

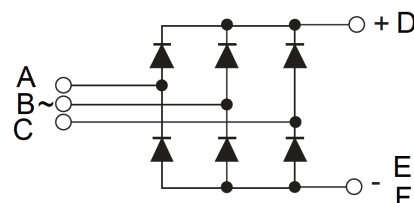
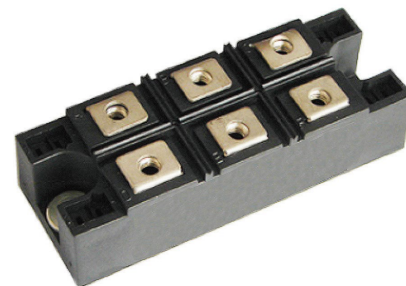
Feature

- Package with screw terminals
- Isolation voltage 4000V~
- Blocking voltage up to 1800V
- Low forward voltage drop

Application

- Supplies for DC power equipment
- Input rectifier for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Maximum value



Symbol	Parameter	Rating					Unit
		70MT80K	70MT120K	70MT140K	70MT160K	70MT180K	
VRRM	Reverse peak repetitive voltage	800	1200	1400	1600	1800	V
VRSM	Reverse peak non-repetitive voltage	900	1300	1500	1700	1900	V

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$V_R = V_{RRM}; T_{VJ} = 25^\circ\text{C}$	≤ 0.2	mA
	$V_R = V_{RRM}; T_{VJ} = T_{VJM}$	≤ 4	
V_F	$I_F = 70\text{A}; T_{VJ} = 25^\circ\text{C}$	≤ 1.45	V
V_{FO}	For power-loss calculations only	0.86	V
r_F	$T_{VJ} = T_{VJM}$	7.3	mΩ
R_{thJC}	per diode	1.75	K/W
	per module	0.29	
R_{thJK}	per diode	1.13	K/W
	per module	0.19	
ds	Creeping distance on surface	10	mm
dA	Creepage distance in air	9.4	mm
a	Max. allowable acceleration	50	m/s ²

Symbol	Test Conditions	Maximum Ratings	Unit
I_{dav}	$T_C=100^{\circ}C$, module	70	A
I_{dav}	$T_A=45^{\circ}C$ ($R_{thCA}=0.6K/W$), module	90	
I_{FSM}	$T_{VJ}=45^{\circ}C$ $t=10ms$ (50Hz), sine	480	A
	$V_R=0$ $t=8.3ms$ (60Hz), sine	500	
	$T_{VJ}=T_{VJM}$ $t=10ms$ (50Hz), sine	430	
	$V_R=0$ $t=8.3ms$ (60Hz), sine	450	
P_{RSM}	Per diode chip, $T_{VJ}=25^{\circ}C$, $t_p=10s$	2.95	KW
I^2t	$T_{VJ}=45^{\circ}C$ $t=10ms$ (50Hz), sine	1150	A^2s
	$V_R=0$ $t=8.3ms$ (60Hz), sine	1050	
	$T_{VJ}=T_{VJM}$ $t=10ms$ (50Hz), sine	1030	
	$V_R=0$ $t=8.3ms$ (60Hz), sine	940	
T_{VJ}		-40..+150	$^{\circ}C$
T_{VJM}		150	
T_{stg}		-40..+150	
V_{ISOL}	50/60Hz, RMS $t=1min$	2500	V~
	$I_{ISOL} \leq 1mA$ $t=1s$	4000	
M_d	Mounting torque (M5)	$5 \pm 15\%$	Nm
	Terminal connection torque (M5)	$5 \pm 15\%$	
Weight	typ.	176	g

