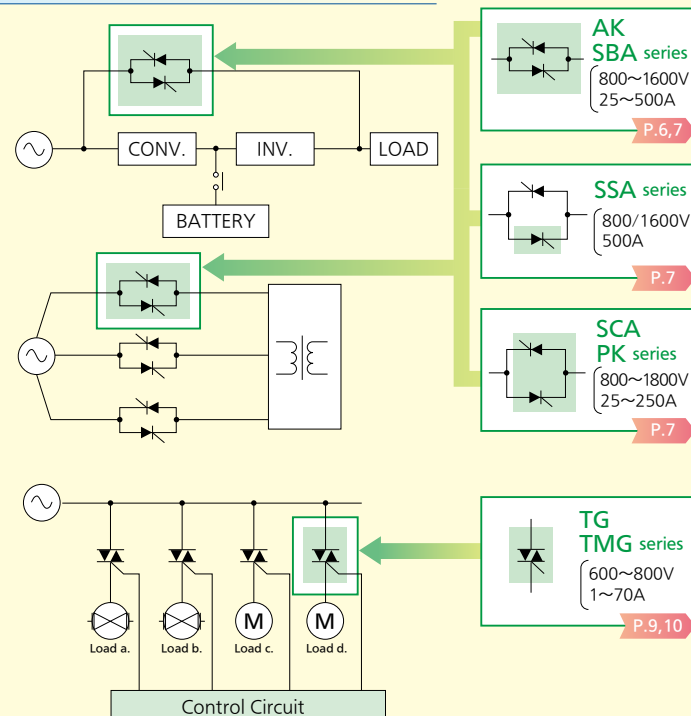
Secondary Rectifier



3-Phase Control



AC Control



POWER MODULE



PRODUCT FEATURES

► Fast Recovery Diode

We design to minimize switching losses for our fast recovery diodes. And we add the soft recovery diodes with a low noise characteristic to our fast recovery diode line-up.

We can offer the suitable device in applications requiring high efficiency and favorable to the environment.

Fast Soft Recovery Series

DCA Series Two types of recovery time are available.

DBA Series Two types of recovery time and softness are available.

Fast Recovery Series

FRG Series Low current diode in an easy-to-assemble Tab terminal

FDF Series Single phase bridge rectifier

FRS Series High current diode up to 400A

DKR Series Compact non-isolated package, dual diode common cathode

► Diode / Thyristor rectifier

Thyristor: 800V, 1600V and 1800V models are available; The characteristics of dv/dt and surge current are suitable for 200V/400V input rectification.

Three phase bridges are offered in different package height, which allow variable layouts with different module packages and improved mounting.

DF Series

Three phase bridge rectifier in various case profile

DF_AA/BA : Standard models

DF_CA : High surge current withstand models

DF_NA : Compact SIP(=Single-In-line Package) modules

DF_AC/AE : 17mm low profile modules

DF_LA/LB : LA/LB series are same profile. LB type has partitioned terminals for increased creepage distance

DFA Series

Three phase bridge rectifier with built-in thyristor for inrush protection at the positive DC terminal

DD / KD Series

Standard dual diode modules, in series (DD), and common cathode (KD)

PK/SCA and PD/SCE Series

Standard dual thyristor and thyristor-diode modules

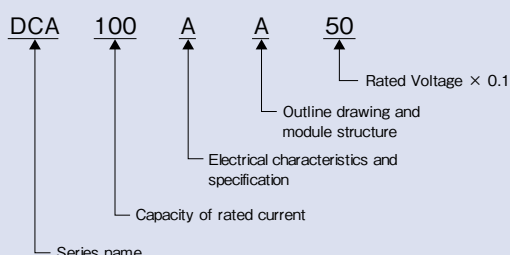
► RoHS Compliance

All our modules in this catalog are EU RoHS compliant.

► UL Recognized

Our modules are UL recognized under UL File No E76102 unless indicated as "Non Isolated Type" in this catalog.

TYPE DESIGNATION



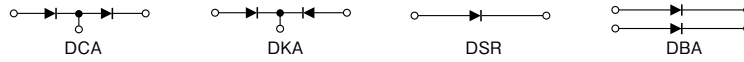
DIODE / FRD / SBD

SOFT RECOVERY DIODE

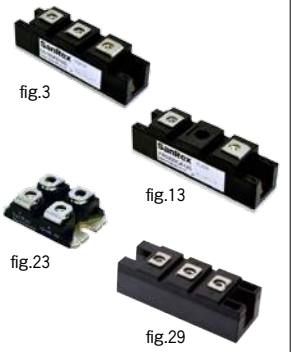
$V_{ISO} : 2500V \text{ (RMS)}$ $T_{j(max)} : 150^{\circ}C$

Type	V_{RRM} V	$I_F(AV)$		I_{FSM} A (60Hz)	I^2_t A ² s	V_{FM} V (25°C)	I_{RRM} mA (125°C)	t_{rr} ns	R_{thj-c} °C / W	Fig No.
		A	°C							
DCA100AA60	600	100	85	2000	16700	1.3	100	300	0.5	3
DCA150AA60	600	150	72	2500	26000	1.3	150	300	0.4	3
DCA100BA60	600	100	80	1350	7500	1.55	100	200	0.45	3
DCA150BA65	650	150	63	1500	9300	1.7	150	200	0.34	3
DCA200UA65	650	200	85	1350	7500	1.7	50 (150°C)	360	0.19	29
DKA200AA60	600	100	85	2000	16700	1.3	100	300	0.5	3
DKA300AA60	600	150	72	2500	26000	1.3	150	300	0.4	3
DSR200BA60	600	200	85	3300	45000	1.3	200	300	0.25	13
DBA200UA40	400	100	96	700	2100	1.20	100 (150°C)	130	0.45	23
DBA200UA60	600	100	89	700	2100	1.35	100 (150°C)	250	0.45	23
DBA200WA40	400	100	96	700	2100	1.2	4	110	0.45	23
DBA200WA60	600	100	89	700	2100	1.5	4	130	0.45	23

Connections



Package



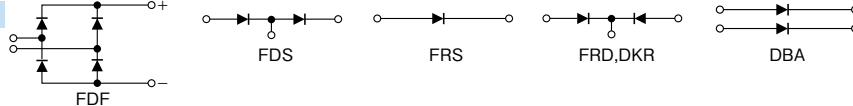
FAST RECOVERY DIODE

$V_{ISO} : 2500V \text{ (RMS)}$ $T_{j(max)} : 150^{\circ}C$

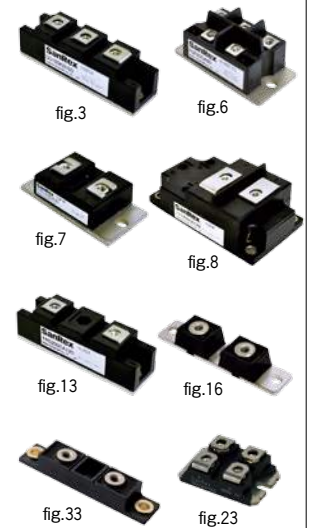
Type	V_{RRM} V	$I_F(AV)$		I_{FSM} A (60Hz)	I^2_t A ² s	V_{FM} V (25°C)	I_{RRM} mA (125°C)	t_{rr} ns	R_{thj-c} °C / W	Fig No.
		A	°C							
FDF25CA120	1200	25	114	400	660	1.8	2 (150°C)	200	0.4	6
FDF60BA60	600	60	80	600	1490	1.6	60	100	0.36	6
FRD100CA120	1200	100	78	2000	16600	1.8	5 (150°C)	300	0.4	3
FDS100CA120	1200	100	78	2000	16600	1.8	5 (150°C)	300	0.4	3
FRS150BA50	500	150	85	3000	37500	1.3	150	200	0.33	7
FRS200CA120	1200	200	78	3300	45000	1.8	10 (150°C)	350	0.2	13
FRS300BA50	500	300	85	4000	66600	1.3	300	200	0.165	7
FRS300CA50	500	300	116	4000	66600	1.3	300	200	0.085	7
FRS400BA60	600	400	94	4000	66640	1.4	400	200	0.1	8
FRS400CA120	1200	400	78	4000	66640	1.8	20 (150°C)	400	0.1	8
FRS400EA200	2000	400	79	5000	104000	2.2 (125°C)	100 (150°C)	700	0.08	8
DKR200AB60*	600	100	133	3600	54000	1.4	100	200	0.125	16
DKR300AB60*	600	150	124	3600	54000	1.4	100	200	0.125	16
DKR400AB60*	600	200	122	6000	150000	1.4	150	200	0.1	16
DKR200BE (BF) 60*	600	100	120	3600	54000	1.4	10	200	0.21	33
DKR300BE (BF) 60*	600	150	106	3600	54000	1.4	10	200	0.21	33
DKR400BE (BF) 60*	600	200	102	5600	130000	1.4	10	200	0.17	33
DBA200YA40	400	100	89	1100	5000	1.35	6 (150°C)	85	0.45	23

*Non-Isolated Type

Connections



Package



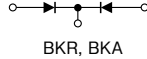
SCHOTTKY BARRIER DIODE

$V_{ISO} : 2500V \text{ (RMS)}$ $T_{j(max)} : 150^{\circ}C$

Type	V_{RRM} V	$I_F(AV)$		I_{FSM} A (60Hz)	I^2_t A ² s	V_{FM} V (25°C)	I_{RRM} mA (125°C)	R_{thj-c} °C / W	Fig No.
		A	°C						
BKR400ABZ50*	50	200	127	7600	240000	0.57	2000	0.2	16
BKR400AB10*	100	200	112	3620	54450	0.82	40	0.2	16
BKA400AA10	100	200	83	3620	54450	0.82	140	0.4	1

*Non-Isolated Type

Connections



Package



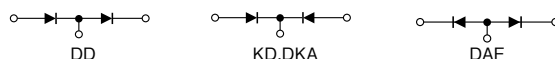
RECTIFIER DIODE DD/KD SERIES

$V_{ISO} : 2500V \text{ (RMS)}$ $T_{j(max)} : 150^{\circ}C$

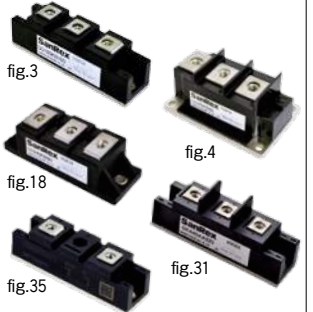
Type	V_{RRM} V	$I_F(AV)$		I_{FSM} A (60Hz)	I^2_t A ² s	V_{FM} V (25°C)	I_{RRM} mA (150°C)	R_{thj-c} °C / W	Fig No.
		A	°C						
DKA40AA220	2200	20	125	1080	4860	1.15	10	0.65	31
DD60KB80/160	800, 1600	60	110	1200	6000	1.35	20	0.52	3
KD60GB80	800	60	114	1200	6000	1.25	20	0.5	3
KD60HB160	1600	60	111	1200	6000	1.35	20	0.5	3
DKA60KB80/160	800, 1600	60	110	1200	6000	1.35	20	0.52	3
DD100KB80/160	800, 1600	100	105	2000	16500	1.35	30	0.35	3
DD160KB80/160	800, 1600	160	90	3200	42600	1.35	30	0.3	3
KD160KB80/160	800, 1600	160	90	3200	42600	1.35	30	0.3	3
DAF160AA40*	400	160	90	3200	42600	1.3	30	0.29	35
DD200KB80/160	800, 1600	200	106	5500	125000	1.3	50	0.17	18
DD200KB220	2200	200	105	5500	125000	1.4	50	0.17	18
DD240KB80/160	800, 1600	240	95	5500	125000	1.35	50	0.17	18
DD300KB80/160	800, 1600	300	91	6000	150000	1.5	50	0.14	4

