

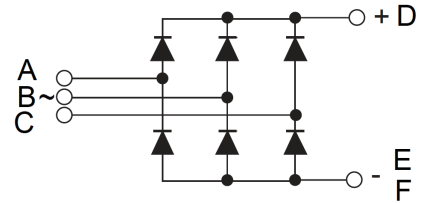
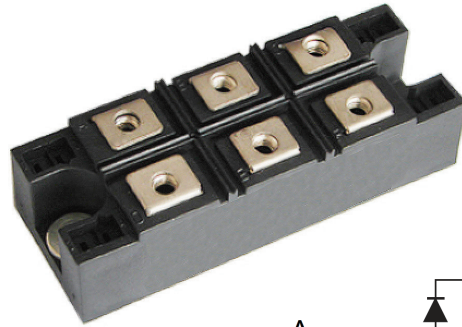
### 60MT80K thru 60MT180K

#### 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
		60MT80	60MT120	60MT140	60MT160	60MT180	
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	
$I_{dAV}$	$T_C=100^{\circ}C$ , module	60	A	
$I_{dAV}$	$T_A=45^{\circ}C$ ( $R_{thCA}=0.6K/W$ ), module	75		
$I_{FSM}$	$T_{VJ}=45^{\circ}C$ $V_R=0$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	420 440	
	$T_{VJ}=T_{VJM}$ $V_R=0$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	380 400	
$P_{RSM}$	Per diode chip, $T_{VJ}=25^{\circ}C$ , $t_p=10s$	2.90	KW	
$I^2t$	$T_{VJ}=45^{\circ}C$ $V_R=0$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	870 790	
	$T_{VJ}=T_{VJM}$ $V_R=0$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	780 710	
$T_{VJ}$ $T_{VJM}$ $T_{stg}$		-40...+150 150 -40...+150	$^{\circ}C$	
$V_{ISOL}$	50/60Hz, RMS $I_{ISOL} \leq 1mA$	$t=1min$ $t=1s$	2500 4000	V~
$M_d$	Mounting torque (M5) Terminal connection torque (M5)		$5 \pm 15\%$ $5 \pm 15\%$	Nm
Weight	typ.		176	g

60MT80K thru 60MT180K

Symbol	Test Conditions	Characteristic Values	Unit
$I_R$	$V_R=V_{RRM}; T_{VJ}=25^{\circ}C$ $V_R=V_{RRM}; T_{VJ}=T_{VJM}$	$\leq 0.2$ $\leq 4$	mA
$V_F$	$I_F=60A; T_{VJ}=25^{\circ}C$	$\leq 1.45$	V
$V_{Fo}$	For power-loss calculations only	0.85	V
$r_F$	$T_{VJ}=T_{VJM}$	8.0	m $\Omega$
$R_{thJC}$	per diode	2.22	K/W
	per module	0.37	
$R_{thJK}$	per diode	1.20	K/W
	per module	0.20	
$d_s$	Creeping distance on surface	10	mm
$d_A$	Creepage distance in air	9.4	mm
$a$	Max. allowable acceleration	50	m/s <sup>2</sup>

