

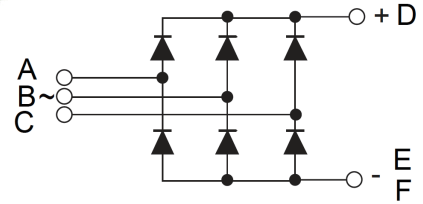
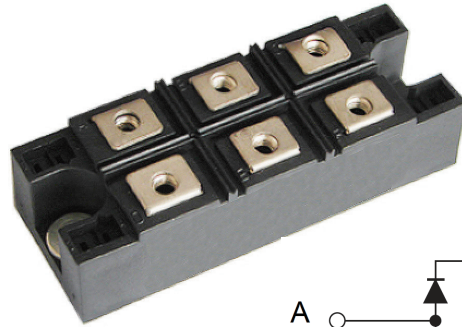
130MT80K thru 130MT180K

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
		130MT80	130MT120	130MT140	130MT160	130MT180	
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	Maximum Ratings	Unit
I_{dav}	$T_c=100^{\circ}\text{C}$, module	130	A
I_{dav}	$T_A=45^{\circ}\text{C}$ ($R_{thCA}=0.6\text{K/W}$), module	160	
I_{FSM}	$T_{VJ}=45^{\circ}\text{C}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	1130 1180	A
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	1010 1060	
P_{RSM}	Per diode chip, $T_{VJ}=25^{\circ}\text{C}$, $t_p=10\text{s}$	6.30	KW
I^2t	$T_{VJ}=45^{\circ}\text{C}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	6400 5800	A^2s
	$T_{VJ}=T_{VJM}$ $V_R=0$ $t=10\text{ms}$ (50Hz), sine $t=8.3\text{ms}$ (60Hz), sine	5760 5220	
T_{VJ} T_{VJM} T_{stg}		-40...+150 150 -40...+150	$^{\circ}\text{C}$
V_{ISOL}	50/60Hz, RMS $I_{ISOL}\leq 1\text{mA}$ $t=1\text{min}$ $t=1\text{s}$	2500 4000	V~
M_d	Mounting torque (M5) Terminal connection torque (M5)	$5 \pm 15\%$ $5 \pm 15\%$	Nm
Weight	typ.	176	g

130MT80K thru 130MT180K

Symbol	Test Conditions	Characteristic Values	Unit
I_R	$V_R=V_{RRM}; T_{VJ}=25^{\circ}\text{C}$ $V_R=V_{RRM}; T_{VJ}=T_{VJM}$	≤ 0.4	mA
		≤ 6	
V_F	$I_F=130\text{A}; T_{VJ}=25^{\circ}\text{C}$	≤ 1.40	V
V_{Fo}	For power-loss calculations only	0.78	V
r_F	$T_{VJ}=T_{VJM}$	4.5	$\text{m}\Omega$
R_{thJC}	per diode	0.92	K/W
	per module	0.153	
R_{thJK}	per diode	0.93	K/W
	per module	0.155	
d_s	Creeping distance on surface	10	mm
d_A	Creepage distance in air	9.4	mm
a	Max. allowable acceleration	50	m/s^2