*Non-Isolated Type

Connections



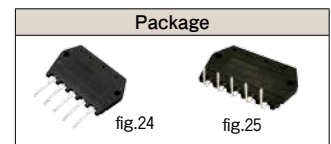
Package



3-PHASE DIODE DF-NA SERIES

Viso : 2500V (RMS) Tj(max) : 150°C

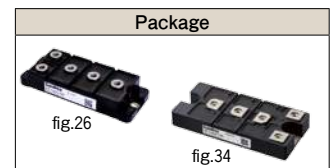
Type	VRRM V	ID		IFSM A (60Hz)	I ² t A ² s	VFM V (25°C)	IRRM mA (150°C)	Rthj-c °C / W	Fig No.
		A	°C						
DF20NA80/160 S	800, 1600	20	111	350	500	1.2	4/8	0.8	24
DF20NA80/160 F1	800, 1600	20	111	350	500	1.2	4/8	0.8	25
DF30NA80/160 S	800, 1600	30	92	400	660	1.2	5/14	0.8	24
DF30NA80/160 F1	800, 1600	30	92	400	660	1.2	5/14	0.8	25



3-PHASE DIODE DF-AC/AE SERIES

Viso : 2500V (RMS) Tj(max) : 150°C

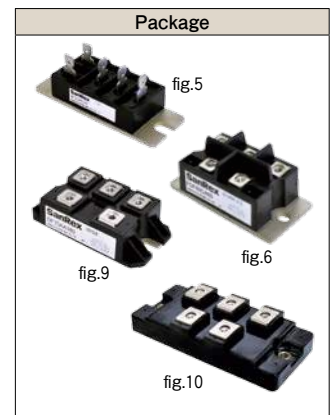
Type	VRRM V	ID		IFSM A (60Hz)	I ² t A ² s	VFM V (25°C)	IRRM mA (150°C)	Rthj-c °C / W	Fig No.
		A	°C						
DF75AC80/160	800, 1600	75	100	1000	4100	1.4	10	0.24	26
DF100AC80/160	800, 1600	100	102	1300	7000	1.2	15	0.2	26
DF150AE80/160	800, 1600	150	106	2000	17000	1.31	15	0.11	34
DF200AE80/160	800, 1600	200	106	2500	26000	1.32	20	0.08	34



3-PHASE DIODE DF-AA/BA/CA SERIES

Viso : 2500V (RMS) Tj(max) : 150°C

Type	VRRM V	ID		IFSM A (60Hz)	VFM V (25°C)	IRRM mA (150°C)	Rthj-c °C / W	Fig No.
		A	°C					
DF20CA80/160	800, 1600	20	123	600	1.1	8	0.6	5
DF20AA120/160	1200, 1600	20	119	240	1.25	3	0.6	5
DF30CA80/160	800, 1600	30	122	850	1.1	12	0.42	5
DF30AA120/160	1200, 1600	30	117	300	1.3	3	0.42	5
DF40BA80	800	40	119	700	1.2	4	0.32	6
DF40AA120/160	1200, 1600	40	116	700	1.3	3	0.32	6
DF50BA80	800	50	114	700	1.2	4	0.30	9
DF50AA120/160	1200, 1600	50	114	700	1.2	8	0.30	9
DF60BA80	800	60	115	1000	1.2	6	0.24	6
DF60AA120/160	1200, 1600	60	112	1000	1.3	12	0.24	6
DF75BA80	800	75	107	1000	1.2	10	0.24	9
DF75AA120/160	1200, 1600	75	100	1000	1.4	10	0.24	9
DF100BA80	800	100	102	1000	1.2	15	0.2	9
DF100AA120/160	1200, 1600	100	102	1000	1.2	15	0.2	9
DF150AB80/160	800, 1600	150	100	1200	1.2	15	0.14	10
DF200AB80/160	800, 1600	200	102	2000	1.2	20	0.1	10

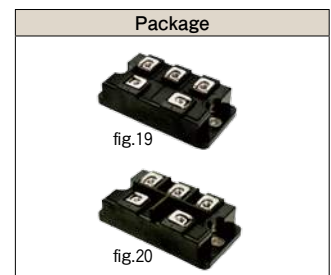
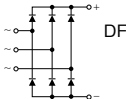


3-PHASE DIODE DF-LA/LB SERIES

Viso : 2500V (RMS) Tj(max) : 150°C

Type	VRRM V	ID		IFSM A (60Hz)	VFM V (25°C)	IRRM mA (150°C)	Rthj-c °C / W	Fig No.
		A	°C					
DF60LA80/160	800, 1600	60	111	800	1.3	8	0.25	19
DF60LB80/160	800, 1600	60	111	800	1.3	8	0.25	20
DF75LA80/160	800, 1600	75	101	1000	1.3	8	0.25	19
DF75LB80/160	800, 1600	75	101	1000	1.3	8	0.25	20
DF100LA80/160	800, 1600	100	90	1300	1.3	12	0.23	19
DF100LB80/160	800, 1600	100	90	1300	1.3	12	0.23	20

Connections

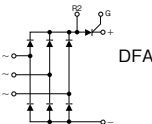


3-PHASE DIODE + THYRISTOR DFA SERIES

Viso : 2500V (RMS)

Type	VDRM / VRRM V	ID		IFSM A (60Hz)	I ² t A ² s	VFM (D) V (25°C)	IRRM (D) mA (150°C)	Rthj-c (D) °C / W	VTM (THY) V (25°C)	IRRM (THY) mA (135°C)	Rthj-c (THY) °C / W	Tj(max)		Fig No.
		A	°C									(thy)	(Diode)	
DFA50BA80/160	800, 1600	50	117	800	2660	1.30	8	0.25	1.25	50	0.80	135°C	150°C	15
DFA75BA80/160	800, 1600	75	101	1000	4150	1.30	8	0.25	1.20	60	0.40	135°C	150°C	15
DFA100BA80/160	800, 1600	100	98	1300	7030	1.30	12	0.20	1.20	70	0.36	135°C	150°C	15
DFA150BA80/160	800, 1600	150	105	1600	10670	1.35	15	0.09	1.35	100	0.22	150°C	150°C	15
DFA150AA80/160	800, 1600	150	93	1600	10670	1.35	15	0.14	1.35	100	0.21	135°C	150°C	28
DFA200AA80/160	800, 1600	200	96	2000	17000	1.35	20	0.1	1.15	50	0.18	135°C	150°C	28
DFA150CB80/160	800, 1600	150	113	1600	10670	1.35	15	0.09	1.35	100	0.18	150°C	150°C	17
DFA200CB80/160	800, 1600	200	96	2000	17000	1.35	20	0.1	1.15	50	0.15	150°C	150°C	17

Connections



Package



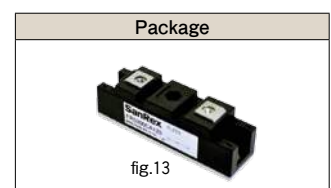
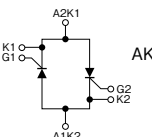
THYRISTOR

THYRISTOR AK SERIES

Viso : 2500V (RMS) dv/dt : 500V/μs Tj(max) : 125°C

Type	VDRM / VRRM V	IT(AV)		IT(RMS)		ITSM A (60Hz)	I ² t A ² s	IGT mA (25°C)	VGT V (25°C)	VTM V (25°C)	IDRM/IRRM mA (125°C)	Rthj-c °C / W	Fig No.
		A	°C	A	°C								
AK25GB80	800	25	97	55	97	500	1000	50	3	1.5	8	0.8	13
AK25HB160	1600	25	94	55	94	500	1000	50	2	1.6	8	0.8	13
AK55GB80	800	55	89	122	89	1100	5000	100	3	1.35	20	0.5	13
AK55HB160	1600	55	85	122	85	1100	5000	100	2	1.5	20	0.5	13
AK90GB80	800	90	91	200	91	1800	15000	100	3	1.3	30	0.3	13
AK90HB160	1600	90	88	200	88	1800	15000	100	2	1.4	30	0.3	13

Connections

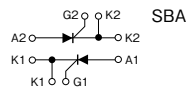


HIGH CURRENT THYRISTOR

V_{ISO} : 2500V (RMS) dv/dt : 500V/ μ s T_j (max) : 125°C

Type	V _{DRM} / V _{RRM} V	IT (AV)		ITSM A (60Hz)	I ² t A ² s	IGT mA (25°C)	VGT V (25°C)	VTM V (25°C)	IDRM/IRRM mA (125°C)	Rthj-c °C/W	Fig No.
		A	°C								
SBA500AA80/160	800, 1600	500	66	10000	4.16×10 ⁵	200	3	1.45	150	0.085	14
SBB500AA80/160	800, 1600	500	66	10000	4.16×10 ⁵	200	3	1.45	150	0.085	14
SSA500AA80/160	800, 1600	500	66	10000	4.16×10 ⁵	200	3	1.45	150	0.085	22

Connections



Package



fig.14



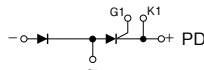
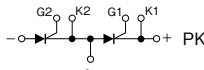
fig.22

THYRISTOR PK/PD SERIES

V_{ISO} : 2500V (RMS) dv/dt : 500V/ μ s T_j (max) : 125°C

Type	V _{DRM} / V _{RRM} V	IT (AV)		ITSM A (60Hz)	I ² t A ² s	IGT mA (25°C)	VGT V (25°C)	VTM V (25°C)	IDRM/IRRM mA (125°C)	Rthj-c °C/W	Fig No.
		A	°C								
PK25FG80/160	800, 1600	25	81	700	2870	50	3	1.6	5	1.1	2
PD25FG80/160	800, 1600	25	81	700	2870	50	3	1.6	5	1.1	2
PK40FG80/160	800, 1600	40	83	950	3760	50	3	1.6	10	0.65	2
PD40FG80/160	800, 1600	40	83	950	3760	50	3	1.6	10	0.65	2
PK55FG80/160	800, 1600	55	81	1300	7040	50	3	1.6	15	0.5	2
PD55FG80/160	800, 1600	55	81	1300	7040	50	3	1.6	15	0.5	2
PK70FG80/160	800, 1600	70	84	1600	10660	50	3	1.6	20	0.37	2
PD70FG80/160	800, 1600	70	84	1600	10660	50	3	1.6	20	0.37	2
PK90FG80/160	800, 1600	90	82	2300	22040	50	3	1.6	25	0.3	2
PD90FG80/160	800, 1600	90	82	2300	22040	50	3	1.6	25	0.3	2
PK110FG80/160	800, 1600	110	81	3000	37500	50	3	1.6	30	0.25	2
PD110FG80/160	800, 1600	110	81	3000	37500	50	3	1.6	30	0.25	2
PK130FG80/160	800, 1600	130	83	3500	51040	50	3	1.6	35	0.2	2
PD130FG80/160	800, 1600	130	83	3500	51040	50	3	1.6	35	0.2	2
PK160FG80/160	800, 1600	160	84	5400	125000	100	3	1.5	100	0.18	21
PD160FG80/160	800, 1600	160	84	5400	125000	100	3	1.5	100	0.18	21
PK200FG80/160	800, 1600	200	73	6500	180000	100	3	1.5	100	0.167	21
PD200FG80/160	800, 1600	200	73	6500	180000	100	3	1.5	100	0.167	21
PK250GB80/HB160	800, 1600	250	72	5500	125000	100	3	1.6	50	0.14	4
PD250GB80/HB160	800, 1600	250	72	5500	125000	100	3	1.6	50	0.14	4

