



A1A:180.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 150°C	$T_J = -40$ to 0°C	
	$T_J = 25$ to 150°C		
A1A:180.02	200	200	300
A1A:180.04	400	400	500
A1A:180.06	600	600	700
A1A:180.08	800	800	900
A1A:180.10	1000	1000	1100
A1A:180.12	1200	1200	1300
A1A:180.14	1400	1400	1500
A1A:180.16	1600	1600	1700
A1A:180.18	1800	1800	1900
A1A:180.20	2000	2000	2100
A1A:180.22	2200	2200	2300

This datasheet applies to:

**Metric thread: A1A:180.XX,
A1B:180.XX**

**Inch thread: A2A:180.XX,
A2B:180.XX**

MAXIMUM ALLOWABLE RATINGS

PARAMETER	VALUE	UNITS	NOTES
T_J Junction Temperature	-40 to 150	$^\circ\text{C}$	-
T_{stg} Storage Temperature	-40 to 150	$^\circ\text{C}$	-
$I_{F(AV)}$ Max. Av. current	180	A	180° half sine wave
	@ Max. T_C	125	
$I_{F(RMS)}$ Nom. RMS current	235	A	-
I_{FSM} Max. Peak non-rep. surge current	3000	A	50 Hz half cycle sine wave Initial $T_J = 150^\circ\text{C}$, rated V_{RRM} applied after surge.
	3140		60 Hz half cycle sine wave
	3570		50 Hz half cycle sine wave Initial $T_J = 150^\circ\text{C}$, no voltage applied after surge.
	3740		60 Hz half cycle sine wave
I^2t Max. I^2t capability	45	kA^2s	$t = 10\text{ms}$ Initial $T_J = 150^\circ\text{C}$, rated V_{RRM} applied after surge.
	41		$t = 8.3\text{ms}$
	64		$t = 10\text{ms}$ Initial $T_J = 150^\circ\text{C}$, no voltage applied after surge.
	58		$t = 8.3\text{ms}$
$I^2t^{1/2}$ Max. $I^2t^{1/2}$ capability	640	$\text{kA}^2\text{s}^{1/2}$	Initial $T_J = 150^\circ\text{C}$, no voltage applied after surge. I^2t for time $t_x = I^2t^{1/2} * t_x^{1/2}$. ($0.1 < t_x < 10\text{ms}$).
F Mounting Force	10(~89)	N.m(Lbf.in)	-



A1A:180.XX

CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V_{FM} Peak forward voltage	---	---	1.33	V	Initial $T_J = 25^\circ\text{C}$, sinusoidal wave, $I_{peak} = 566\text{A}$.
$V_{F(TO)}$ Threshold voltage	---	---	0.67	V	$T_J = 150^\circ\text{C}$, Av. Power = $V_{F(TO)} * I_{F(AV)} + r_F * [I_{F(RMS)}]^2$, sine.
r_F Forward slope resistance	---	---	1.42	m Ω	Use low values for $I_{FM} < \pi I_{F(AV)}$
I_{RM} Peak reverse current	---	10	20.00	mA	$T_J = 150^\circ\text{C}$. Max. Rated V_{RRM}
R_{thJC} Thermal resistance, junction-to-case	---	---	0.35	$^\circ\text{C/W}$	DC operation
	---	---	0.40	$^\circ\text{C/W}$	180° sine wave
	---	---	0.43	$^\circ\text{C/W}$	120° rectangular wave
R_{thCS} Thermal resistance, case-to-sink	---	---	0.08	$^\circ\text{C/W}$	Mtg. Surface smooth, flat and greased. Single side.
wt Weight	---	100(3.5)	---	g(oz.)	---
Case Style	DO-205AA (DO-8)		JEDEC	---	

