

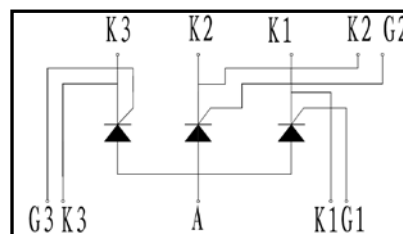
FEATURES

- ☐ High surge current
- ☐ Easy construction
- ☐ Non-isolated (Mounting base as common Anode terminal)
- ☐ High $I_{T(AV)}$



APPLICATIONS

- ☐ DC Motor Control and Drives
- ☐ Welders
- ☐ Power Converters
- ☐ Heat and Temperature Control



ABSOLUTE MAXIMUM RATINGS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Values	Unit
V_{RRM}	Repetitive Peak Off-State Voltage		300	V
V_{DRM}	Repetitive Peak Reverse Voltage		300	V
$I_{T(AV)}$	Average On-State Current	Single phase, half wave, 180° conduction, $T_C=100^{\circ}\text{C}$	150	A
$I_{T(RMS)}$	R.M.S On-State Current		225	A
I_{TSM}	Surge On-State Current	1/2cycle, 50Hz, peak value, non-repetitive	3300	A
I^2t		$T_j=25^{\circ}\text{C}$, $t=10\text{ms}$ (50Hz), sine, $V_R=0$	54000	A^2S
P_{GM}	Peak Gate Power Dissipation		12	W
$P_{G(AV)}$	Average Gate Power Dissipation		1.5	W
I_{FGM}	Peak Gate Current		3.5	A
V_{FGM}	Peak Gate Voltage (Forward)		12	V
V_{RGM}	Peak Gate Voltage (Reverse)		6	V
di/dt	Critical Rate of On-State Current	$I_G=200\text{mA}$, $T_j=25^{\circ}\text{C}$, $V_D=1/2V_{DRM}$, $dI_G=1\text{A}/\mu\text{S}$	100	$\text{A}/\mu\text{S}$
T_j	Operating Junction Temperature		-40~125	$^{\circ}\text{C}$
T_{STG}	Storage Temperature		-40~125	$^{\circ}\text{C}$
Md	Mounting torque(M6)		3 to 5	N·m
	Terminal torque(M6)		3 to 5	N·m
Weight			205	g

ELECTRICAL CHARACTERISTICS
 $T_C=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{DRM}	Max.Repetitive Peak Off-State Current	$V_D = V_R = 300\text{V}$, $T_C = 125^{\circ}\text{C}$			25	mA
I_{RRM}	Max.Repetitive Peak Reverse Current	Single phase,half wave			25	mA
V_{TM}	Max. Peak On-State Voltage	$I_{TM}=450\text{A}$, $T_C=25^{\circ}\text{C}$		1.15	1.5	V
		$t_d=10\text{ms}$,half sine $T_C=125^{\circ}\text{C}$		1.10	1.4	V
V_{GT}	Max. Gate Trigger Voltage	$I_T=1\text{A}$, $V_D=6\text{V}$ $T_C=25^{\circ}\text{C}$		1.1	1.5	V
		$T_C=125^{\circ}\text{C}$		0.9	1.3	V
I_{GT}	Max. Gate Trigger Current	$I_T=1\text{A}$, $V_D=6\text{V}$ $T_C=25^{\circ}\text{C}$		75	120	mA
		$T_C=125^{\circ}\text{C}$		50	80	mA
I_H	Holding Current	$T_C=25^{\circ}\text{C}$		70		mA
V_{GD}	Min. Gate Non-Trigger Voltage	$T_C=125^{\circ}\text{C}$, $V_D=1/2V_{DRM}$	0.35			V
dv/dt	Min. Critical Rate of Rise Off-State Voltage	$T_C=125^{\circ}\text{C}$, $V_D=2/3V_{DRM}$ Exponential wave	500			V/ μS
R_{thjc}	Thermal resistance,Junction to case	Per Thyristor			0.2	$^{\circ}\text{C/W}$

