



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
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)	-



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CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V _{FM} Peak forward voltage	---	1.35	1.60	V	Initial T _J = 25°C, sinusoidal wave, I _{peak} = 220A.
V _{F(TO)1} Low-level threshold	---	---	0.86	V	T _J = 180°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°C. Max. Rated V _{RRM}
R _{thJC} Thermal resistance, junction-to-case	---	---	0.55	°C/W	DC operation
	---	---	0.60	°C/W	180° sine wave
	---	---	0.70	°C/W	120° rectangular wave
R _{thCS} Thermal resistance, case-to-sink	---	---	0.20	°C/W	Mtg. Surface smooth, flat and greased. Single side.
wt Weight	---	17(0.6)	---	g(oz.)	---
Case Style	DO-203AB (DO-5)			JEDEC	---

Case Temperature vs. Forward Current

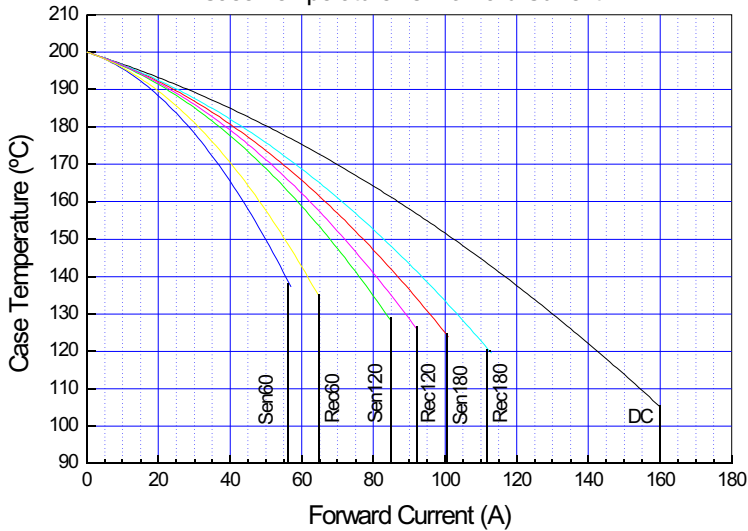


Fig. 1 - Current Ratings Characteristics

Power Dissipation vs. Forward Current

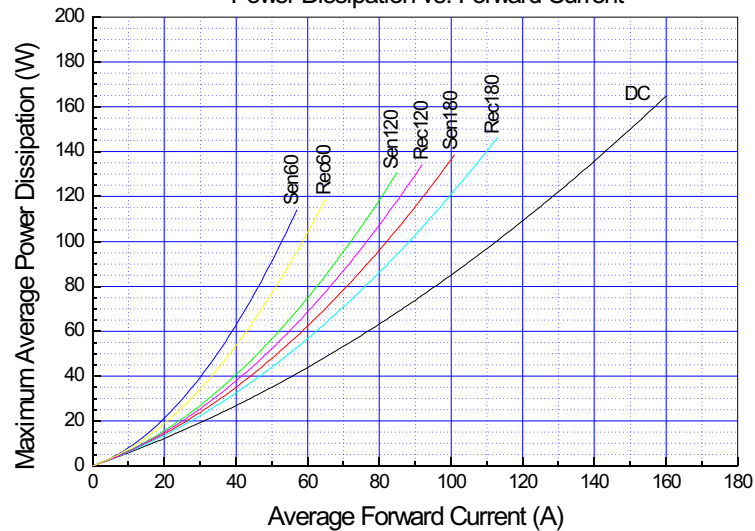


Fig. 2 - Forward Power Loss Characteristics



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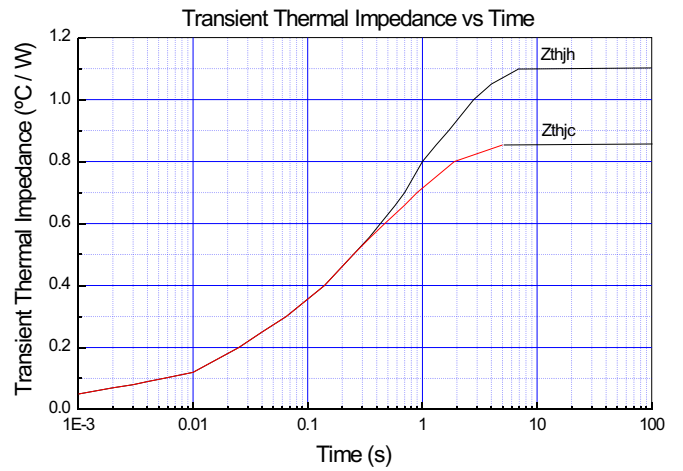
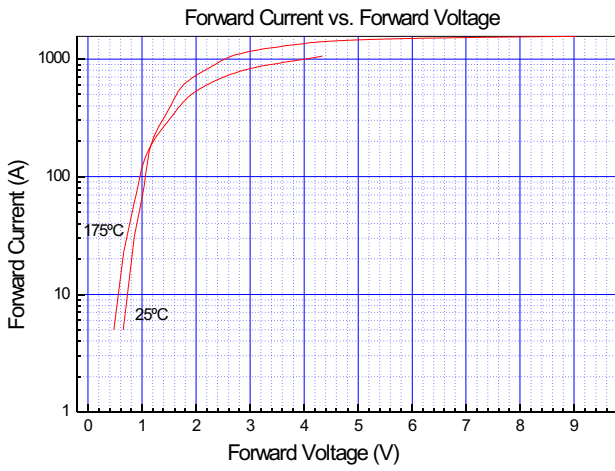
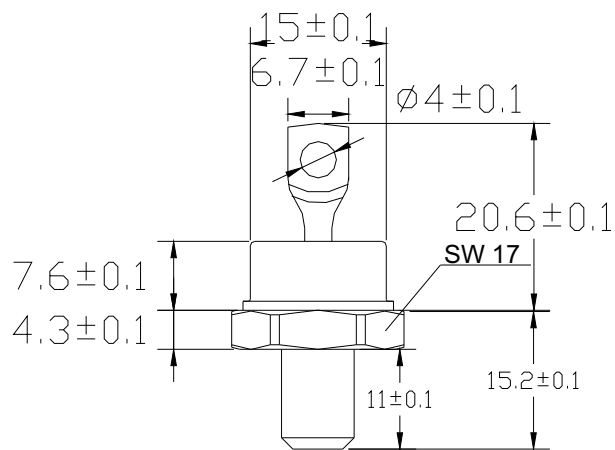


Fig. 3 - Forward Voltage Drop Characteristics

Fig. 4 - Transient Thermal Impedance

DO-5



M8 x 1.25
1/4" UNF 2A