AEGIS
SEMICONDUTORES LTDA.

A1A:400.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:400.18	1800	1800	1900
A1A:400.20	2000	2000	2100
A1A:400.22	2200	2200	2300
A1A:400.24	2400	2400	2500
A1A:400.26	2600	2600	2700
A1A:400.28	2800	2800	2900
A1A:400.30	3000	3000	3100

This datasheet applies to:

Metric thread: A1A:400.XX, A1B:400.XX

Inch thread: A2A:400.XX, A2B:400.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	400	A	180° half sine wave
$I_{F(AV)}$ @ Max. T_C	125	°C	180° half sine wave
$I_{F(RMS)}$ Nom. RMS current	800	A	-
I_{FSM} Max. Peak non-rep. surge current	8.56	kA	50 Hz half cycle sine wave; Initial T_J = 180°C, rated V_{RRM} applied after surge.
	9.33		60 Hz half cycle sine wave; Initial T_J = 180°C, rated V_{RRM} applied after surge.
	10.18		50 Hz half cycle sine wave; Initial T_J = 180°C, no voltage applied after surge.
	11.10		60 Hz half cycle sine wave; Initial T_J = 180°C, no voltage applied after surge.
I^2t Max. I^2t capability	303	kA^2s	t = 10ms; Initial T_J = 180°C, rated V_{RRM} applied after surge.
	331		t = 8.3 ms; Initial T_J = 180°C, rated V_{RRM} applied after surge.
	429		t = 10ms; Initial T_J = 180°C, no voltage applied after surge.
	468		t = 8.3 ms; Initial T_J = 180°C, no voltage applied after surge.
$I^2t^{1/2}$ Max. $I^2t^{1/2}$ capability	3800	$kA^2s^{1/2}$	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	60(~534)	N.m(Lbf.in)	-

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CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V_{FM} Peak forward voltage	---	---	1.45	V	Initial T_J = 25°C, sinusoidal wave, I_{peak} = 1257A.
$V_{F(TO)}$ Threshold voltage	---	---	0.97	V	T_J = 180°C, Av. Power = $V_{F(TO)}$*$I_{F(AV)}$+r_F*[$I_{F(RMS)}$]^2, sine.
r_F Forward slope resistance	---	---	0.30	m	Use low values for I_{FM} < $I_{F(AV)}$
I_{RM} Peak reverse current	---	---	45.00	mA	T_J = 180°C. Max. Rated V_{RRM}
R_{thJC} Thermal resistance, junction-to-case	---	---	0.11	°C/W	DC operation
	---	---	0.12	°C/W	180 °sine wave
	---	---	0.13	°C/W	120° rectangular wave
R_{thCS} Thermal resistance, case-to-sink	---	---	0.010	°C/W	Mtg. Surface smooth, flat and greased. Single side.
wt Weight	---	500(17.5)	---	g(oz.)	---
Case Style	DO-205AD (DO-13)			JEDEC	---