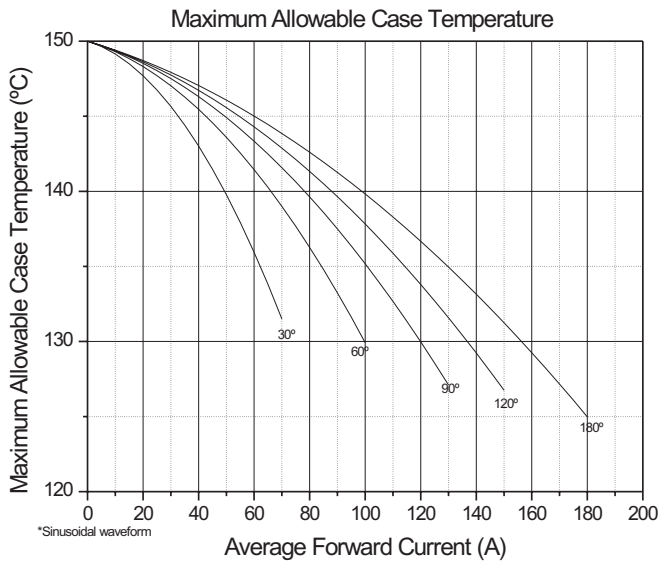


Fig. 1 - Current Ratings Characteristics

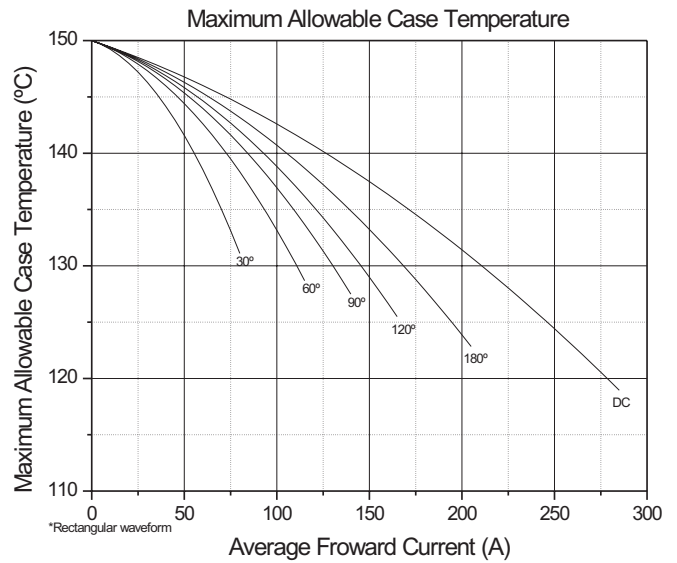


Fig. 2 - Current Ratings Characteristics



A1A:180.XX



Fig. 3 - Forward Power Loss Characteristics

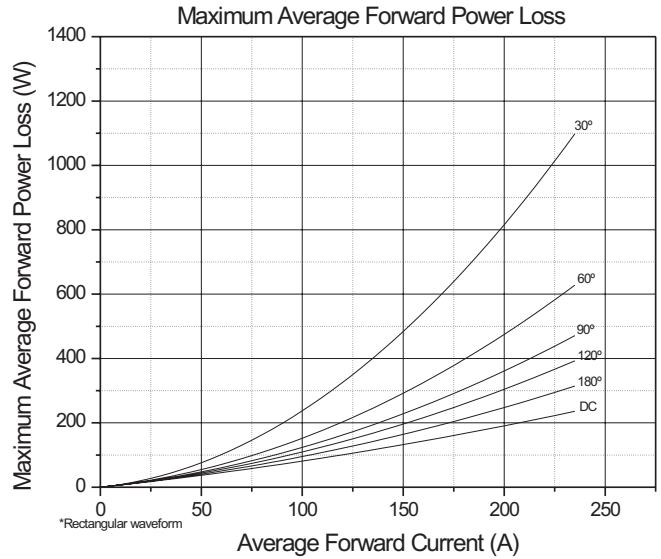


Fig. 4 - Forward Power Loss Characteristics

