AEGIS
SEMICONDUTORES LTDA.

A1A:245.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 200℃	T_J = -40 to 0℃	T_J = 25 to 200℃
A1A:245.02	200	200	300
A1A:245.04	400	400	500
A1A:245.06	600	600	700
A1A:245.08	800	800	900

This datasheet applies to:

Metric thread: A1A:245.XX, A1B:245.XX

Inch thread: A2A:245.XX, A2B:245.XX

MAXIMUM ALLOWABLE RATINGS

PARAMETER	VALUE	UNITS	NOTES
T_J Junction Temperature	-40 to 200	℃	-
T_{stg} Storage Temperature	-40 to 200	℃	-
$I_{F(AV)}$ Max. Av. current	245	A	180° half sine wave
@ Max. T_C	125	℃	
$I_{F(RMS)}$ Nom. RMS current	490	A	-
I_{FSM} Max. Peak non-rep. surge current	2760	A	50 Hz half cycle sine wave; Initial T_J = 200℃, rated V_{RRM} applied after surge.
	2880		60 Hz half cycle sine wave; Initial T_J = 200℃, rated V_{RRM} applied after surge.
	3240		50 Hz half cycle sine wave; Initial T_J = 200℃, no voltage applied after surge.
	3420		60 Hz half cycle sine wave; Initial T_J = 200℃, no voltage applied after surge.
I^2t Max. I^2t capability	31	kA^2s	t = 10ms; Initial T_J = 200℃, rated V_{RRM} applied after surge.
	29		t = 8.3 ms; Initial T_J = 200℃, rated V_{RRM} applied after surge.
	44		t = 10ms; Initial T_J = 200℃, no voltage applied after surge.
	41		t = 8.3 ms; Initial T_J = 200℃, no voltage applied after surge.
$I^2t^{1/2}$ Max. $I^2t^{1/2}$ capability	264	$kA^2s^{1/2}$	Initial T_J = 200℃, no voltage applied after surge. I2t for time tx = I2t1/2 * tx1/2. (0.1 < tx < 10ms).
F Mounting Force	10(~89)	N.m(Lbf.in)	-

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CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V_{FM} Peak forward voltage	---	1.1	1.20	V	Initial T_J = 25 °C, sinusoidal wave, I_{peak} = 770A.
$V_{F(TO)}$ Threshold voltage	---	---	0.83	V	T_J = 200 °C, Av. Power = $V_{F(TO)}*I_{F(AV)}+r_F*[I_{F(RMS)}]^2$, sine.
r_{F1} Forward slope resistance	---	---	0.65	mΩ	Use low values for $I_{FM} < \pi I_{F(AV)}$
I_{RM} Peak reverse current	---	10	20.00	mA	T_J = 200 °C. Max. Rated V_{RRM}
R_{thJC} Thermal resistance, junction-to-case	---	---	0.35	°C/W	DC operation
	---	---	0.40	°C/W	180° sine wave
	---	---	0.43	°C/W	120° rectangular wave
R_{thCS} Thermal resistance, case-to-sink	---	---	0.08	°C/W	Mtg. Surface smooth, flat and greased. Single side.
wt Weight	---	100(3.5)	---	g(oz.)	---
Case Style	DO-205AA (DO-8)			JEDEC	---