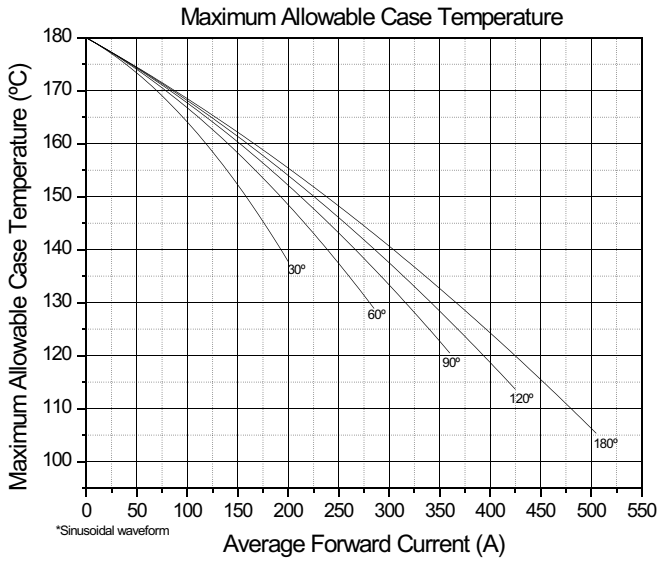

Fig. 1 - Current Ratings Characteristics

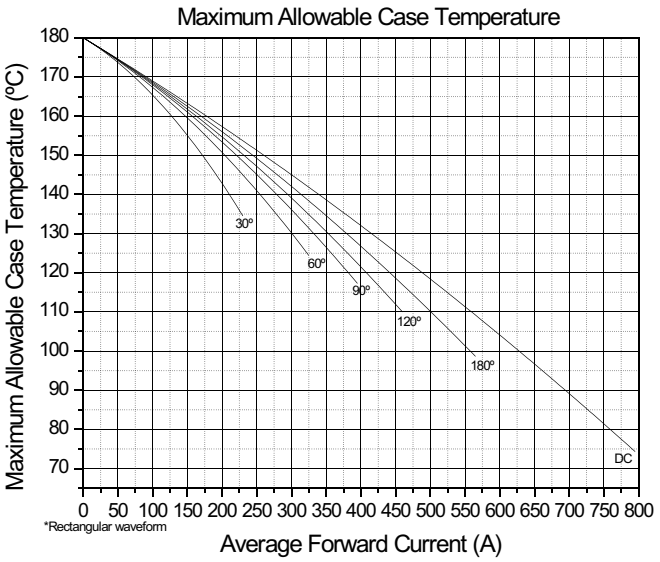

Fig. 2 - Current Ratings Characteristics

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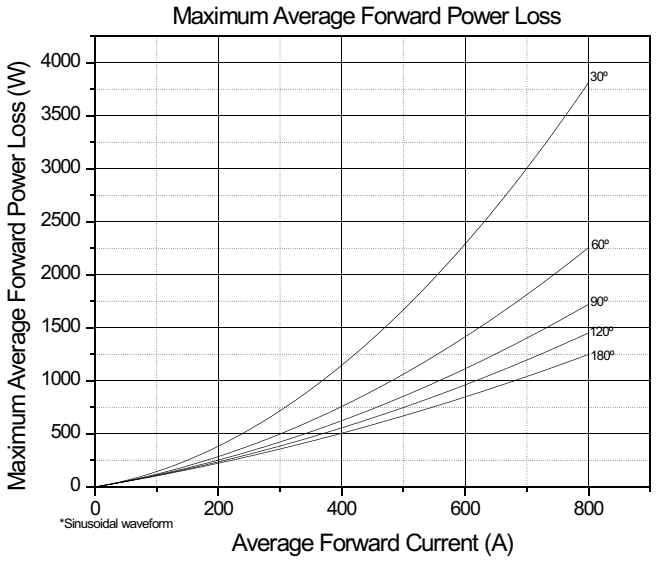

