AEGIS
SEMICONDUTORES LTDA.

A5A:1100.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 175°C	T_J = -40 to 0°C	T_J = 25 to 175°C
A5A:1100.14	1400	1400	1500
A5A:1100.16	1600	1520	1700
A5A:1100.18	1800	1710	1900
A5A:1100.20	2000	1900	2100
A5A:1100.22	2200	2090	2300

MAXIMUM ALLOWABLE RATINGS

PARAMETER	VALUE	UNITS	NOTES
T_J Junction Temperature	-40 to 175	°C	-
T_{stg} Storage Temperature	-40 to 175	°C	-
$I_{F(AV)}$ Max. Av. current	950	A	180° half sine wave
$I_{F(AV)}$ @ Max. T_C	125	°C	180° half sine wave
$I_{F(RMS)}$ Nom. RMS current	1800	A	-
I_{FSM} Max. Peak non-rep. surge current	14.3	kA	50 Hz half cycle sine wave; Initial T_J = 175°C, rated V_{RRM} applied after surge.
I_{FSM} Max. Peak non-rep. surge current	15.0	kA	60 Hz half cycle sine wave; Initial T_J = 175°C, rated V_{RRM} applied after surge.
I_{FSM} Max. Peak non-rep. surge current	17.0	kA	50 Hz half cycle sine wave; Initial T_J = 175°C, no voltage applied after surge.
I_{FSM} Max. Peak non-rep. surge current	17.8	kA	60 Hz half cycle sine wave; Initial T_J = 175°C, no voltage applied after surge.
I^2t Max. I^2t capability	937	kA^2s	t = 10ms; Initial T_J = 175°C, rated V_{RRM} applied after surge.
I^2t Max. I^2t capability	1025	kA^2s	t = 8.3 ms; Initial T_J = 175°C, rated V_{RRM} applied after surge.
I^2t Max. I^2t capability	1325	kA^2s	t = 10ms; Initial T_J = 175°C, no voltage applied after surge.
I^2t Max. I^2t capability	1450	kA^2s	t = 8.3 ms; Initial T_J = 175°C, no voltage applied after surge.
$I^2t^{1/2}$ Max. $I^2t^{1/2}$ capability	14500	$kA^2s^{1/2}$	Initial T_J = 175°C, no voltage applied after surge. for time $t_x = I^2t^{1/2} * t_x^{1/2}$. (0.1 < tx < 10ms).
F Mounting Force	1250	N(Lbf)	-

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CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V_{FM} Peak forward voltage	---	1.60	1.79	V	Initial T_J = 25°C, 50-60Hz half sine, I_{peak} = 2984A.
$V_{F(TO)1}$ Low-level threshold	---	---	0.788	V	T_J = 175°C
$V_{F(TO)2}$ High-level threshold	---	---	0.806		Av. power = $V_{F(TO)} * I_{F(AV)} + r_F * [I_{F(RMS)}]^2$
r_{F1} Low-level resistance	---	---	0.318	m	Use low values for $I_{FM} < I_{F(AV)}$
r_{F2} High-level resistance	---	---	0.290		
I_{RM} Peak reverse current	---	25	50	mA	TJ = 175°C. Max. rated V_{RRM}
R_{thJC} Thermal resistance, junction-to-case	---	---	0.05	°C/W	DC operation, double side
	---	---	0.054	°C/W	180° sine wave, double side
	---	---	0.055	°C/W	120° rectangular wave, duble side
R_{thCS} Thermal resistance, case-to-sink	---	---	0.015	°C/W	Mtg. Surface smooth, flat and greased.
wt Weight	---	255(9)	---	g(oz.)	---
Case Style	TO-200AC				---