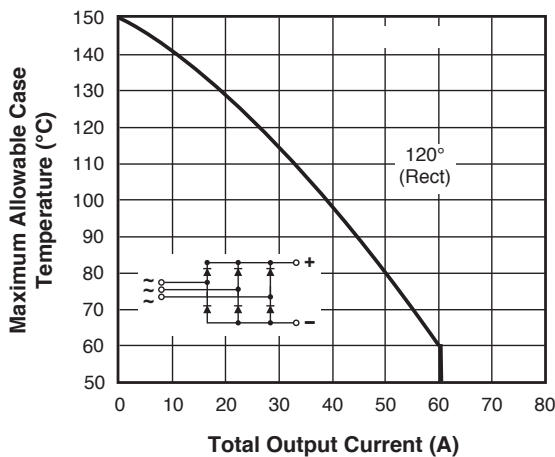


Fig. 1 - Current Ratings Characteristics

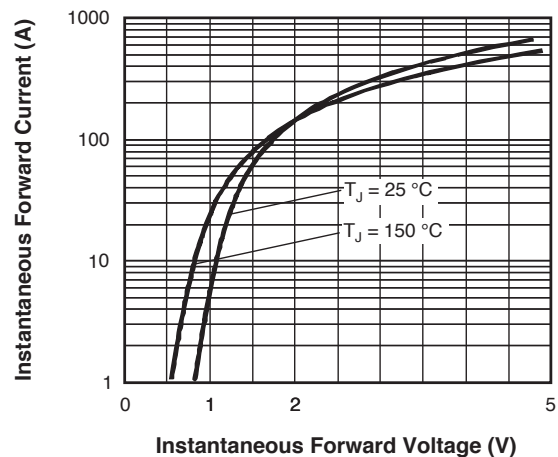


Fig. 2 - Forward Voltage Drop Characteristics

### 60MT80K thru 60MT180K

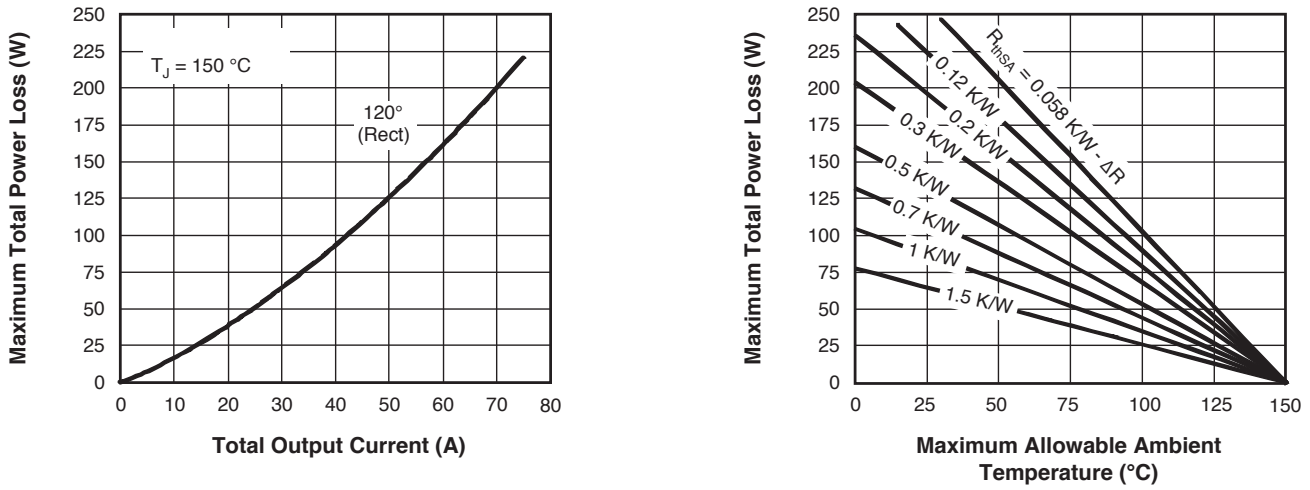


Fig. 3 - Total Power Loss Characteristics

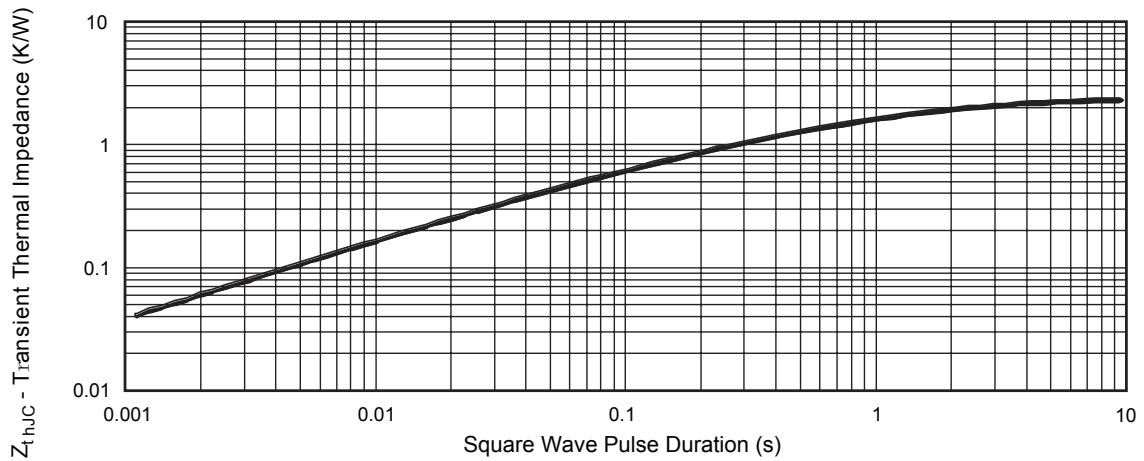


Fig.4 - Thermal Impedance  $Z_{thJC}$  Characteristic

### Dimensions in mm (1mm=0.0394")

Screws M5 x 0.8 length 10

