AEGIS
SEMICONDUTORES LTDA.

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	80	A	180° half sine wave
$I_{F(AV)}$ @ Max. T_C	125	°C	180° half sine wave
$I_{F(RMS)}$ 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; Initial T_J = 180°C, rated V_{RRM} applied after surge.
	1312		50 Hz half cycle sine wave; Initial T_J = 180°C, no voltage applied after surge.
	1430		60 Hz half cycle sine wave; Initial T_J = 180°C, no voltage applied after surge.
I^2t Max. I^2t capability	5.49	kA^2s	t = 10ms; Initial T_J = 180°C, rated V_{RRM} applied after surge.
	5.98		t = 8.3 ms; Initial T_J = 180°C, rated V_{RRM} applied after surge.
	7.78		t = 10ms; Initial T_J = 180°C, no voltage applied after surge.
	8.48		t = 8.3 ms; Initial T_J = 180°C, no voltage applied after surge.
$I^2t^{1/2}$ Max. $I^2t^{1/2}$ capability	55 220	$kA^2s^{1/2}$	Initial T_J = 180°C, no voltage applied after surge. I^2t for time $t_x = I^2t^{1/2} * t_x^{1/2}$. (0.1 < tx < 10ms).
F Mounting Force	4(~30)	N.m(Lbf.in)	-

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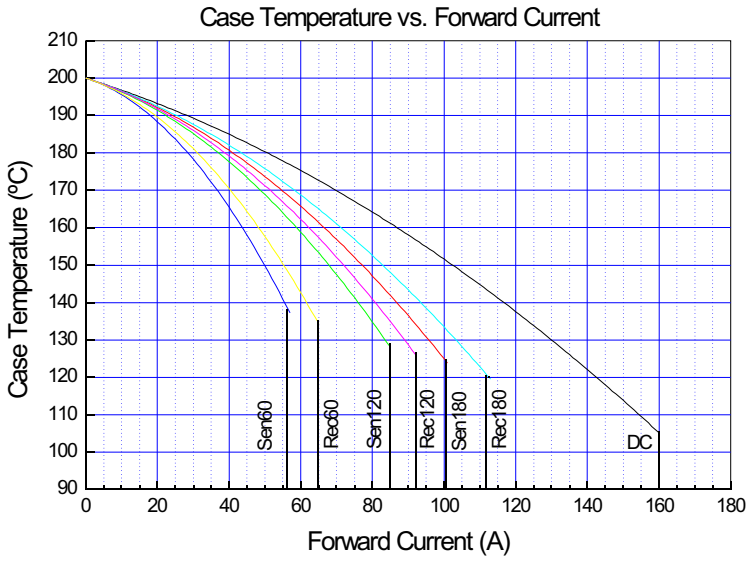
CHARACTERISTICS

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	---



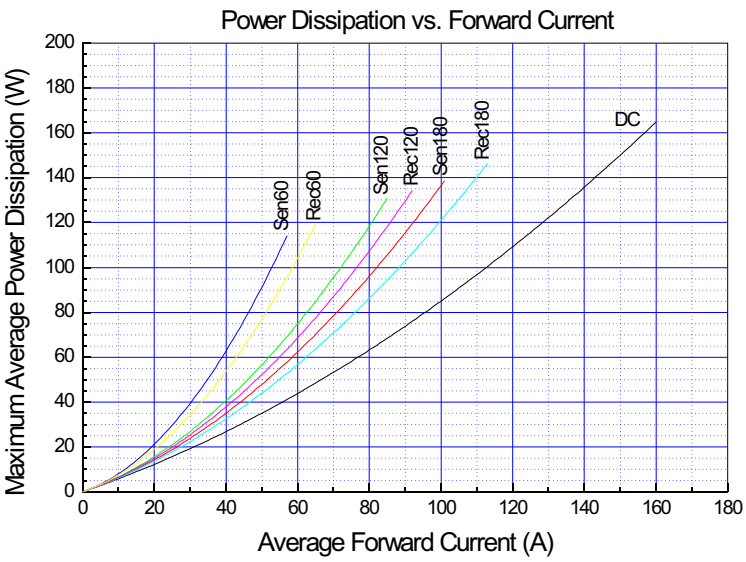


Fig. 1 - Current Ratings Characteristics

Fig. 2 - Forward Power Loss Characteristics

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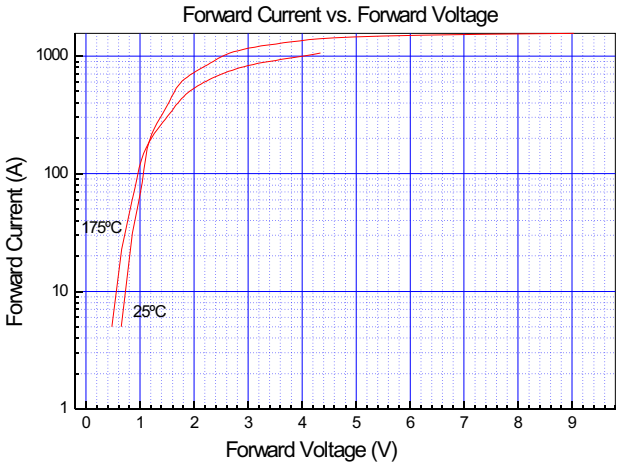


Fig. 3 - Forward Voltage Drop Characteristics

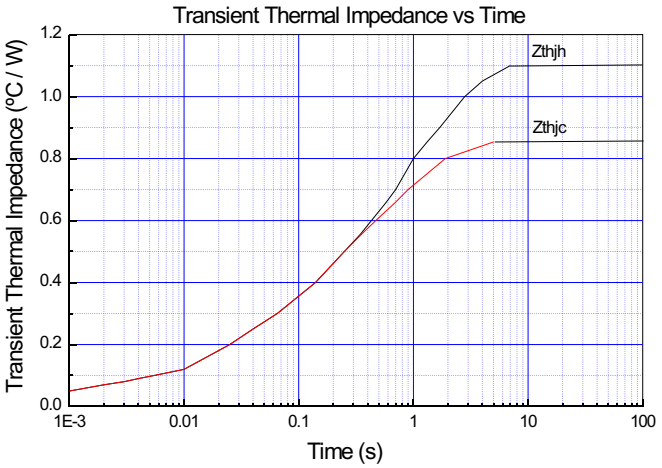
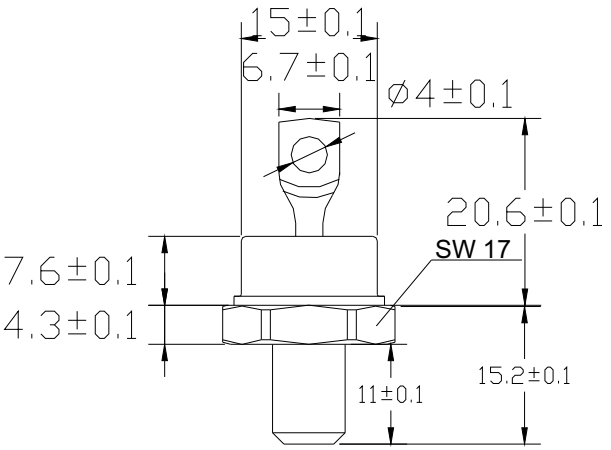


Fig. 4 - Transient Thermal Impedance

DO-5



M8 x 1.25
1/4" UNF 2A