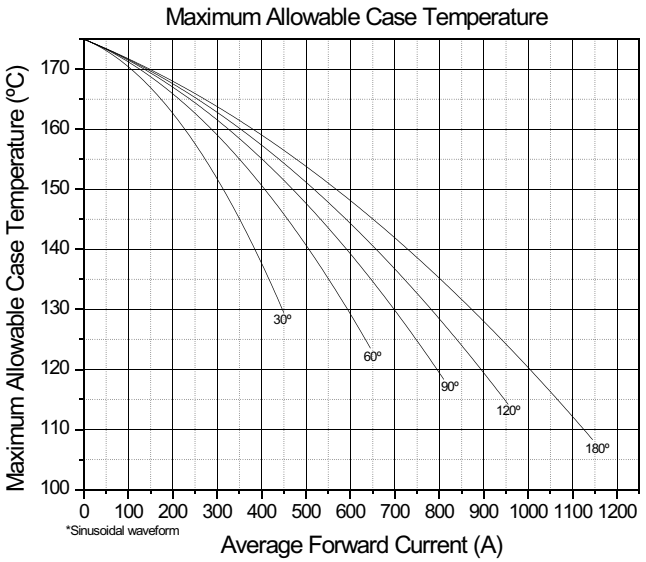

Fig. 1 - Current Ratings Characteristics

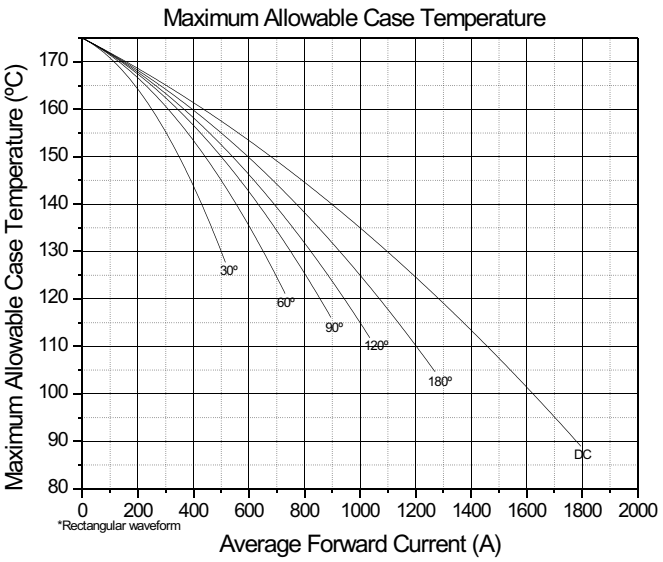

Fig. 2 - Current Ratings Characteristics

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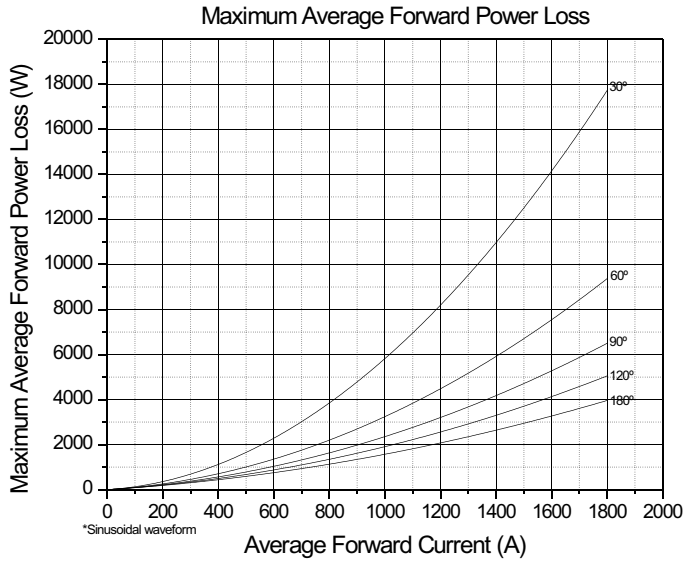