Connections



Package



fig.2



fig.21



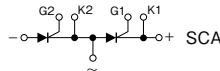
fig.4

THYRISTOR SCA/SCE SERIES

V_{ISO} : 2500V/3000V (RMS) dv/dt : 1000V/ μ s

Type	V _{DRM} / V _{RRM} V	IT (AV)		ITSM A (60Hz)	I ² t A ² s	IGT mA (25°C)	VGT V (25°C)	VTM V (25°C)	IDRM/IRRM mA	Rthj-c °C/W	T _j (max) °C	Fig No.
		A	°C									
SCA55AA160	1600	55	95	1500	9380	100	2.5	1.65	20(130°C)	0.4	130	30
SCE55AA160	1600	55	95	1500	9380	100	2.5	1.65	20(130°C)	0.4	130	30
SCA70AA160	1600	70	101	1750	12800	100	2.5	1.7	20(130°C)	0.25	130	30
SCE70AA160	1600	70	101	1750	12800	100	2.5	1.7	20(130°C)	0.25	130	30
SCA90AA160	1600	90	100	2300	22040	100	2.5	1.7	20(130°C)	0.2	130	30
SCE90AA160	1600	90	100	2300	22040	100	2.5	1.7	20(130°C)	0.2	130	30
SCA110AA160	1600	110	95	2500	25000	100	2.5	1.7	20(130°C)	0.19	130	30
SCE110AA160	1600	110	95	2500	25000	100	2.5	1.7	20(130°C)	0.19	130	30
SCE110AB160	1600	110	89	2300	22000	150	3.2	2.0	70(150°C)	0.28	150	32
SCA130AA80/160	800, 1600	130	92	5400	125000	100	3	1.5	100(125°C)	0.18	125	29
SCE130AA80/160	800, 1600	130	92	5400	125000	100	3	1.5	100(125°C)	0.18	125	29
SCA160DA80/160	800, 1600	160	88	5900	145000	100	3	1.4	100(125°C)	0.17	125	36
SCE160CA200	2000	160	85	4500	84000	100	3	1.65	40(130°C)	0.17	130	36
SCE160DA80/160	800, 1600	160	88	5900	145000	100	3	1.4	100(125°C)	0.17	125	36
SCA200DA80/160	800, 1600	200	82	6500	180000	100	3	1.4	100(125°C)	0.155	125	36
SCE200CA200	2000	200	76	5500	125000	100	3	1.7	50(130°C)	0.155	130	36
SCE200DA80/160	800, 1600	200	82	6500	180000	100	3	1.4	100(125°C)	0.155	125	36

Connections



Package



fig.29



fig.36



fig.30



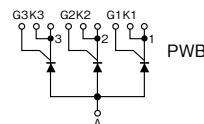
fig.32

THYRISTOR PWB SERIES

Non-Isolated Type di/dt : 50A/ μ s, V_{GT} : 2V (25°C), T_j (max) : 150°C

Type	V _{DRM} / V _{RRM} V	IT (AV)		IT (RMS)		ITSM A (60Hz)	I ² t A ² s	dv/dt V/ μ s(150°C)	IGT mA(25°C)	VTM V (25°C)	IDRM/IRRM mA(150°C)	Rthj-c °C/W	Fig No.
		A	°C	A	°C								
PWB60A30/40	300, 400	60	123	94	123	1800	13500	50	150	1.25	10	0.35	11
PWB80A30/40	300, 400	80	116	125	116	2500	26000	50	150	1.2	12	0.35	11
PWB100A30/40	300, 400	100	114	157	114	3500	51000	50	150	1.2	15	0.3	11
PWB130A30/40	300, 400	130	120	204	112	3500	51000	50	150	1.2	30	0.20	11
PWB150AA30/40	300, 400	150	121	230	121	3500	51000	200	100	1.2	40	0.15	12
PWB200AA30/40	300, 400	200	121	314	121	6000	149940	200	150	1.2	60	0.12	12

Connections



Package



fig.11



fig.12

DISCRETE

PRODUCT FEATURES

PRODUCT FEATURES

► **Broad Product Line up**
- Easy to choose a suitable Device -

Through Hole type : 7packages
TO-92, TO-251, TO-220AB, TO-220AB-2L,
TO-220F, TO-3P, TO-3PF

TO-92, TO-251, TO-220AB, TO-220AB-2L,
TO-220F, TO-3P, TO-3PF

Surface Mount type : 3packages
SOT-89, TO-252, TO-263

SOT-89, TO-252, TO-263

Tab terminal type : 1package
T0-3

TO-3

► Triac - Qseries : $T_{jmax}=150^{\circ}\text{C}$ only

Easy to design with smaller or no heat sinks. It will reduce the total cost.

► **Triac/Thyristor** - The following high sensitivity models are available

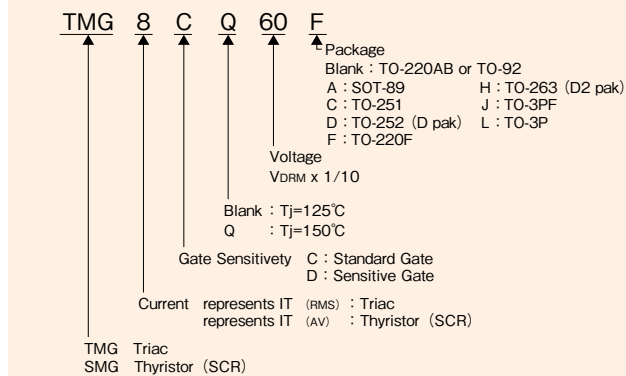
Triac	Standard		Sensitive Gate	
	I ⁺ 、I ⁻ 、Ⅲ ⁻	Ⅲ ⁺	I ⁺ 、I ⁻ 、Ⅲ ⁻	Ⅲ ⁺
TMG1C_			5	10
TMG2C_	15	—		
TMG2D_			5	10
TMG3C_	15	—		
TMG3D_			5	10
TMG5C_	20	—		
TMG8/12/16/20/25C_	30	—		
TMG5/8/12/16/20/25D_			10	—
TMG40C_	50	—		

Thyristor	Standard	Sensitive Gate (mA)
SMG04/05/08C_		0.1
SMG2D_		0.2
SMG5/8C_	10	
SMG3D_		0.2
SMG12/16C_	30	
SMG5F_		0.2

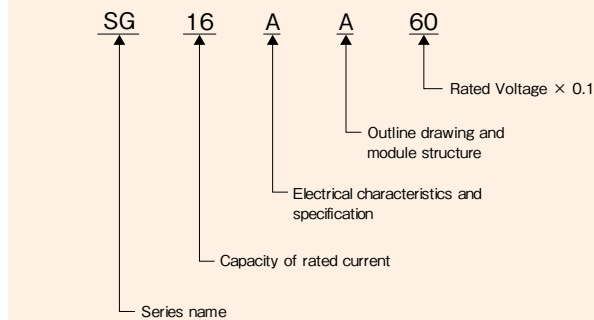
It will be suitable for Logic Level triggering

TYPE DESIGNATION

TMG/SMG SERIES



OTHER DISCRETE SERIES



TRIAC

Through Hole / Standard

Package	Type	V _{DRM} V	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA		V _{GT} V		T _j °C	[dv/dt] c		R _{thj-c} °C/W	Fig No.
						I+, I-, II-	III +	I+, I-, II-	III +		V/μs (T _j =125°C)	-A/ms [-di/dt] c		
TO-251	TMG2C60/80C	600, 800	2	1	1.6	15	—	1.5	—	125	3	1	5.8	D2
	TMG3C60/80C	600, 800	3	1	1.4	15	—	1.5	—	125	5	1.5	3.8	
	TMG5C60C	600	5	1	1.4	20	—	1.5	—	125	5	2.5	3	
TO-220AB	TMG5C60	600	5	1	1.4	20	—	1.5	—	125	5	2.5	3	D3
	TMG8C60	600	8	2	1.4	30	—	1.5	—	125	10	4	2	
	TMG12C60/80	600, 800	12	2	1.4	30	—	1.5	—	125	10	6	1.8	
	TMG16C60	600	16	2	1.4	30	—	1.5	—	125	10	8	1.4	
TO-220AB2	TMG20C60	600	20	2	1.4	30	—	1.5	—	125	10	8	1.0	D5
TO-220F	TMG2C60F	600	2	1	1.6	15	—	1.5	—	125	3	1	7.5	*D6
	TMG3C60F	600	3	1	1.4	15	—	1.5	—	125	5	1.5	5	
	TMG5C60F	600	5	1	1.4	20	—	1.5	—	125	5	2.5	4	
	TMG8C60/80F	600, 800	8	2	1.4	30	—	1.5	—	125	10	4	3.7	
	TMG12C60/80F	600, 800	12	2	1.4	30	—	1.5	—	125	10	6	3.3	
	TMG16C60/80F	600, 800	16	2	1.4	30	—	1.5	—	125	10	8	3	
	TMG20C60/80F	600, 800	20	2	1.4	30	—	1.5	—	125	10	8	2.5	
	TMG25C60/80F	600, 800	25	5	1.4	30	—	1.5	—	125	10	12.5	1.9	
TO-3P	TMG25C60/80L	600, 800	25	5	1.4	30	—	1.5	—	125	10	12.5	1.2	D7
	TMG40C60/80L	600, 800	40	5	1.4	50	—	1.5	—	125	10	20	0.6	
TO-3PF	TMG25C60/80J	600, 800	25	5	1.4	30	—	1.5	—	125	10	12.5	1.4	*D8
	TMG40C60/80J	600, 800	40	5	1.4	50	—	1.5	—	125	10	20	1.1	

*UL File No.E76102

Through Hole / Sensitive Gate

Package	Type	V _{DRM} V	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA		V _{GT} V		T _j °C	[dv/dt] c		R _{thj-c} °C/W	Fig No.
						I+, I-, II-	III +	I+, I-, II-	III +		V/μs (T _j =125°C)	-A/ms [-di/dt] c		
TO-92	TMG1C60/80	600, 800	1	0.5	1.6	5	10	1.8	2	125	2	0.5	**120	D1
TO-251	TMG2D60/80C	600, 800	2	1	1.6	5	10	1.5	2	125	3	1	5.8	D2
	TMG3D60/80C	600, 800	3	1	1.4	5	10	1.5	2	125	5	1.5	3.8	
	TMG5D60/80C	600, 800	5	1	1.4	10	—	1.5	—	125	5	2.5	3	
TO-220AB	TMG12D60	600	12	2	1.4	10	—	1.5	—	125	10	6	1.8	D3
	TMG16D80	800	16	2	1.4	10	—	1.5	—	125	10	8	1.4	
TO-220AB2	TMG20D60/80	600, 800	20	2	1.4	10	—	1.5	—	125	10	8	1.0	D5
TO-220F	TMG2D60/80F	600, 800	2	1	1.6	5	10	1.5	2	125	3	1	7.5	*D6
	TMG3D60/80F	600, 800	3	1	1.4	5	10	1.5	2	125	5	1.5	5	
	TMG5D80F	800	5	1	1.4	10	—	1.5	—	125	5	2.5	4	
	TMG8D60/80F	600, 800	8	2	1.4	10	—	1.5	—	125	10	4	3.7	
	TMG12D60/80F	600, 800	12	2	1.4	10	—	1.5	—	125	10	6	3.3	
	TMG16D60F	600	16	2	1.4	10	—	1.5	—	125	10	8	3	
	TMG20D60F	600	20	2	1.4	10	—	1.5	—	125	10	8	2.5	
	TMG25D60F	600	25	5	1.4	10	—	1.5	—	125	10	12.5	1.9	