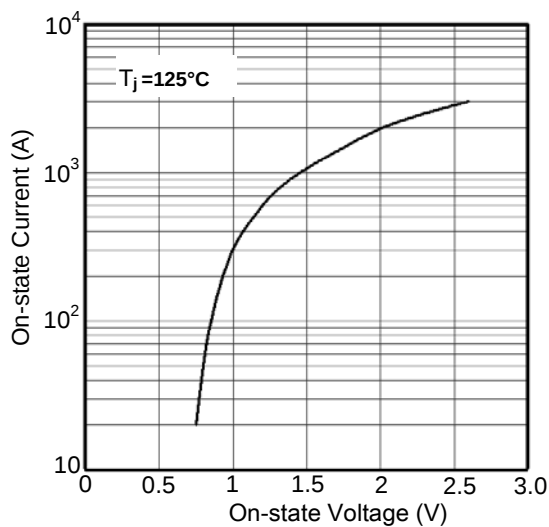


Figure1. On State Voltage Drop Characteristics

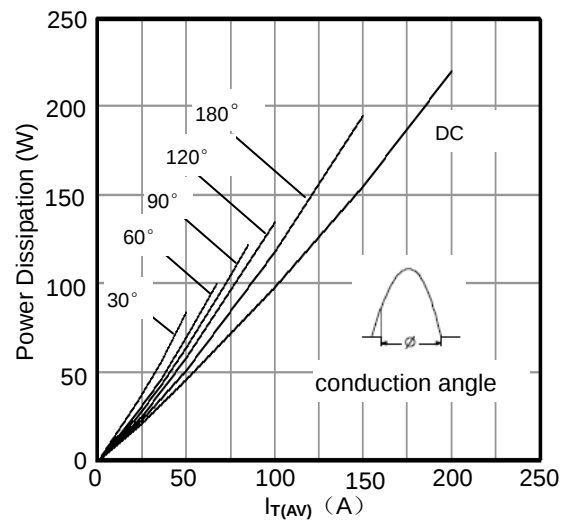


Figure2. Average On-State Current vs Power Dissipation

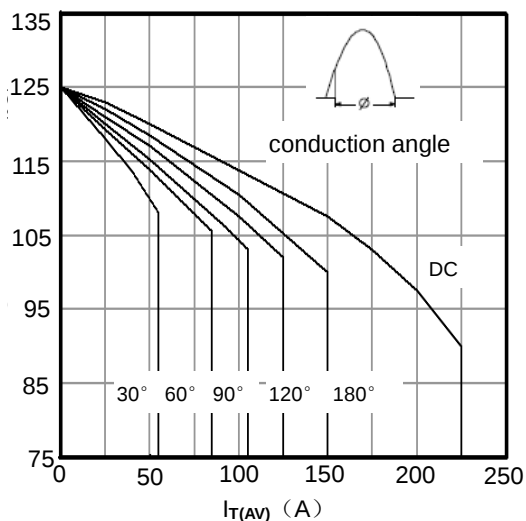


Figure3. Average On-State Current vs Maximum Allowable Case Temperature

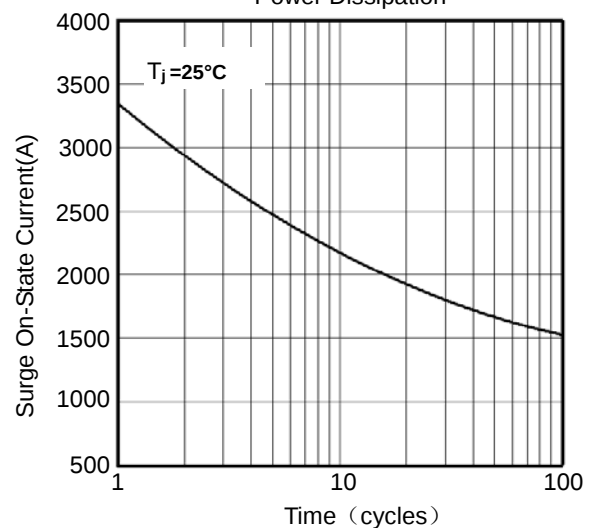


Figure4. Surge On-State Current Rating (Non-Repetitive)