Fig. 3 - On-State Power Loss Characteristics

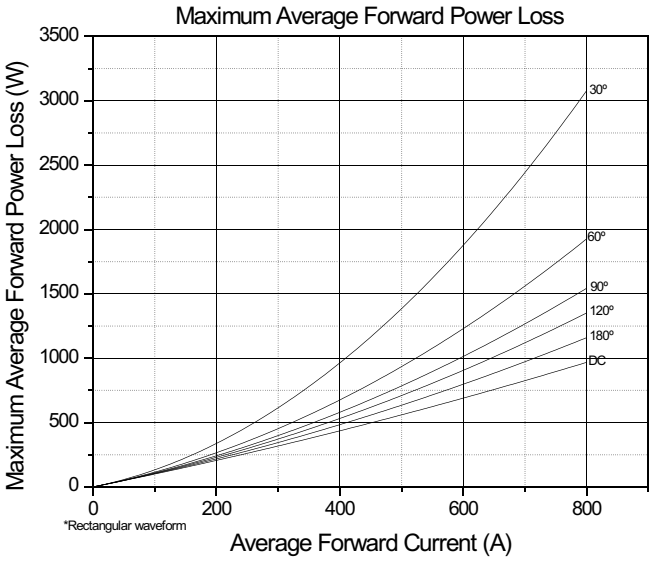

Fig. 4 - On-State Power Loss Characteristics

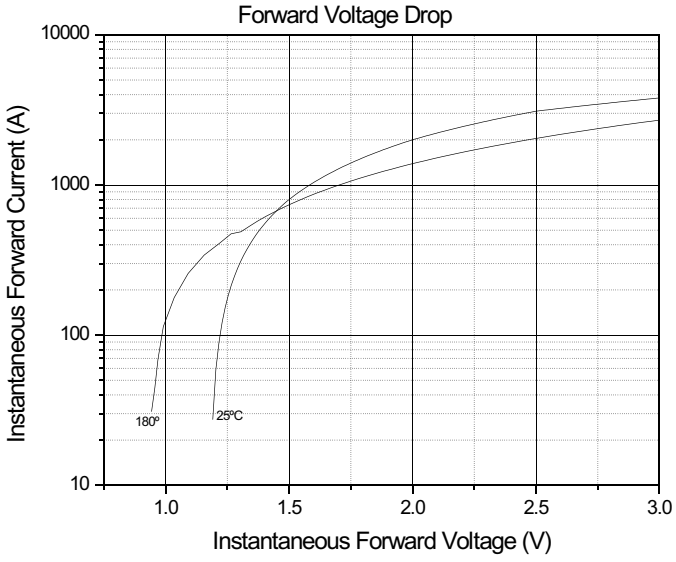

Fig. 5 - Forward Voltage Drop Characteristics

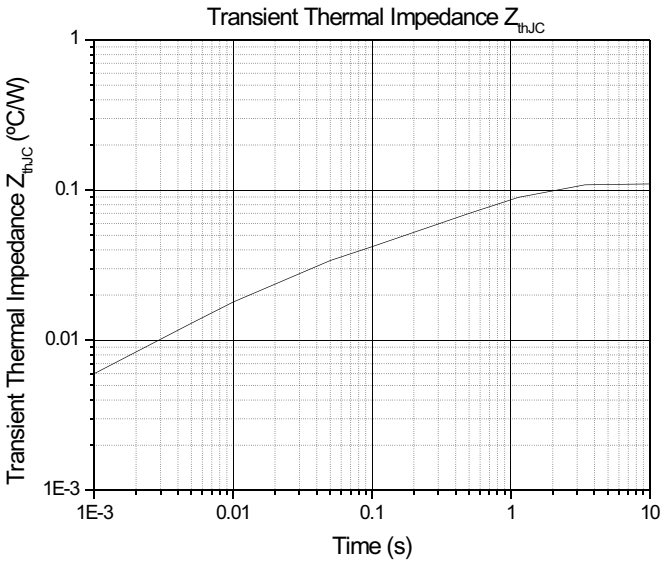

Fig. 6 - Transient Thermal Impedance Characteristics

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DO-205AD (DO-13)

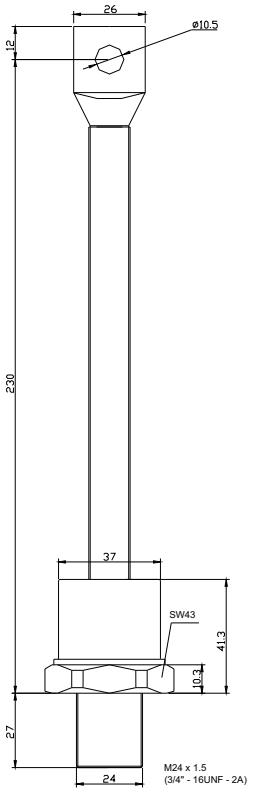

Fig. 7 - Outline Characteristics