*UL File No.E76102 **R_{th}(j-a)

Through Hole / T_j=150°C

Package	Type	V _{DRM} V	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA		V _{GT} V		T _j °C	[dv/dt] c		R _{thj-c} °C/W	Fig No.
						I+, I-, II-	III +	I+, I-, II-	III +		V/μs (T _j =150°C)	-A/ms [-di/dt] c		
TO-251	TMG5CQ60C	600	5	2	1.4	20	—	1.5	—	150	2	2.5	3	D2
TO-220AB	TMG8CQ60	600	8	2	1.4	30	—	1.5	—	150	5	4	2	D3
	TMG16CQ60	600	16	3	1.4	30	—	1.5	—	150	5	8	1.4	
TO-220AB2	TMG20CQ60	600	20	3	1.4	30	—	1.5	—	150	5	10	1.0	D5
TO-220F	TMG2DQ60F	600	2	1	1.6	5	10	1.5	—	150	1	1	7.5	*D6
	TMG3CQ60F	600	3	2	1.4	15	—	1.5	2	150	1	1.5	5	
	TMG5CQ60F	600	5	2	1.4	20	—	1.5	—	150	2	2.5	4	
	TMG8CQ60F	600	8	2	1.4	30	—	1.5	—	150	5	4	3.7	
	TMG12CQ60F	600	12	2	1.4	30	—	1.5	—	150	5	6	3.3	
	TMG16CQ60F	600	16	3	1.4	30	—	1.5	—	150	5	8	3	
	TMG20CQ60F	600	20	3	1.4	30	—	1.5	—	150	5	10	2.5	
	TMG25CQ60F	600	25	5	1.4	30	—	1.5	—	150	5	12.5	1.9	
TO-3P	TMG25CQ60L	600	25	5	1.4	30	—	1.5	—	150	5	12.5	1.2	D7
	TMG40CQ60L	600	40	8	1.4	50	—	1.5	—	150	5	20	0.6	
TO-3PF	TMG25CQ60J	600	25	5	1.4	30	—	1.5	—	150	5	12.5	1.4	*D8
	TMG40CQ60J	600	40	8	1.4	50	—	1.5	—	150	5	20	1.1	

*UL File No.E76102

SMD (Surface Mount Device) / Standard

Package	Type	V _{DRM} V	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA		V _{GT} V		T _j °C	[dv/dt] c		R _{thj-c} °C/W	Fig No.
						I+, I-, II-	III +	I+, I-, II-	III +		V/μs (T _j =125°C)	-A/ms [-di/dt] c		
TO-252 (D pak)	TMG2C60D	600	2	1	1.6	15	—	1.5	2	125	3	1	5.8	D10
	TMG3C60D	600	3	1	1.4	15	—	1.5	—	125	5	1.5	3.8	
	TMG5C60D	600	5	1	1.4	20	—	1.5	—	125	5	2.5	3	
TO-263 (D2 pak)	TMG5C60H	600	5	1	1.4	20	—	1.5	—	125	5	2.5	3	D11
	TMG8C60H	600	8	2	1.4	30	—	1.5	—	125	10	4	2	
	TMG16C60H	600	16	2	1.4	30	—	1.5	—	125	10	8	1.4	

SMD (Surface Mount Device) / Sensitive Gate

Package	Type	V _{DRM} V	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA		V _{GT} V		T _j °C	[dv/dt] c		R _{thj-c} °C/W	Fig No.
						I+, I-, II-	III +	I+, I-, II-	III +		V/μs (T _j =125°C)	-A/ms [-di/dt] c		
SOT-89	TMG1C60A	600	1	0.5	1.6	5	10	1.8	2	125	2	0.5	** 65	D9
TO-252 (D pak)	TMG3D60D	600	3	1	1.4	5	10	1.5	2	125	5	1.5	3.8	D10
	TMG5D60D	600	5	1	1.4	10	—	1.5	—	125	5	2.5	3	

** R_{th}(j-a)

SMD (Surface Mount Device) / T_j=150°C

Package	Type	V _{DRM} V	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA		V _{GT} V		T _j °C	[dv/dt] c		R _{thj-c} °C/W	Fig No.
						I+, I-, II-	III +	I+, I-, II-	III +		V/μs (T _j =125°C)	-A/ms [-di/dt] c		
SOT-89	TMG1CQ60A	600	1	1	1.6	5	10	1.8	2	150	1	0.5	** 65	D9
TO-252 (D pak)	TMG3CQ60D	600	3	2	1.4	15	—	1.5	—	150	1	1.5	3.8	D10
	TMG3DQ60D	600	3	2	1.4	5	10	1.5	2	150	1	1.5	3.8	
	TMG5CQ60D	600	5	2	1.4	20	—	1.5	—	150	2	2.5	3	

** R_{th}(j-a)

Tab terminal / Standard

Package	Type	V _{DRM} V	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA		V _{GT} V		T _j °C	[dv/dt] c		R _{thj-c} °C/W	Fig No.
						I+, I-, II-	III +	I+, I-, II-	III +		V/μs (T _j =125°C)	-A/ms [-di/dt] c		
TO-3	TG16C40/60	400, 600	16	3	1.5	50	—	3	—	125	6	8	2	* D12
	TG25C40/60	400, 600	25	5	1.4	50	—	3	—	125	6	15	1.6	
	TG35C40/60	400, 600	35	5	1.4	50	—	3	—	125	5	15	1.5	
	TG40E60	600	40	5	1.4	50	—	1.5	—	125	6	10	1.3	* D15
not standard	TG70AA40/60	400, 600	70	10	1.35	50	—	3	—	125	6	8	0.83	D14

* UL File No.E76102

THYRISTOR

Through Hole / Standard

Package	Type	V _{DRM} V	I _{T(AV)} A	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA	V _{GT} V	T _j °C	R _{thj-c} °C/W	Fig No.
TO-220AB	SMG8C60	600	8	12.6	2	1.5	10	1.4	125	2	D3
	SMG12C60	600	12	18.8	2	1.5	30	1.4	125	1.8	
	SMG16C60	600	16	25.1	2	1.5	30	1.4	125	1.4	
TO-220F	SMG5C60F	600	5	7.8	2	1.5	10	1.4	125	4	* D6
	SMG8C60F	600	8	12.6	2	1.5	10	1.4	125	3.7	
	SMG12C60F	600	12	18.8	2	1.5	30	1.4	125	3.3	
	SMG16C60F	600	16	25.1	2	1.5	30	1.4	125	3	

* UL File No.E76102

Through Hole / Sensitive Gate

Package	Type	V _{DRM} V	I _{T(AV)} A	I _{T(RMS)} A	I _{DRM} mA	V _{TM} V	I _{GT} mA	V _{GT} V	T _j °C	R _{thj-c} °C/W	Fig No.
TO-92	SMG04C60	600	0.4	0.63	0.5	1.2	0.1	0.8	125	** 150	D1
	SMG05C60	600	0.5	0.78	0.5	1.2	0.1	0.8	125	** 150	
TO-251	SMG3D60C	600	3	4.7	1	1.5	0.2	0.8	125	3.8	D2

** R_{th}(j-a)

SMD (Surface Mount Device) / Standard

Package	Type	V _{DRM} V	I _T (AV) A	I _T (RMS) A	I _{DRM} mA	V _{TM} V	I _{GT} mA	V _{GT} V	T _j °C	R _{thj-c} °C/W	Fig No.
TO-252 (D pak)	SMG5C60D	600	5	7.8	2	1.8	10	0.8	125	3	D10
TO-263 (D2 pak)	SMG5C60H	600	5	7.8	2	1.5	10	1.4	125	3	D11

SMD (Surface Mount Device) / Sensitive Gate

Package	Type	V _{DRM} V	I _T (AV) A	I _T (RMS) A	I _{DRM} mA	V _{TM} V	I _{GT} mA	V _{GT} V	T _j °C	R _{thj-c} °C/W	Fig No.
SOT-89	SMG08C60A	600	0.8	1.3	0.5	1.5	0.1	0.8	125	**65	D9
TO-252 (D pak)	SMG3D60D	600	3	4.7	1	1.5	0.2	0.8	125	3.8	D10
	SMG5F60D	600	5	7.8	2	1.8	0.2	0.8	125	3	

**R_{th}(j-a)

Tab terminal / Standard

Package	Type	V _{DRM} V	I _T (AV) A	I _T (RMS) A	I _{DRM} mA	V _{TM} V	I _{GT} mA	V _{GT} V	T _j °C	R _{thj-c} °C/W	Fig No.
TO-3	SG16AA40/60	400, 600	16	25	3	1.5	40	3	125	2	*D12
	SG25AA40/60	400, 600	25	39	5	1.4	40	3	125	1.6	

*UL File No.E76102

FRD

Through Hole

Package	Type	V _{RRM} V	I _F (AV)		I _{FSM} A (60Hz)	I ² _t A ² s	V _{FM} V (25°C)	I _{RRM} mA (125°C)	t _{rr} ns	R _{thj-c} °C/W	Fig No.
			A	°C							
TO-3P	DMG60UL20	200	60	105	900	3375	1.05	2.0 (150°C)	60	0.7	D7

Tab terminal

Package	Type	V _{RRM} V	I _F (AV)		I _{FSM} A (60Hz)	I ² _t A ² s	V _{FM} V (25°C)	I _{RRM} mA (125°C)	t _{rr} ns	R _{thj-c} °C/W	Fig No.
			A	°C							
TO-3	FRG25BA60	600	25	94	450	840	1.3	30 (150°C)	100	1.6	D13
	FRG25CA120	1200	25	78	400	660	1.8	1 (150°C)	200	1.6	

DIODE

Through Hole

Package	Type	V _{RRM} V	I _F (AV) A	I _{FSM} A (60Hz)	I ² _t A ² s	V _{FM} V (25°C)	I _{RRM} mA (125°C)	T _j °C	R _{thj-c} °C/W	Fig No.
TO-220AB-2L	DMG35AA100	1000	35	300	380	1.2	100	180	1	D4

Tab terminal

Package	Type	V _{RRM} V	I _F (AV)		I _{FSM} A (60Hz)	I ² _t A ² s	V _{FM} V (25°C)	I _{RRM} mA (150°C)	R _{thj-c} °C/W	Fig No.
			A	°C						
TO-3	DG20AA80/160	800, 1600	20	101	450	840	1.65	8	1.6	D13