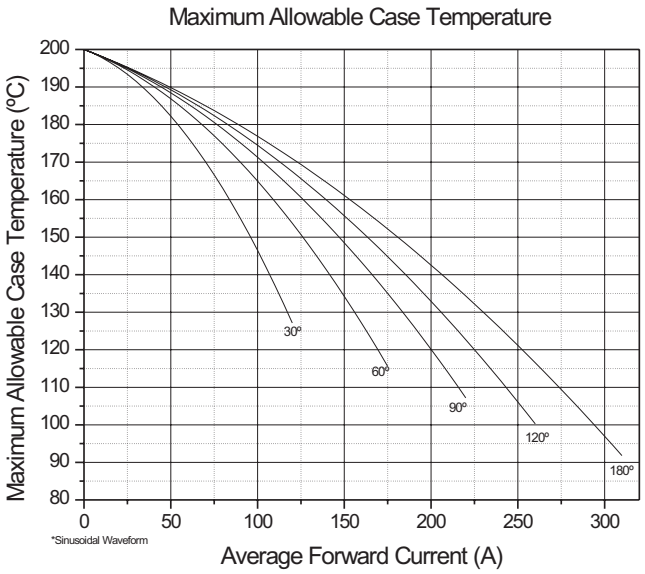

Fig. 1 - Current Ratings Characteristics

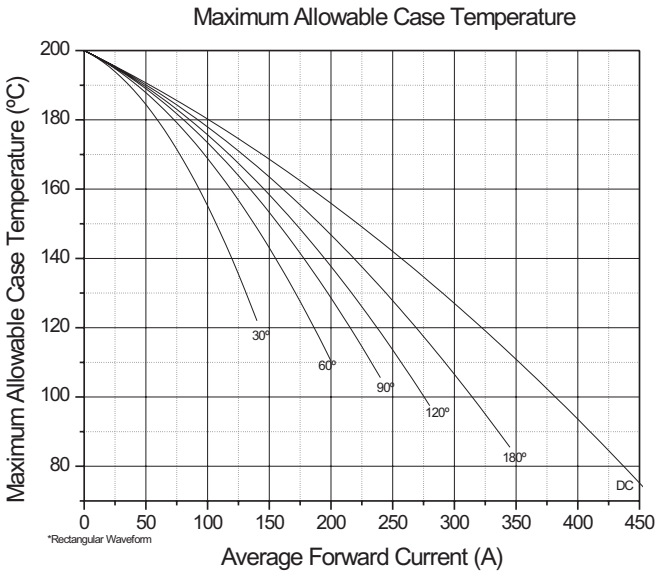

Fig. 2 - Current Ratings Characteristics

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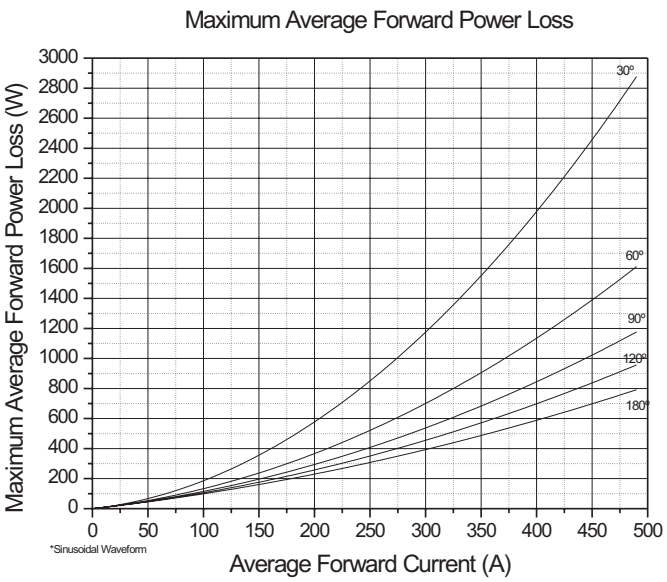