Fig. 3 - On-State Power Loss Characteristics

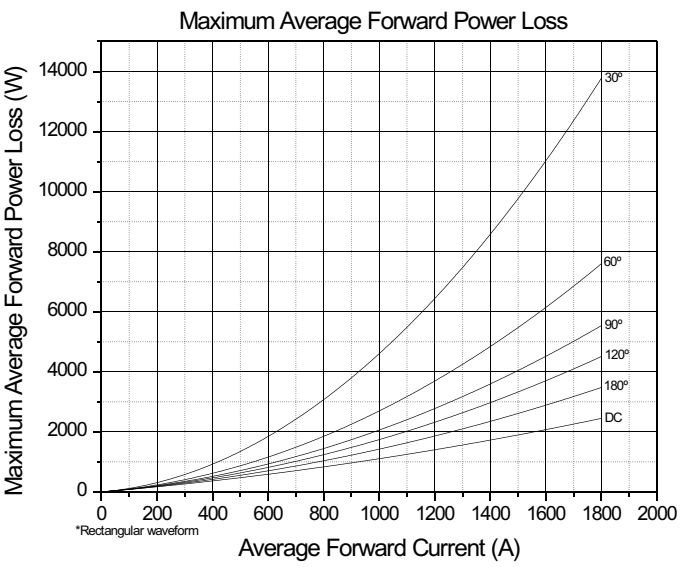

Fig. 4 - On-State Power Loss Characteristics

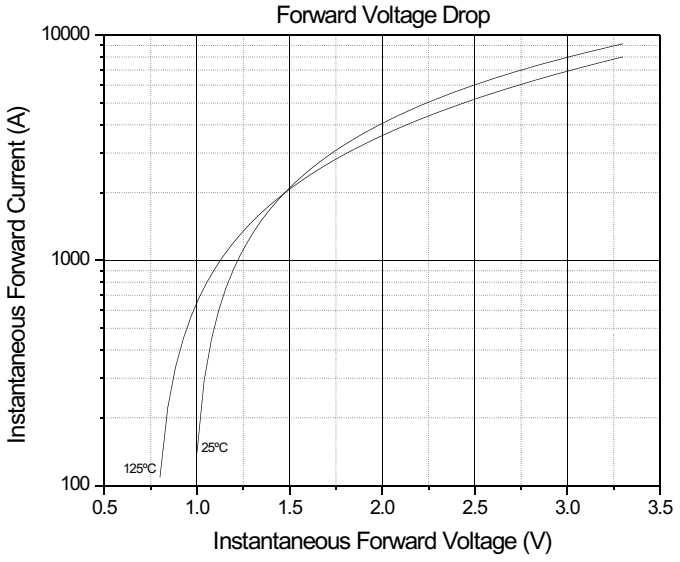

Fig. 5 - Forward Voltage Drop Characteristics

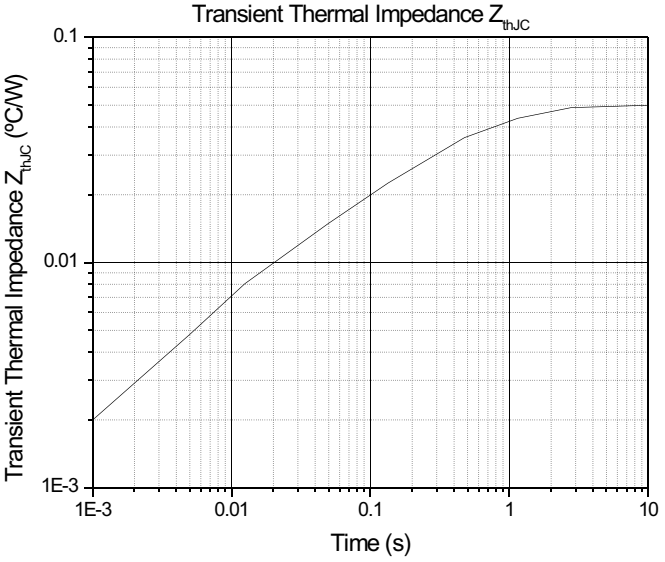

Fig. 6 - Transient Thermal Impedance Characteristics

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TO-200AC

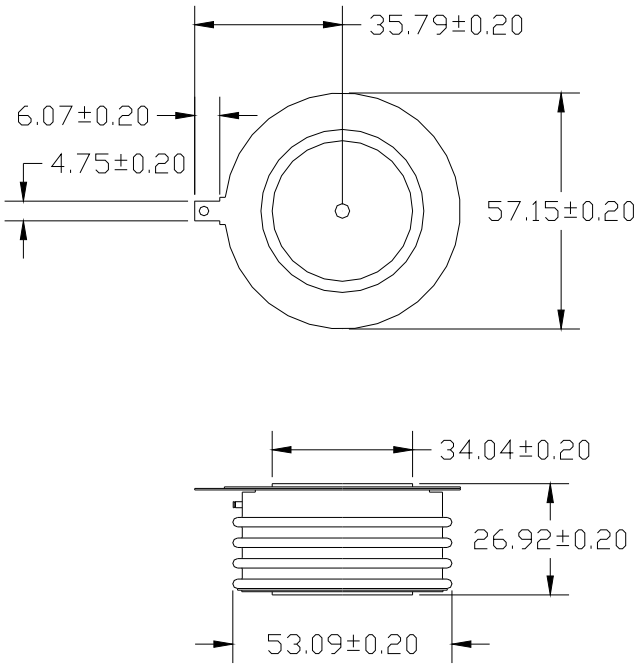

Fig. 7 - Outline Characteristics