POWER MODULE

Fig.
1

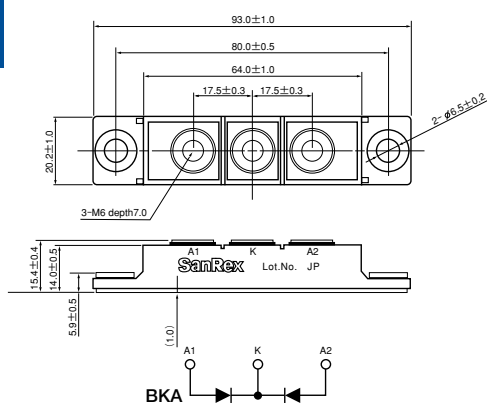


Fig.
2

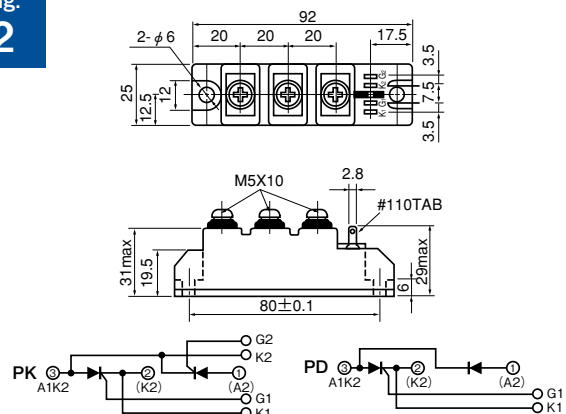


Fig.
3

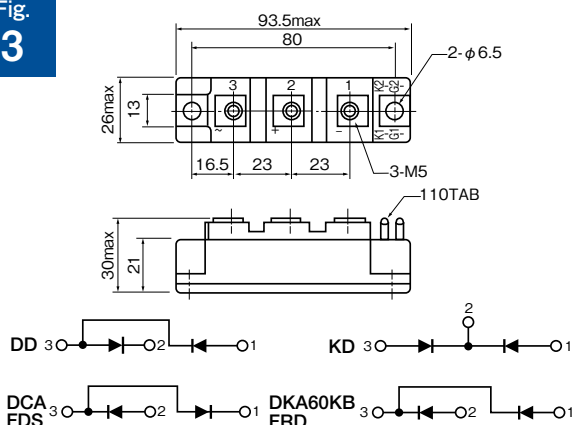


Fig.
4

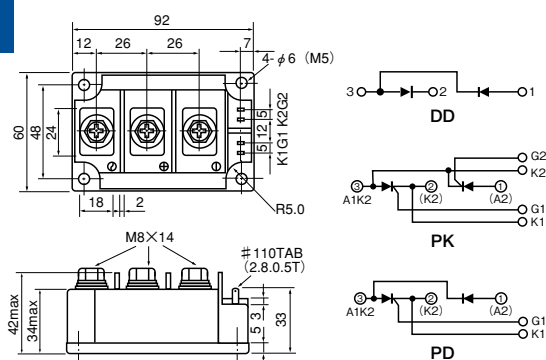


Fig.
5

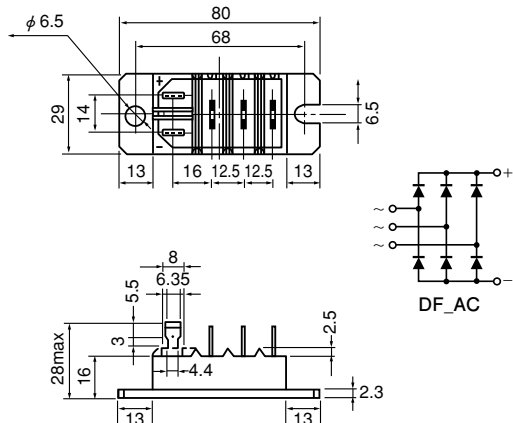


Fig.
6

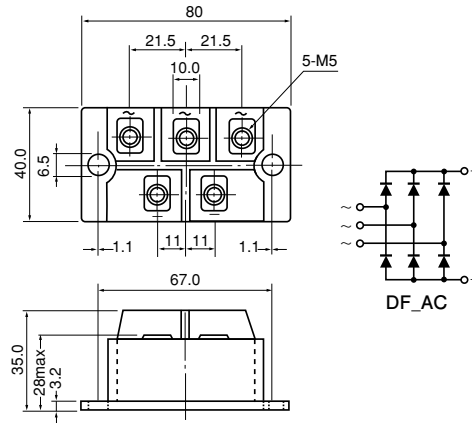


Fig.
7

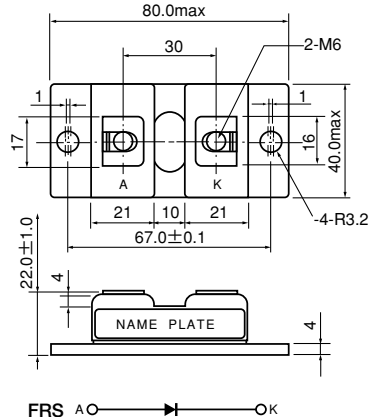


Fig.
8

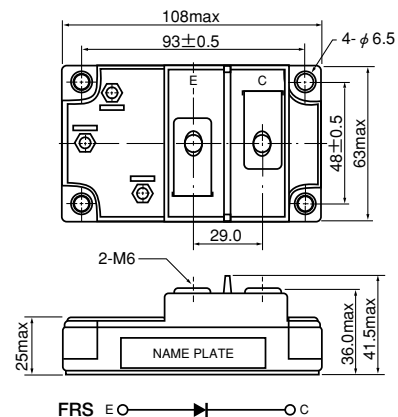


Fig.
9

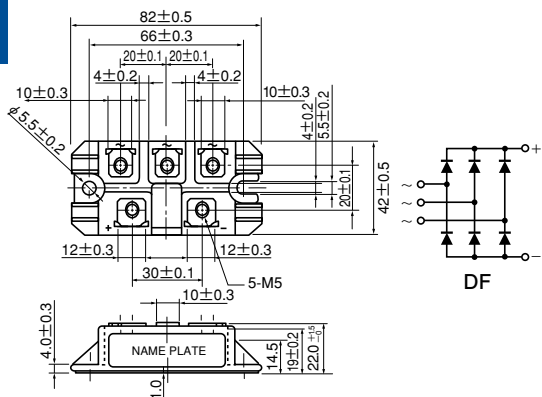


Fig.
10

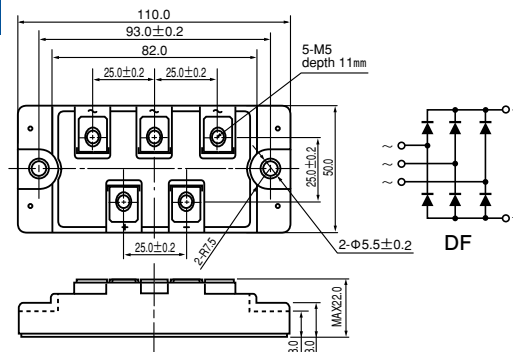


Fig.
11

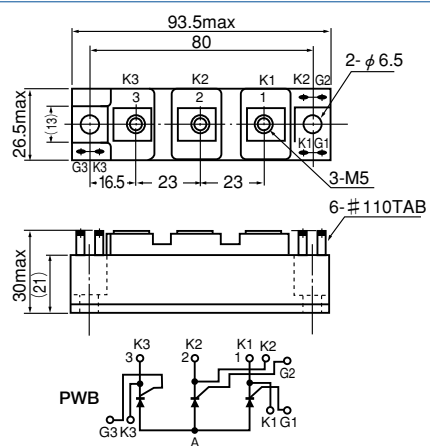
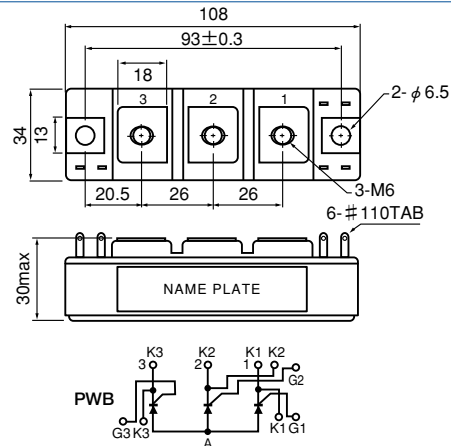


Fig.
12



**Fig.
13**

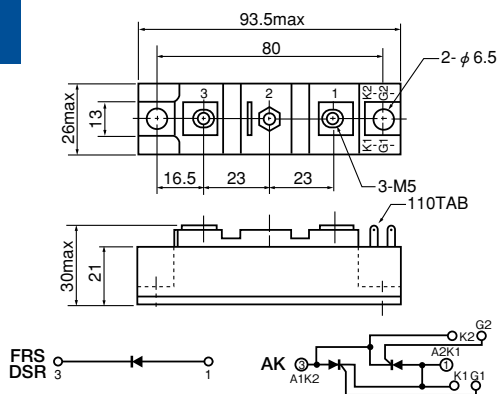
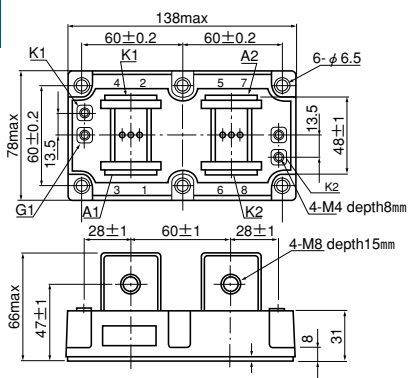


