



A1A:80.XX

VOLTAGE RATINGS

Part Number	V _{RRM} , V _R (V) Max. rep. peak reverse voltage		V _{RSM} , V _R (V) Max. non- rep. peak reverse voltage
	T _J = 0 to 180°C	T _J = -40 to 0°C	T _J = 25 to 180°C
A1A:80.02	200	200	300
A1A:80.04	400	400	500
A1A:80.06	600	600	700
A1A:80.08	800	800	900
A1A:80.10	1000	1000	1100
A1A:80.12	1200	1200	1300
A1A:80.14	1400	1400	1500
A1A:80.16	1600	1600	1700

This datasheet applies to:

**Metric thread: A1A:80.XX,
A1B:80.XX**

**Inch thread: A2A:80.XX,
A2B:80.XX**

MAXIMUM ALLOWABLE RATINGS

PARAMETER	VALUE	UNITS	NOTES
T _J Junction Temperature	-40 to 180	°C	-
T _{stg} Storage Temperature	-40 to 180	°C	-
I _{F(AV)} Max. Av. current @ Max. T _C	80	A	180° half sine wave
	125	°C	
I _{F(RMS)} Nom. RMS current	160	A	-
I _{FSM} Max. Peak non-rep. surge current	1102	A	50 Hz half cycle sine wave Initial T _J = 180°C, rated V _{RRM} applied after surge.
	1201		60 Hz half cycle sine wave
	1312		50 Hz half cycle sine wave Initial T _J = 180°C, no voltage applied after surge.
	1430		60 Hz half cycle sine wave
I ² t Max. I ² t capability	5.49	kA ² s	t = 10ms Initial T _J = 180°C, rated V _{RRM} applied after surge.
	5.98		t = 8.3 ms
	7.78		t = 10ms Initial T _J = 180°C, no voltage applied after surge.
	8.48		t = 8.3 ms
I ² t ^{1/2} Max. I ² t ^{1/2} capability	55 220	kA ² s ^{1/2}	Initial T _J = 180°C, no voltage applied after surge. I ² t for time t _x = I ² t ^{1/2} * t _x ^{1/2} . (0.1 < t _x < 10ms).
F Mounting Force	4(~30)	N.m(Lbf.in)	-



A1A:80.XX

CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V_{FM} Peak forward voltage	---	1.35	1.60	V	Initial $T_J = 25^{\circ}\text{C}$, sinusoidal wave, $I_{peak} = 220\text{A}$.
$V_{F(TO)1}$ Low-level threshold	---	---	0.86	V	$T_J = 180^{\circ}\text{C}$
$V_{F(TO)2}$ High-level threshold	---	---	1.00		Av. power = $V_{F(TO)} * I_{F(AV)} + r_F * [I_{F(RMS)}]^2$
r_{F1} Low-level resistance	---	---	2.50	m	Use low values for $I_{FM} < I_{F(AV)}$
r_{F2} High-level resistance	---	---	1.53		
I_{RM} Peak reverse current	---	---	5.00	mA	$T_J = 180^{\circ}\text{C}$. Max. Rated V_{RRM}
R_{thJC} Thermal resistance, junction-to-case	---	---	0.55	$^{\circ}\text{C/W}$	DC operation
	---	---	0.60	$^{\circ}\text{C/W}$	180° sine wave
	---	---	0.70	$^{\circ}\text{C/W}$	120° rectangular wave
R_{thCS} Thermal resistance, case-to-sink	---	---	0.20	$^{\circ}\text{C/W}$	Mtg. Surface smooth, flat and greased. Single side.
wt Weight	---	17(0.6)	---	g(oz.)	---
Case Style	DO-203AB (DO-5)			JEDEC	---