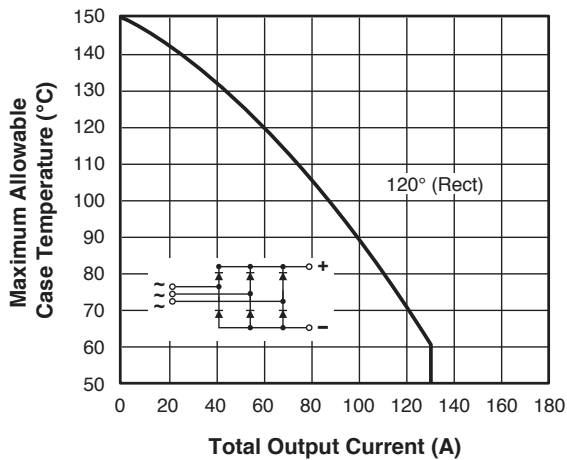


Fig. 1 - Current Rating Characteristics

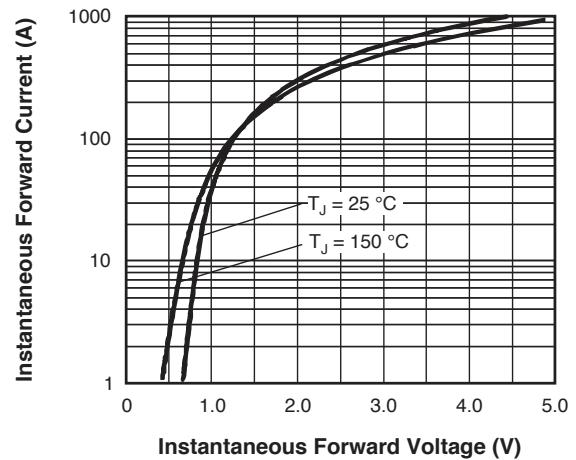


Fig. 2 - Forward Voltage Drop Characteristics

130MT80K thru 130MT180K

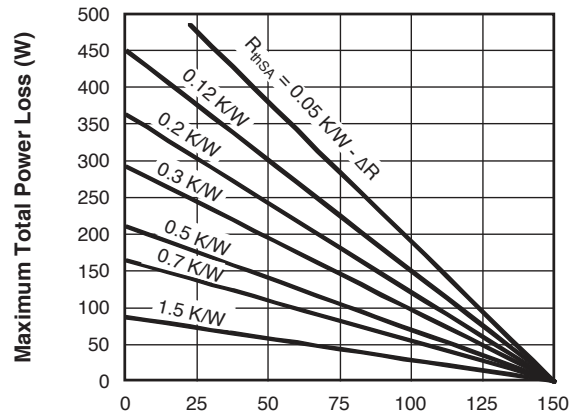
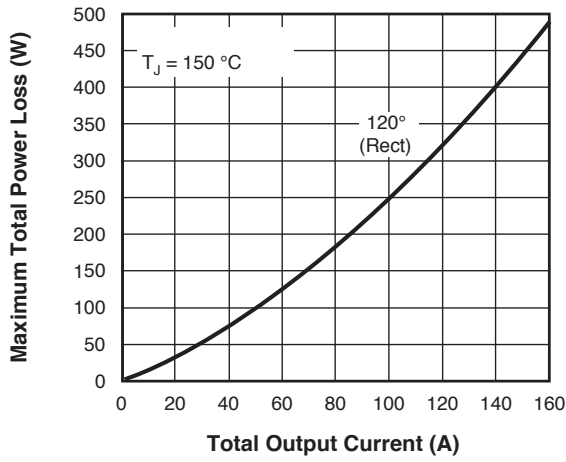


Fig. 3 - Total Power Loss Characteristics

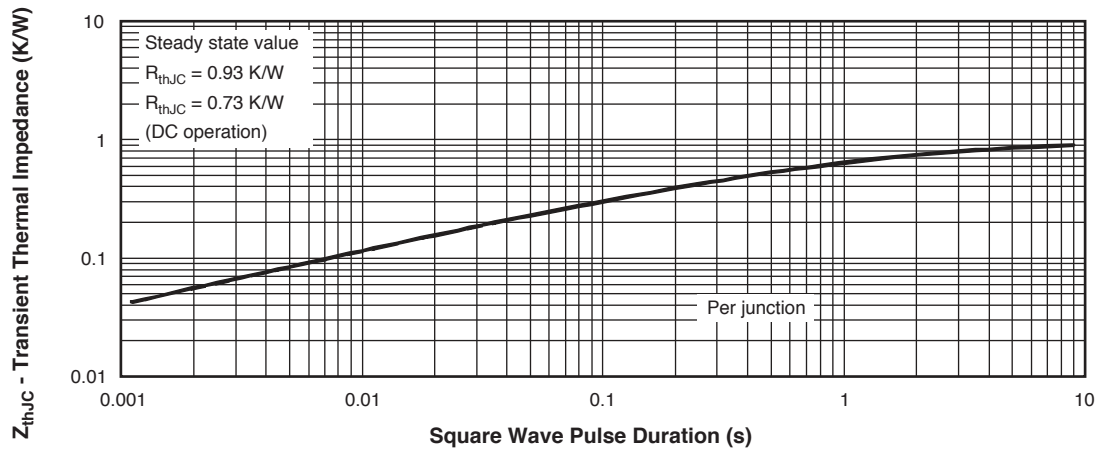


Fig. 4 - Thermal Impedance Z_{thJC} Characteristics

Dimensions in mm (1mm=0.0394")

Screws M5 x 0.8 length 10