Fig.
14



**Fig.
15**

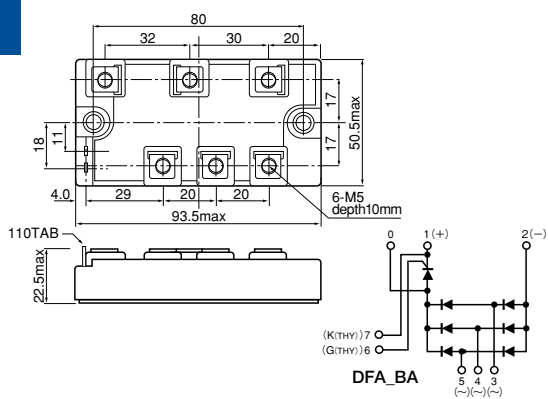


Fig.
16

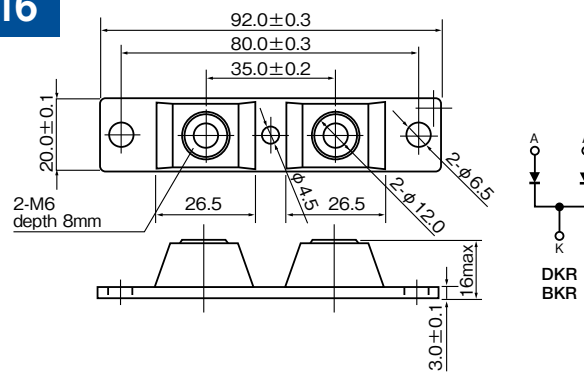


Fig.
25

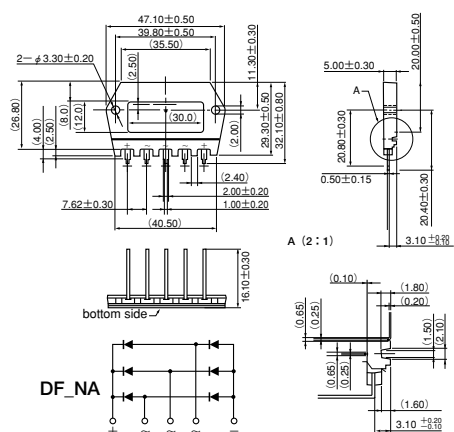


Fig.
26

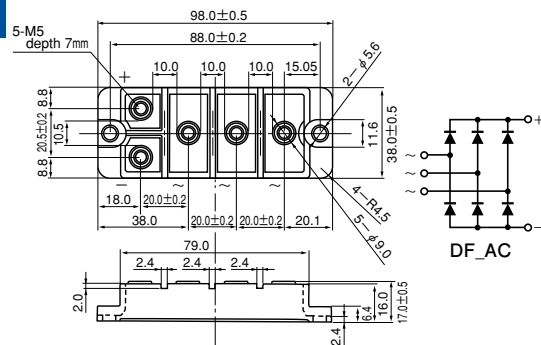


Fig.
27

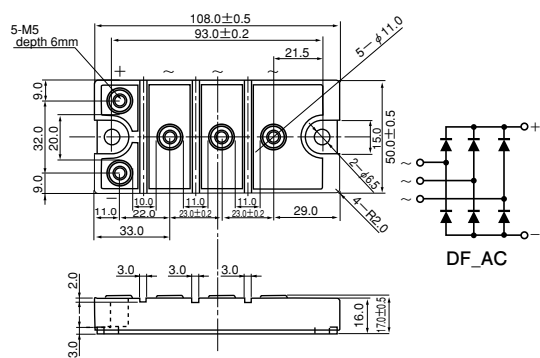


Fig.
28

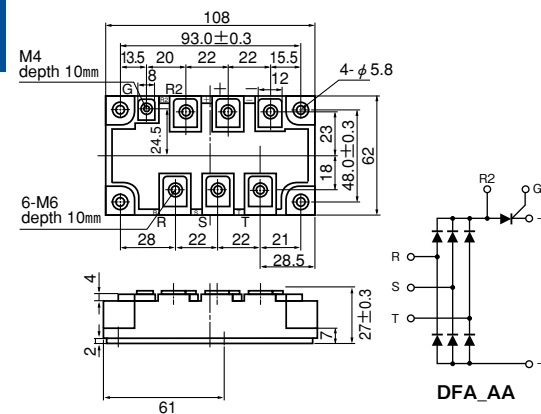


Fig.
29

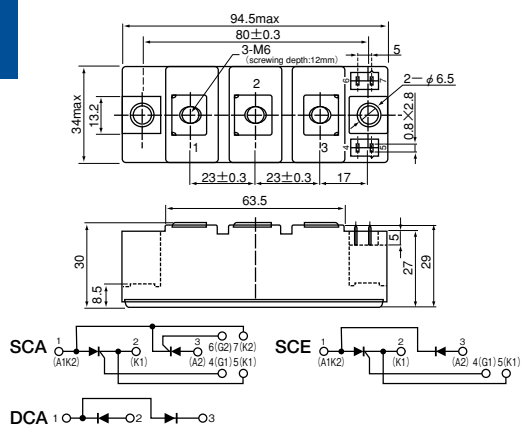


Fig.
30

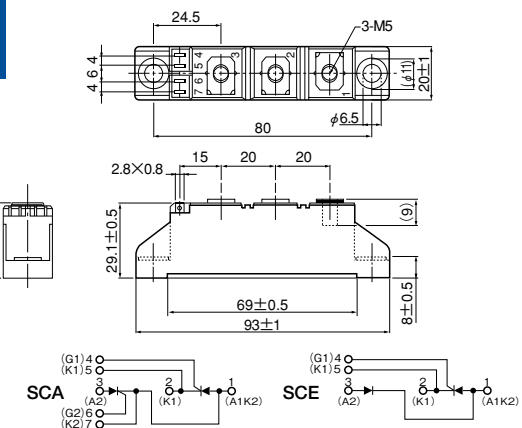


Fig.
31

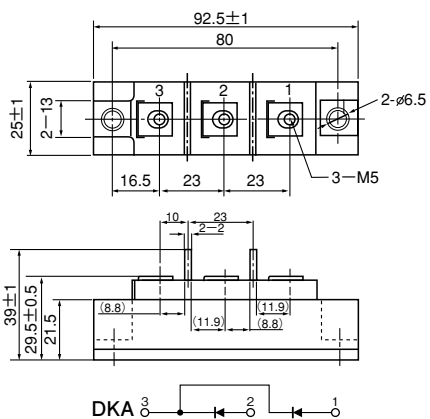


Fig.
32

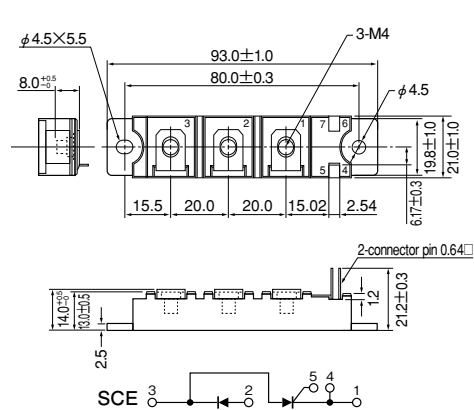


Fig.
33

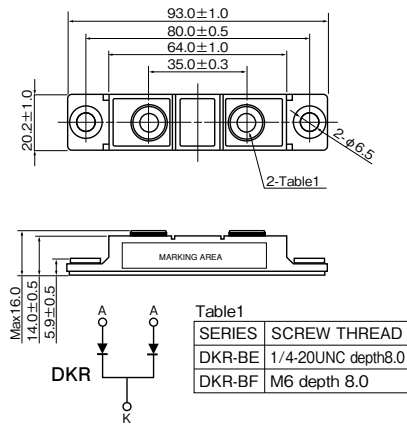


Fig.
34

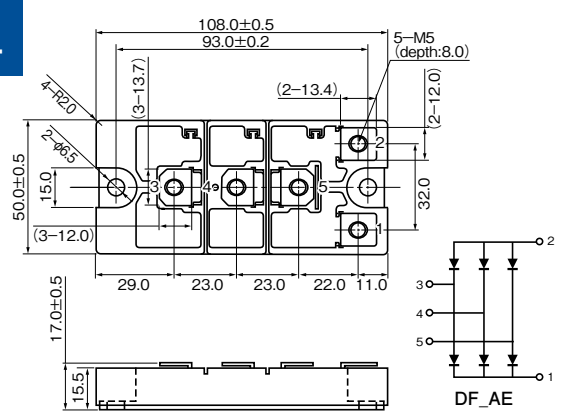


Fig.
35

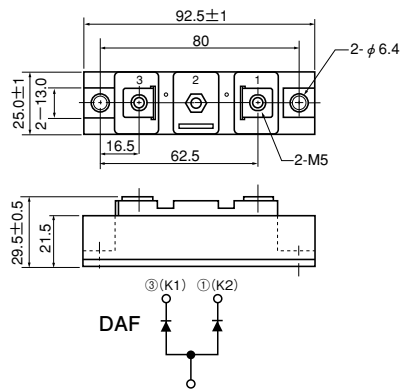
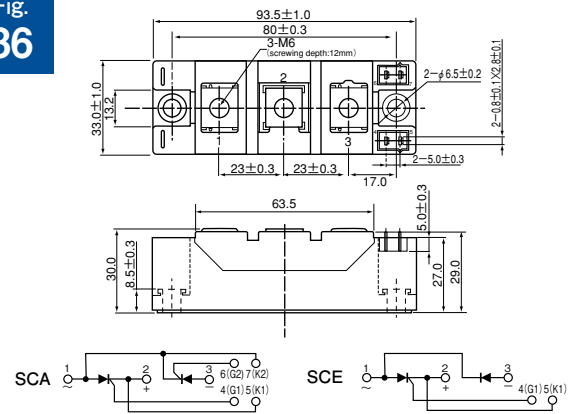
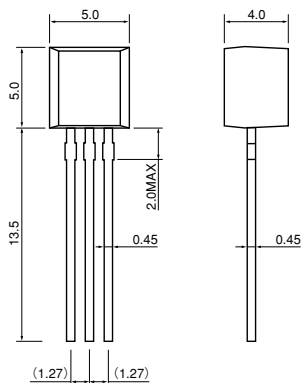