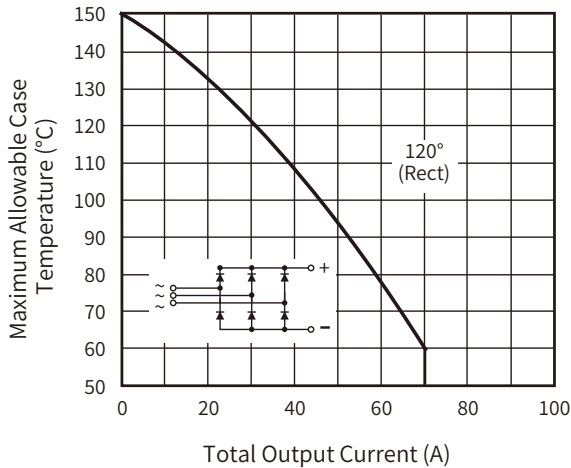


Fig. 1 - Current Ratings Characteristics

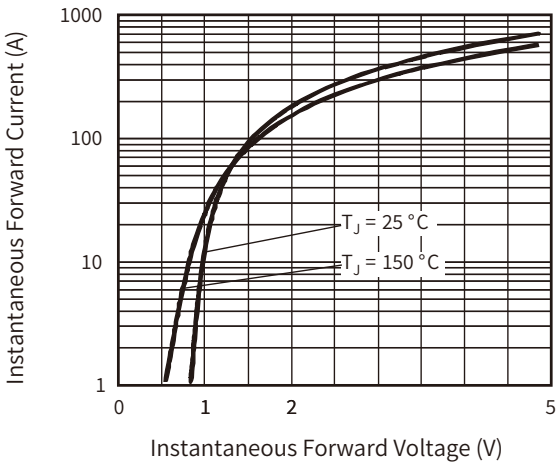


Fig. 2 - Forward Voltage Drop Characteristics

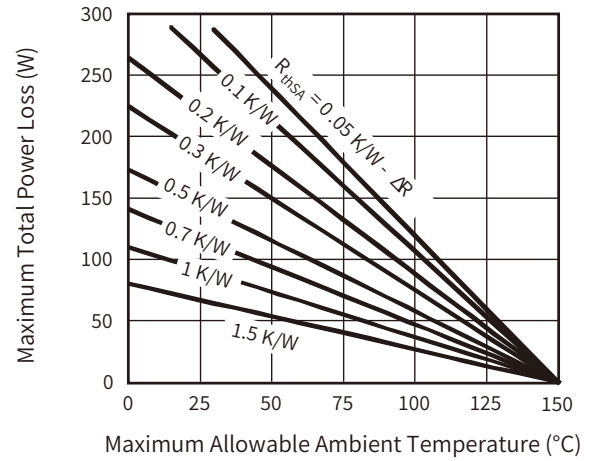
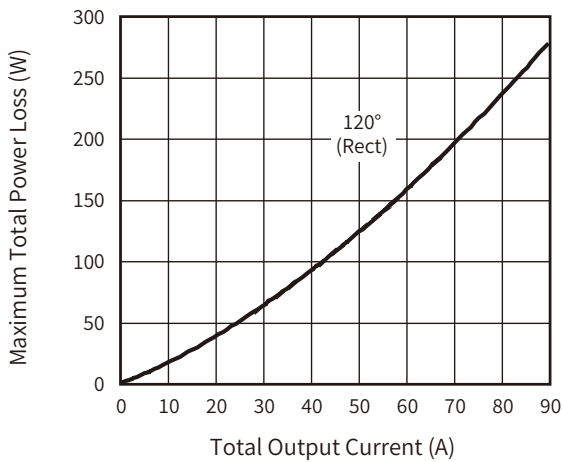


Fig. 3 - Total Power Loss Characteristics

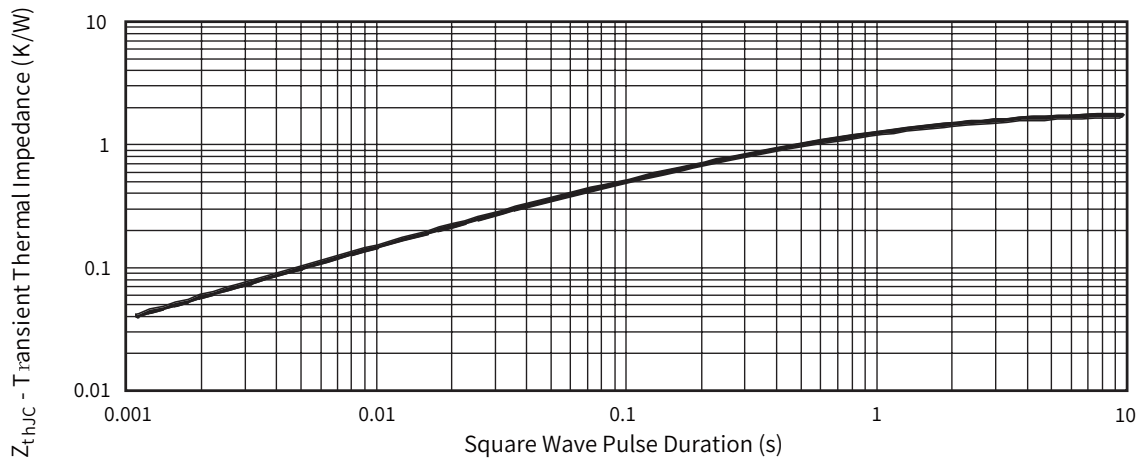


Fig.4 - Thermal Impedance Z_{thJC} Characteristic

Dimensions in mm (1mm=0.0394")