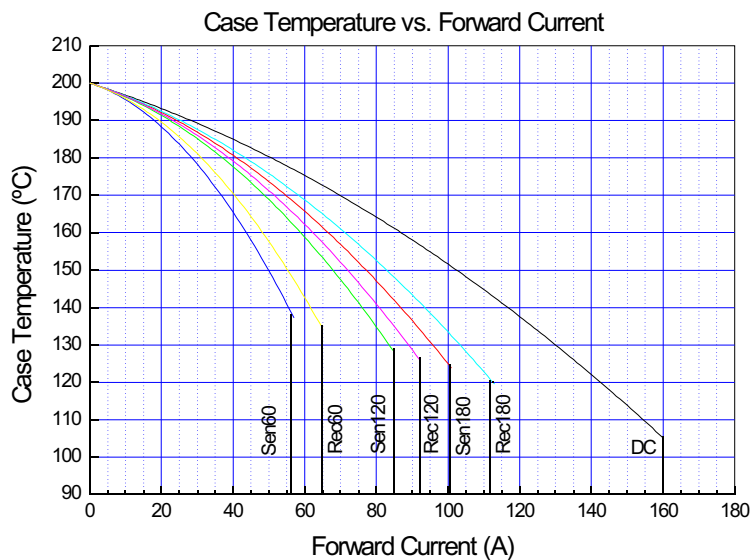


Fig. 1 - Current Ratings Characteristics

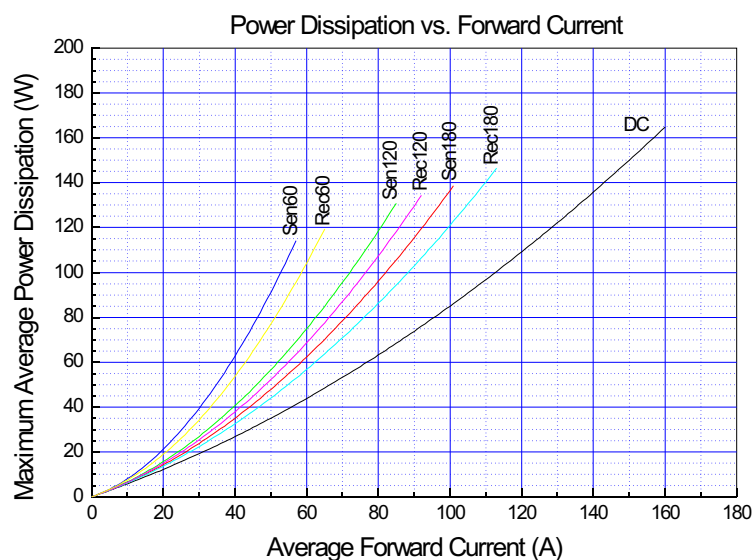


Fig. 2 - Forward Power Loss Characteristics



A1A:80.XX

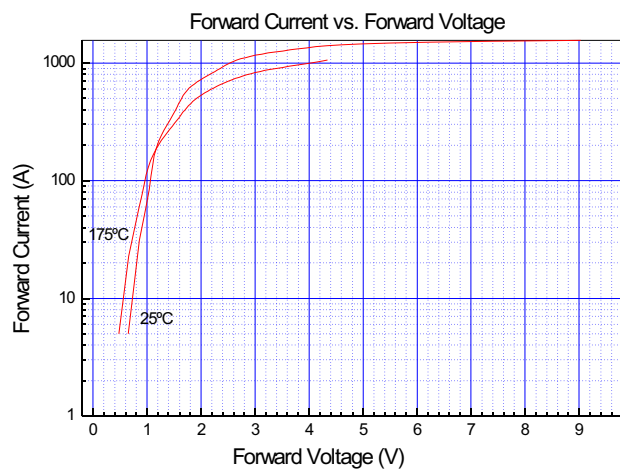


Fig. 3 - Forward Voltage Drop Characteristics

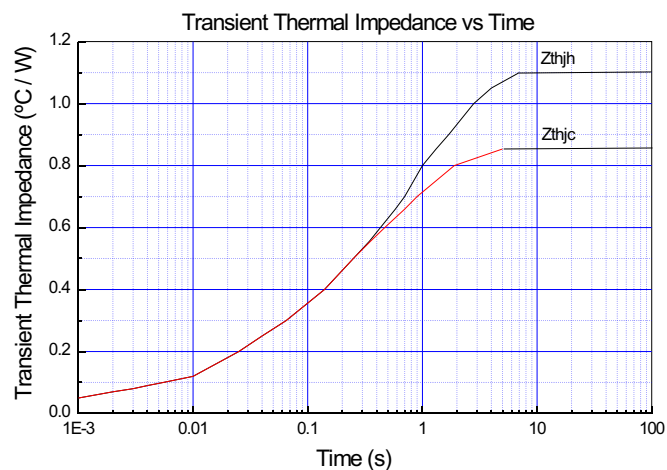
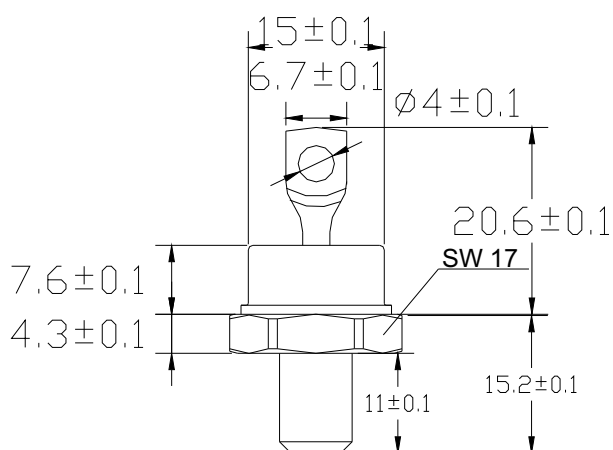


Fig. 4 - Transient Thermal Impedance

DO-5



M8 x 1.25
1/4" UNF 2A