Fig.
36



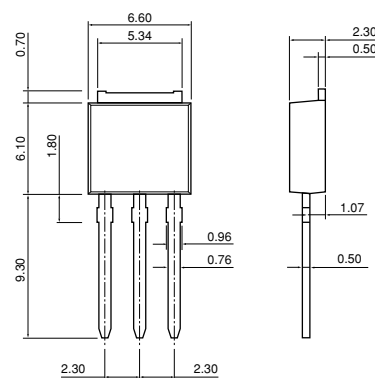
Please refer specification for details

Fig.
D1



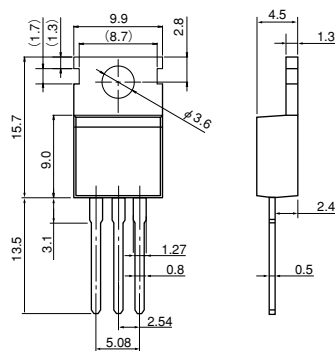
TO-92

Fig.
D2



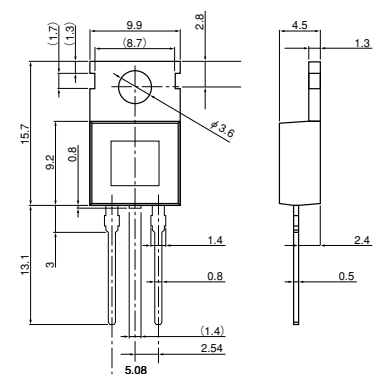
TO-251

Fig.
D3



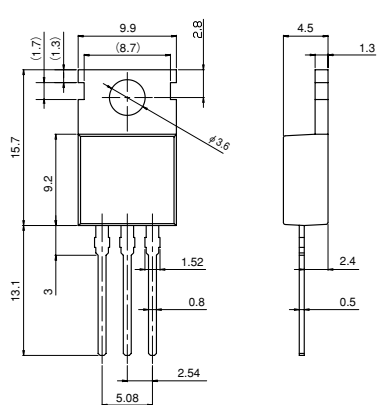
TO-220AB

Fig.
D4



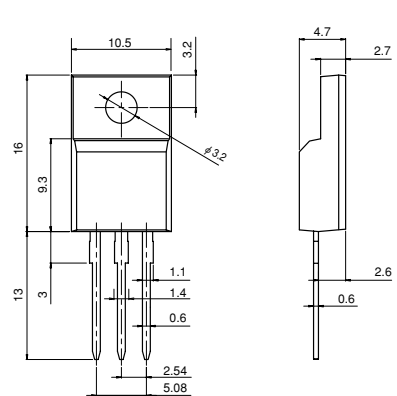
TO-220AB-2L

Fig.
D5



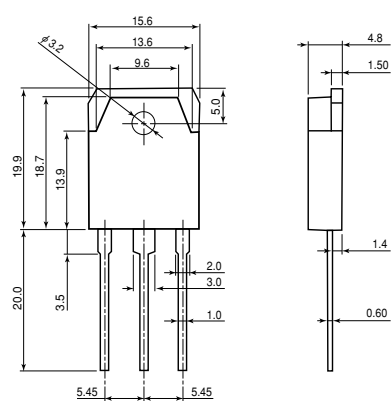
TO-220AB2

Fig.
D6



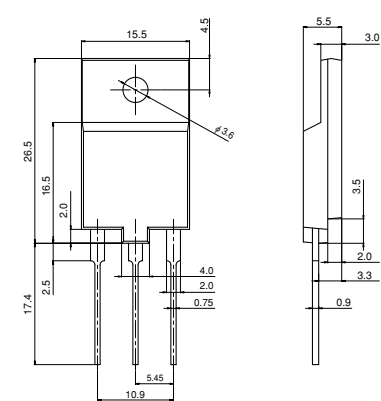
TO-220F

Fig.
D7



TO-3P

Fig.
D8



TO-3PF

Fig.
D9

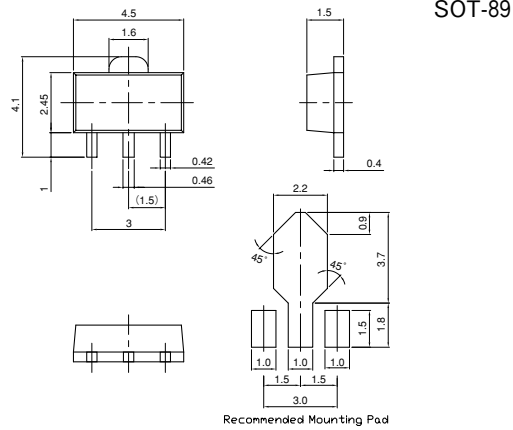


Fig.
D10

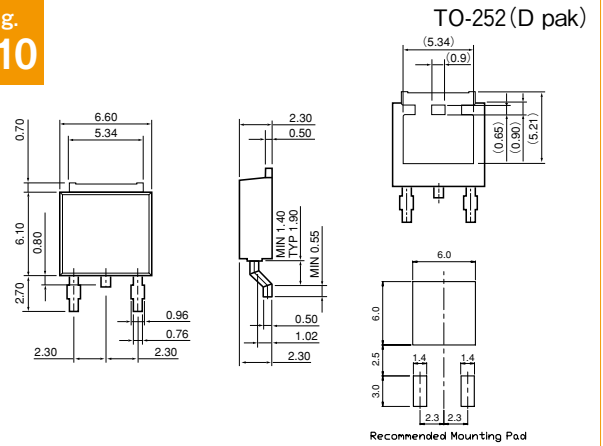


Fig.
D11

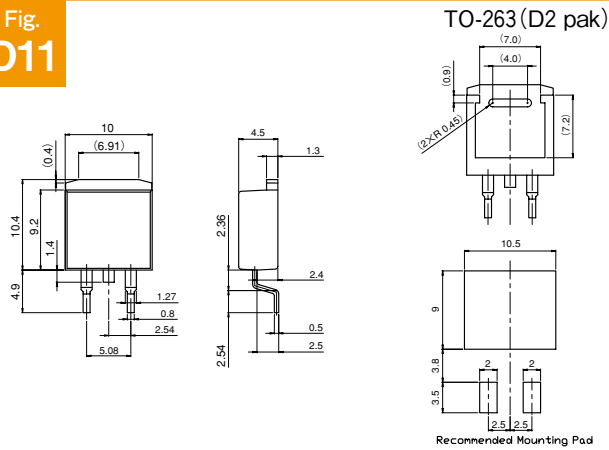


Fig.
D12

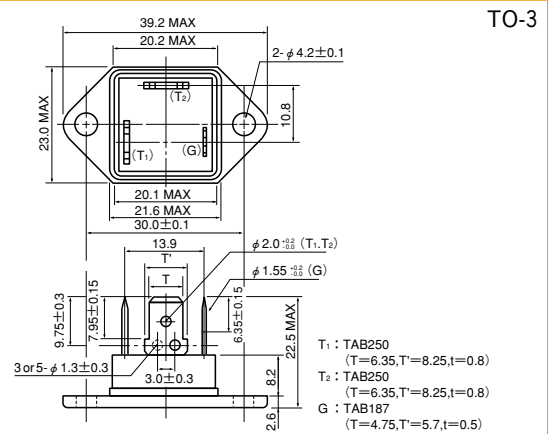


Fig.
D13

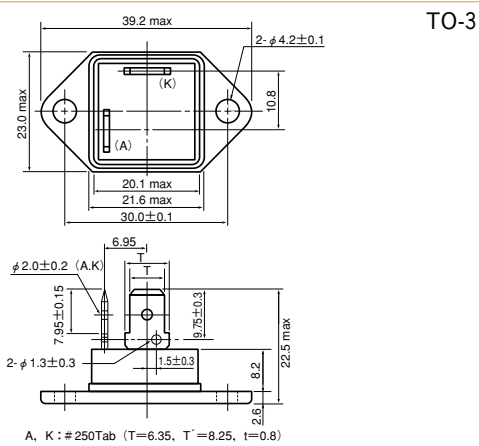


Fig.
D14

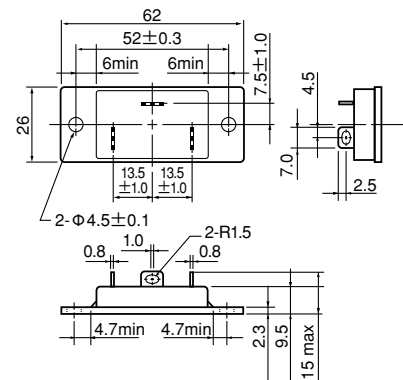
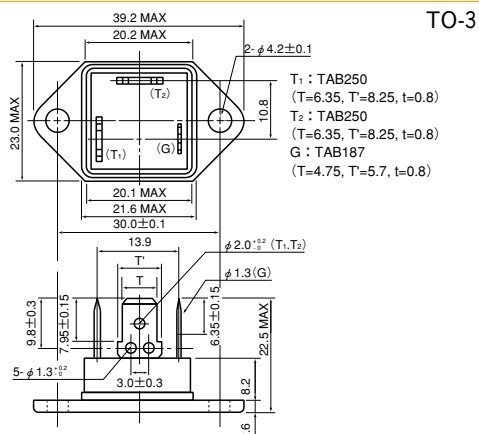
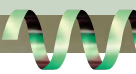


Fig.
D15



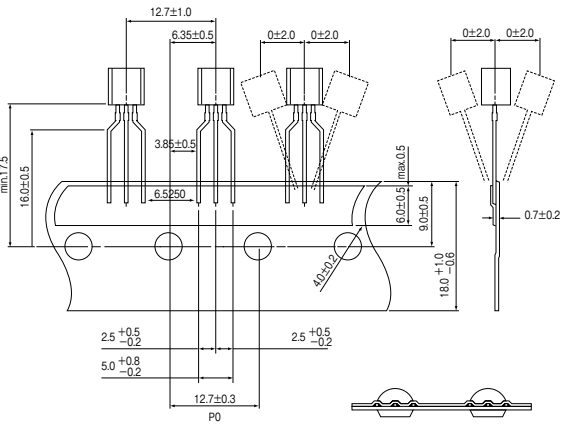
Please refer specification for details



PACKAGING SPECIFICATIONS

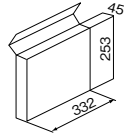
Through Hole

TO-92 (Taping)

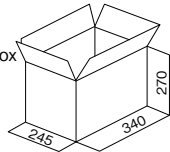


P0 : Cumulative Feedhole Pitch $\pm 1.0/20$ pitch

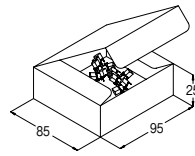
Inner Box
3,000pcs/Box
(Corrugated Board)



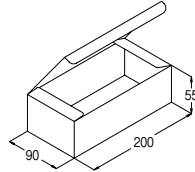
Outer Box
5 Packing Boxes (15,000pcs)/Box
(Corrugated Board)



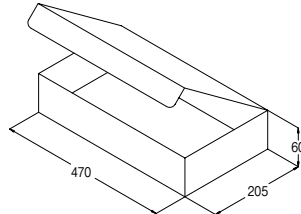
TO-92 (Formed Lead)



Box (White paperboard)
500 pcs/Box

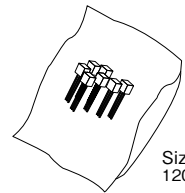


Inner Box (White paperboard)
4 Boxes (2,000pcs) per Inner Box



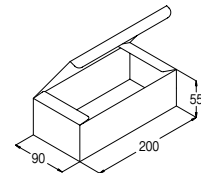
Outer Box (Corrugated Board)
5 Inner boxes (10,000pcs)
per Outer Box

TO-92 (Straight Lead)

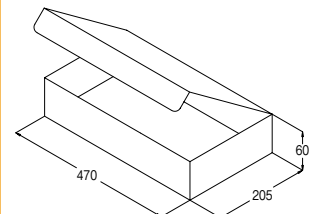


Size
120×85

Bag (Polyethylene)
200 pcs per Bag

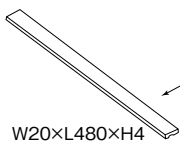


Inner Box (White paperboard)
10 Bags (2,000pcs) per Inner Box



Outer Box (Corrugated Board)
5 Inner boxes (10,000pcs)
per Outer Box

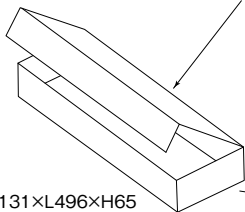
TO-251



Tube (PVC plastic)
70 pieces per Tube

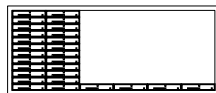
W20×L480×H4

Inner Box (Corrugated Board)
72 Tubes (5,040 pieces) per Inner box
For less than 5,040 pieces,
parts are shipped in Inner box
without Outer box.

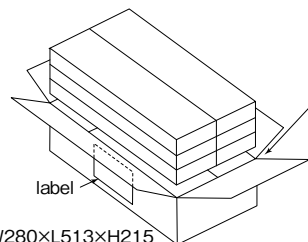


W131×L496×H65

6 rows 12 levels



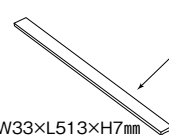
Outer Box (Corrugated Board)
6 Inner boxes (30,240 pieces)
per Outer box



W280×L513×H215

Note) A label with Type and Quantity is indicated on the Outer box.

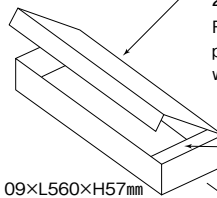
TO-220AB / TO-220AB-2L



Tube (PVC plastic)
50 pieces per Tube

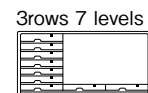
W33×L513×H7mm

Inner Box (Corrugated Board)
20 Tubes (1,000 pieces) per Inner box
For less than 1,000 pieces,
parts are shipped in Inner box
without Outer box.