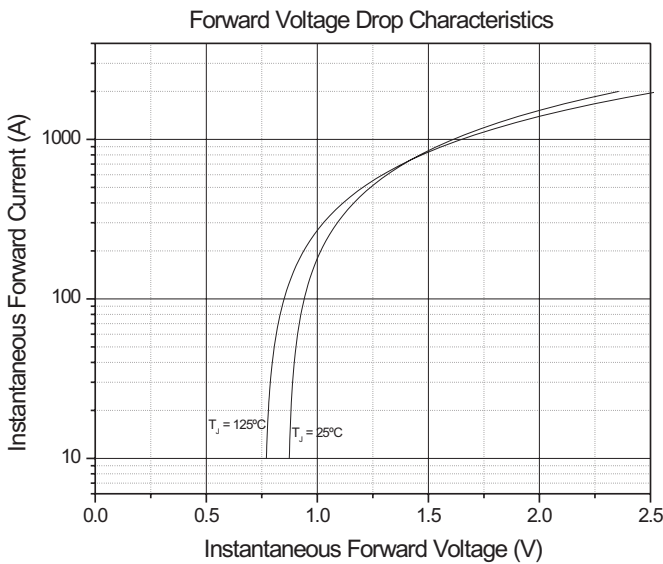


Fig. 5 - Forward Voltage Drop Characteristics

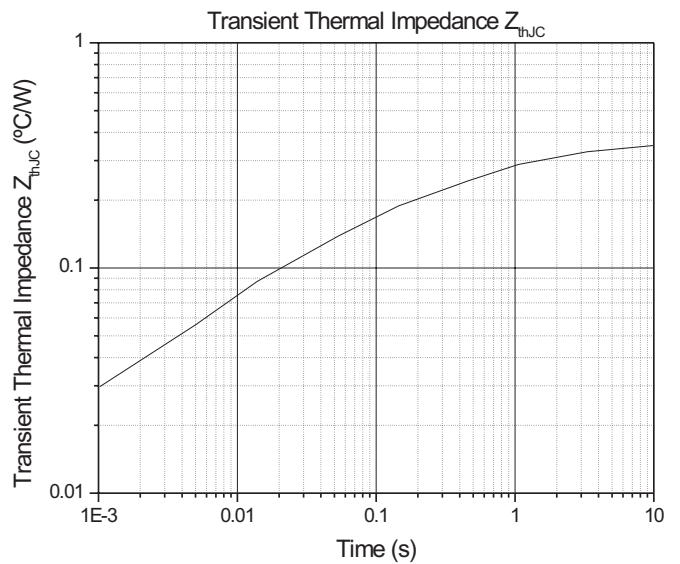


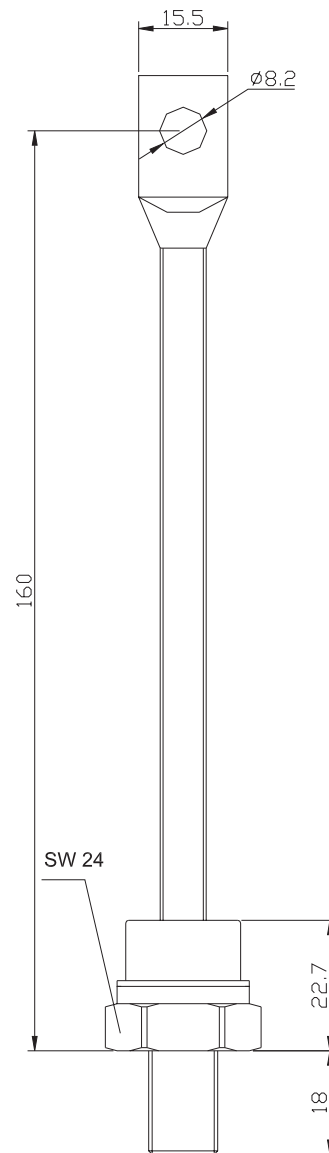
Fig. 6 - Transient Thermal Impedance Characteristics



AEGIS
SEMICONDUCTORES LTDA.

A1A:180.XX

DO-205AA (DO-8)



M12 x 1.75
1/2" UNF 2A