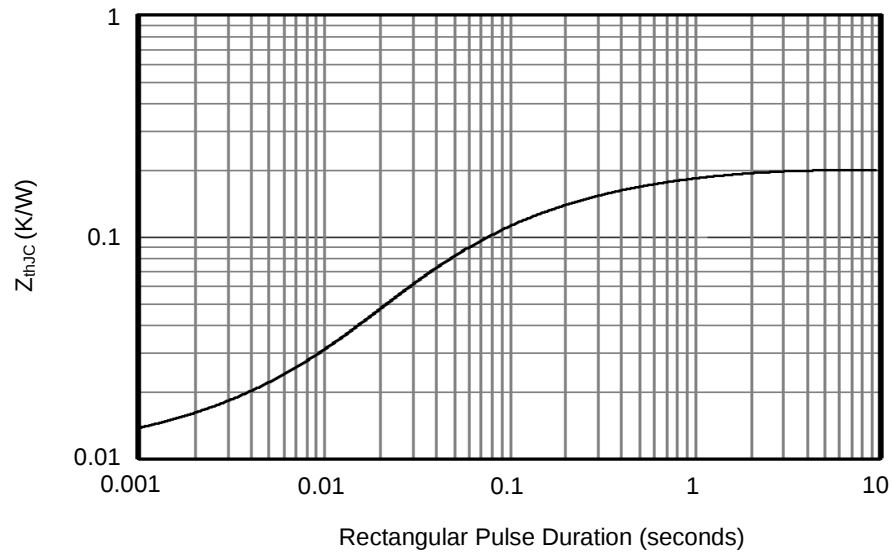
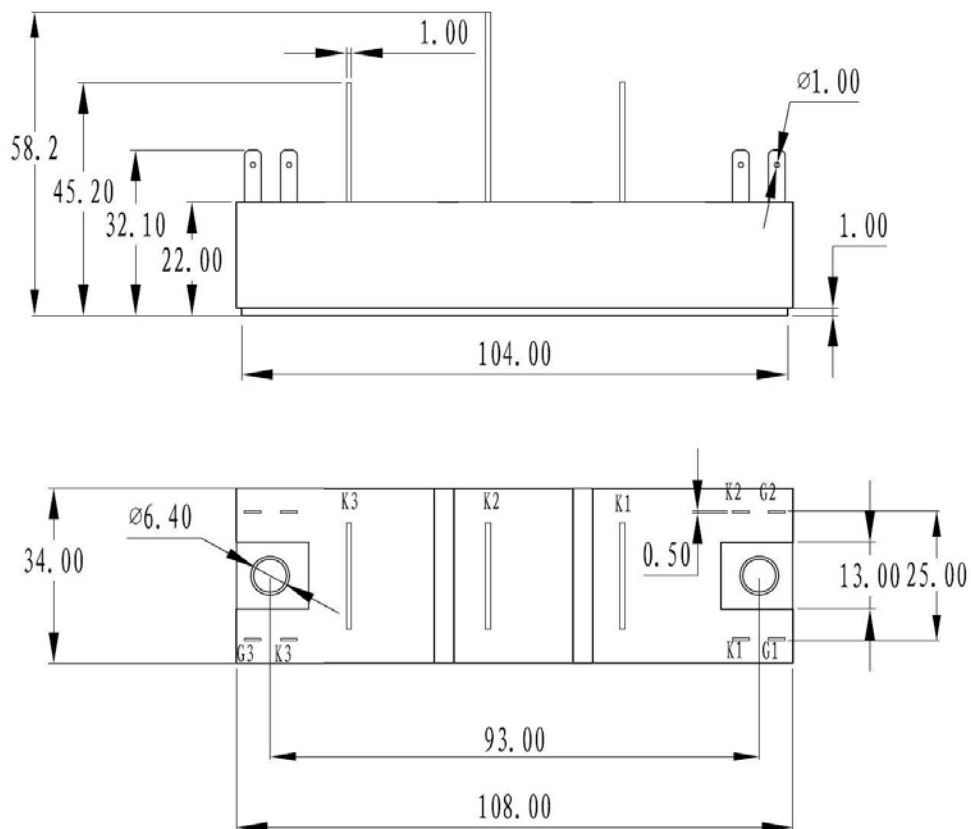


Figure5. Transient Thermal Impedance



Dimensions (mm)
Figure6. Package Outline