Fig. 3 - Forward Power Loss Characteristics

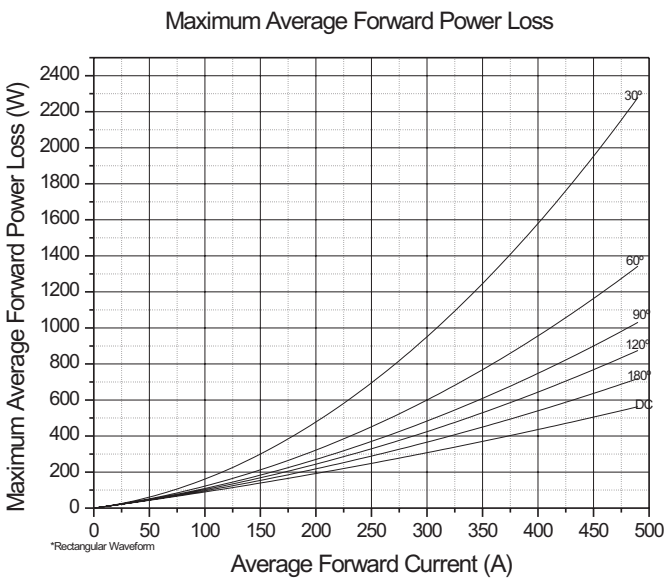

Fig. 4 - Forward Power Loss Characteristics

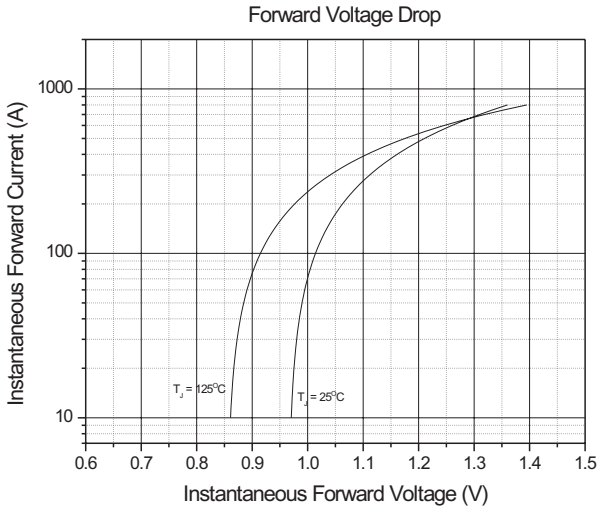

Fig. 5 - Forward Voltage Drop Characteristics

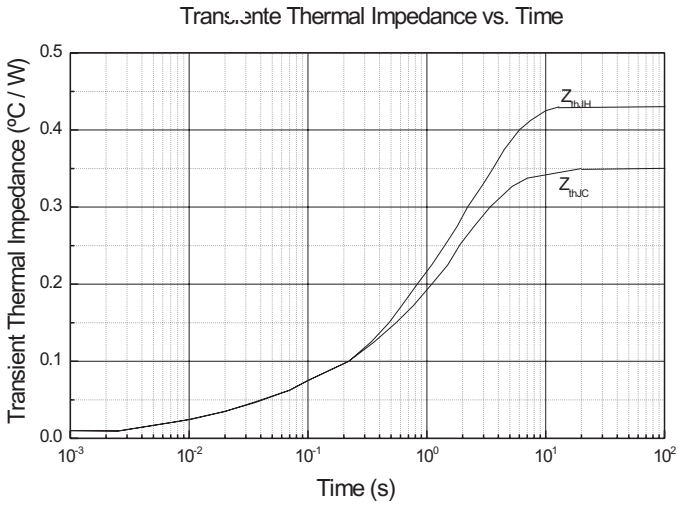

Fig. 6 - Transient Thermal Impedance Characteristics

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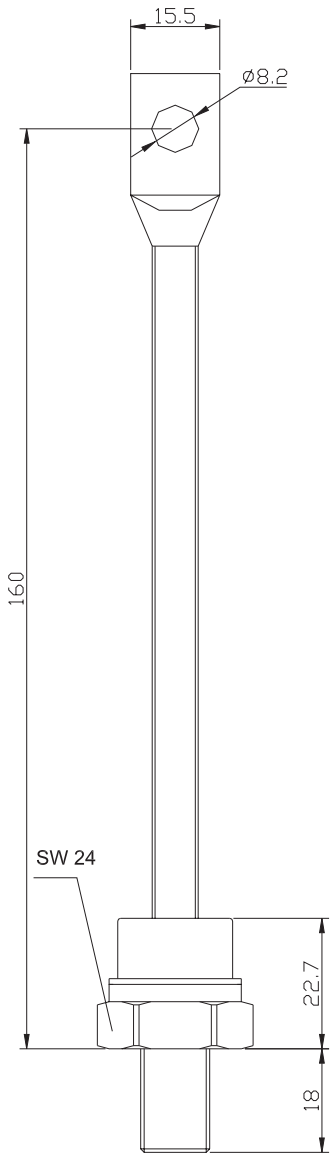
DO-205AA (DO-8)



M12 x 1.75
1/2" UNF 2A