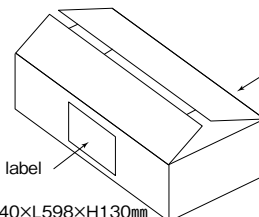


W109×L560×H57mm

Cushioning material (Corrugated Board)



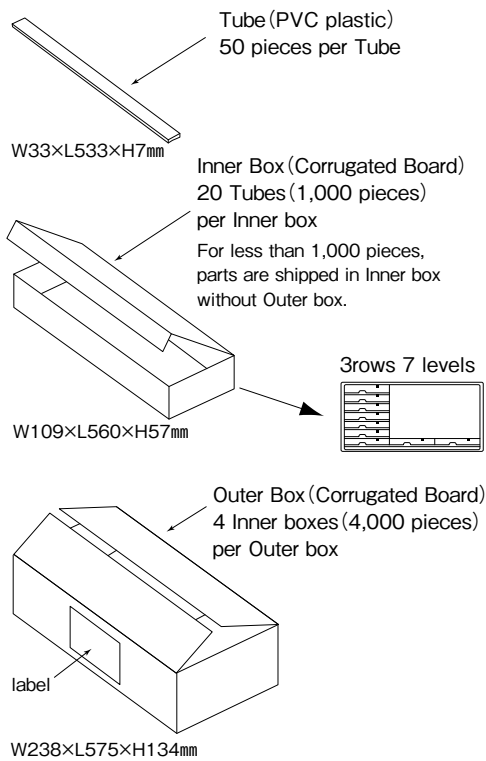
Outer Box (Corrugated Board)
4 Inner boxes (4,000 pieces)
per Outer box



W240×L598×H130mm

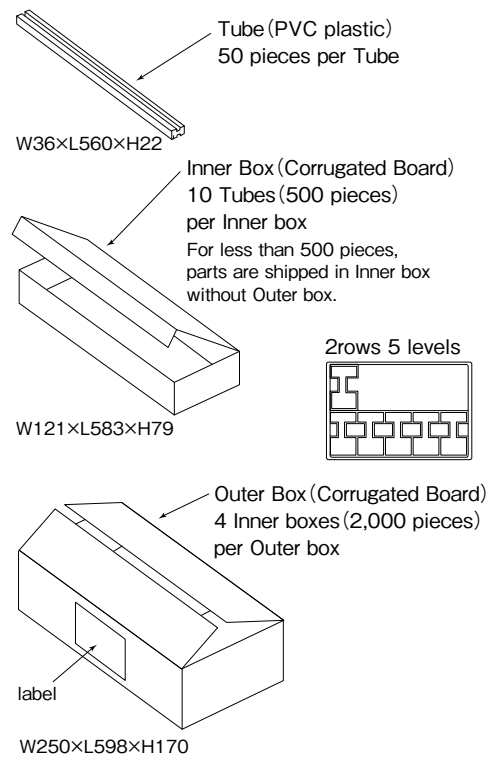
Note) A label with Type and Quantity is indicated on the Outer box.

TO-220F (Straight Lead)



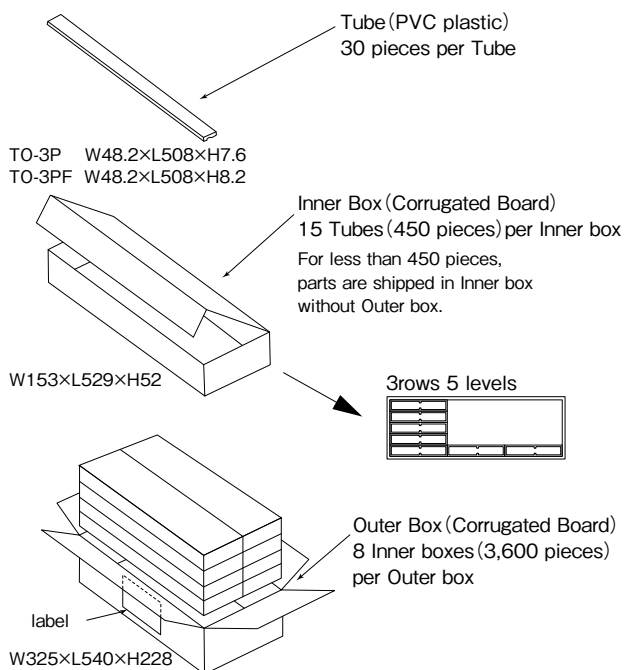
Note) A label with Type and Quantity is indicated on the Outer box.

TO-220F (Formed Lead)

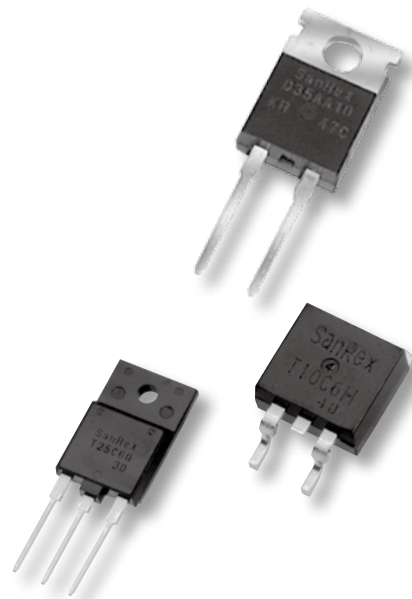


Note) A label with Type and Quantity is indicated on the Outer box.

TO-3P / TO-3PF



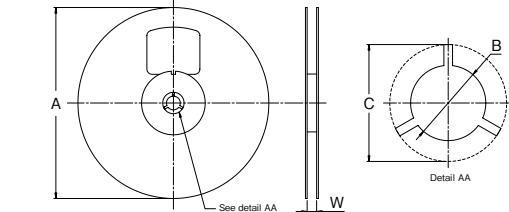
Note) A label with Type and Quantity is indicated on the Outer box.



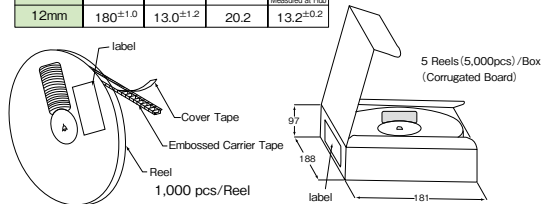
SMD (Surface Mount Device)

SOT-89

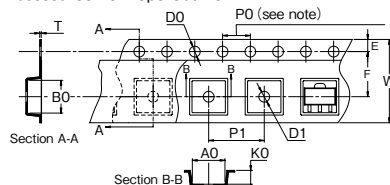
SOT-89 Reel Outline



Dimensions are in millimeter				
Tape Size	A	B	C	W
12mm	180 $\pm$ 1.0	13.0 $\pm$ 1.2	20.2	13.2 $\pm$ 0.2



SOT-89 Embossed Carrier Tape Outline

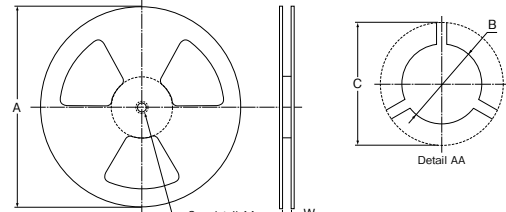


Dimensions are in millimeter												
	A0	B0	W	D0	D1	E	F	P0	P1	K0	T	
SOT-89 (12mm)	4.8	4.6	12.0	1.55	1.55	1.75	5.5	4.0	8.0	1.65	0.30	
	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.2	$\pm$ 0.05	$\pm$ 0.05	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.05	$\pm$ 0.10	$\pm$ 0.05	

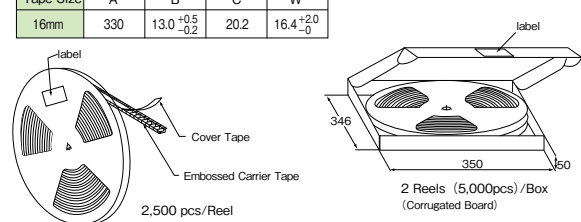
Notes 10 sprocket hole pitch cumulative tolerance $\pm$ 0.2.

TO-252

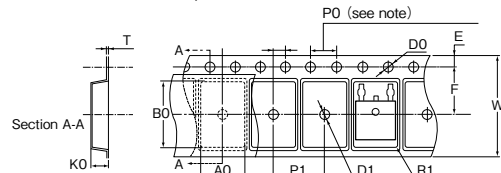
TO-252 Reel Outline



Dimensions are in millimeter				
Tape Size	A	B	C	W
16mm	330	13.0 $\pm$ 0.5	20.2	16.4 $\pm$ 0.2



TO-252 Embossed Carrier Tape Outline

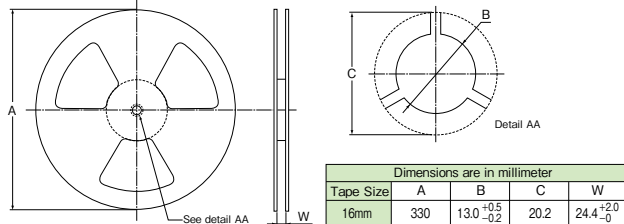


Dimensions are in millimeter												
	A0	B0	W	D0	D1	E	F	P0	P1	K0	T	
TO-252 (16mm)	7.1	10.5	16.0	1.5	1.7	1.75	7.5	4.0	8.0	2.85	0.30	
	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.3	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.10	$\pm$ 0.05	

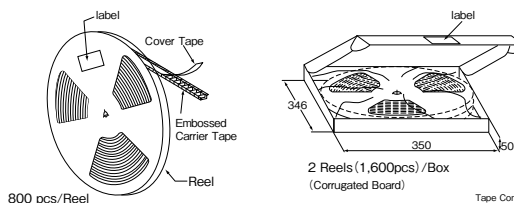
Notes 10 sprocket hole pitch cumulative tolerance $\pm$ 0.2.

TO-263

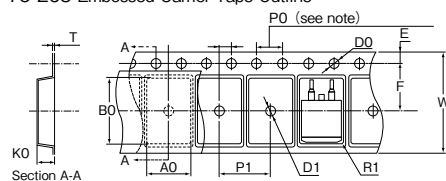
TO-263 Reel Outline



Dimensions are in millimeter				
Tape Size	A	B	C	W
16mm	330	13.0 $\pm$ 0.5	20.2	24.4 $\pm$ 0.2



TO-263 Embossed Carrier Tape Outline



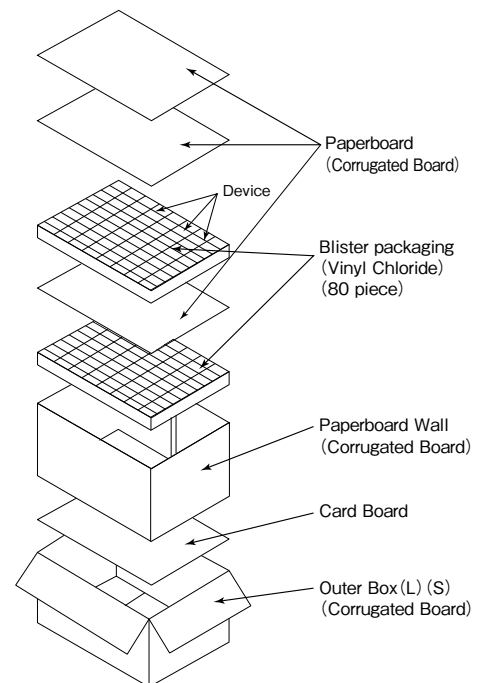
Dimensions are in millimeter												
	A0	B0	W	D0	D1	E	F	P0	P1	K0	T	
TO-263 (16mm)	10.6	15.8	24.0	1.5	1.6	1.75	11.5	4.0	16.0	4.90	0.30	
	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.3	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.1	$\pm$ 0.10	$\pm$ 0.05	

Notes

- 10 sprocket hole pitch cumulative tolerance $\pm$ 0.2.
- A0, B0 and K0 dimensions are determined with respect to EIA RS-481.
- K0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier.

Tab terminal

TO-3



- For Outer Carton (L) ; Maximum 5 stacks of partition tray (400pcs) W395×L295×H185mm
- For Outer Carton (S) ; Maximum 2 stacks of partition tray (160pcs) W395×L295×H105mm

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