



A5A:2550.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:2550.14	1400	1400
A5A:2550.16	1600	1520	1700
A5A:2550.18	1800	1710	1900
A5A:2550.20	2000	1900	2100
A5A:2550.22	2200	2090	2300

MAXIMUM ALLOWABLE RATINGS

PARAMETER	VALUE	UNITS	NOTES
T_J Junction Temperature	-40 to 175	$^\circ\text{C}$	-
T_{stg} Storage Temperature	-40 to 175	$^\circ\text{C}$	-
$I_{F(AV)}$ Max. Av. current @ Max. T_C	2200	A	180° half sine wave
	125	$^\circ\text{C}$	
$I_{F(RMS)}$ Nom. RMS current	4020	A	-
I_{FSM} Max. Peak non-rep. surge current	26.7	kA	50 Hz half cycle sine wave Initial $T_J = 175^\circ\text{C}$, rated V_{RRM} applied after surge.
	28.0		60 Hz half cycle sine wave
	31.8		50 Hz half cycle sine wave Initial $T_J = 175^\circ\text{C}$, no voltage applied after surge.
	33.3		60 Hz half cycle sine wave
I^2t Max. I^2t capability	3270	kA^2s	$t = 10\text{ms}$ Initial $T_J = 175^\circ\text{C}$, rated V_{RRM} applied after surge.
	3580		$t = 8.3\text{ms}$
	4620		$t = 10\text{ms}$ Initial $T_J = 175^\circ\text{C}$, no voltage applied after surge.
	5070		$t = 8.3\text{ms}$
$I^2t^{1/2}$ Max. $I^2t^{1/2}$ capability	50700	$\text{kA}^2\text{s}^{1/2}$	Initial $T_J = 175^\circ\text{C}$, no voltage applied after surge. for time $t_x = I^2t^{1/2} * t_x^{1/2}$. ($0.1 < t_x < 10\text{ms}$). I^2t
F Mounting Force	2500	N.m	-



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CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V _{FM} Peak forward voltage	---	1.55	1.75	V	Initial T _J = 25°C, 50-60Hz half sine, I _{peak} = 6911A.
V _{F(TO)1} Low-level threshold	---	---	0.787	V	T _J = 175°C
V _{F(TO)2} High-level threshold	---	---	0.804		Av. power = V _{F(TO)} * I _{F(AV)} + r _F * [I _{F(RMS)}] ²
r _{F1} Low-level resistance	---	---	0.133	m	Use low values for I _{FM} < I _{F(AV)}
r _{F2} High-level resistance	---	---	0.121		
I _{RM} Peak reverse current	---	50	100	mA	T _J = 175°C. Max. rated V _{RRM}
R _{thJC} Thermal resistance, junction-to-case	---	---	0.023	°C/W	DC operation, double side
	---	---	0.025	°C/W	180° sine wave, double side
	---	---	0.025	°C/W	120° rectangular wave, double side
R _{thCS} Thermal resistance, case-to-sink	---	---	0.01	°C/W	Mtg. Surface smooth, flat and greased. Double side cooled.
wt Weight	---	425(15)	---	g(oz.)	---
Case Style	A-24				---

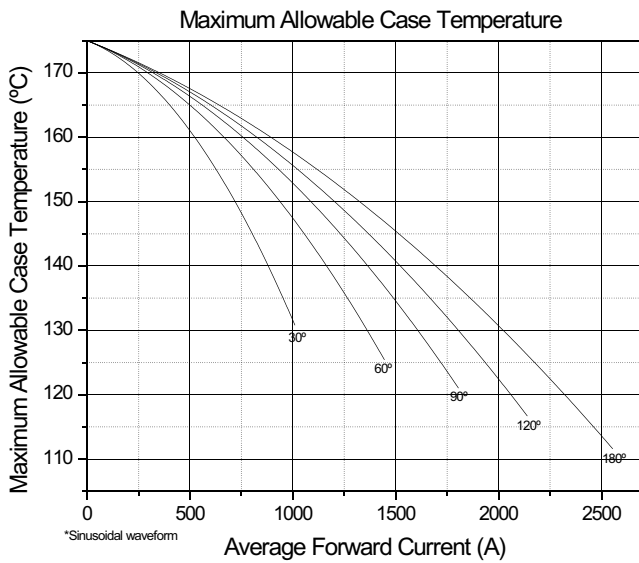


Fig. 1 - Current Ratings Characteristics

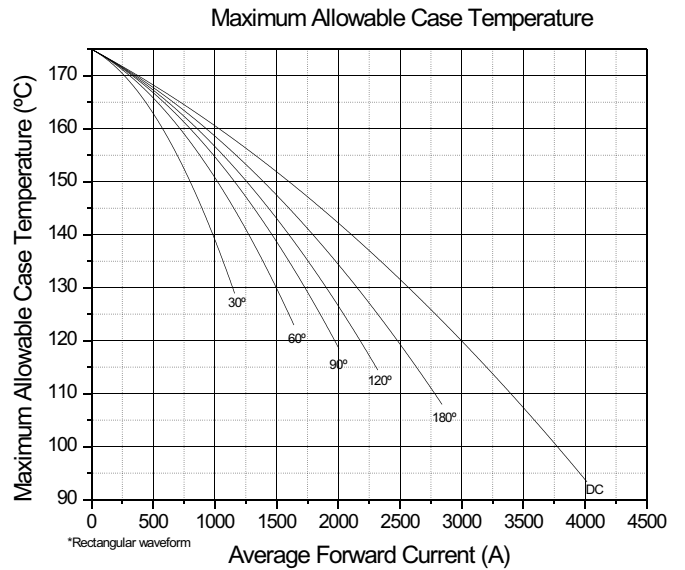


Fig. 2 - Current Ratings Characteristics



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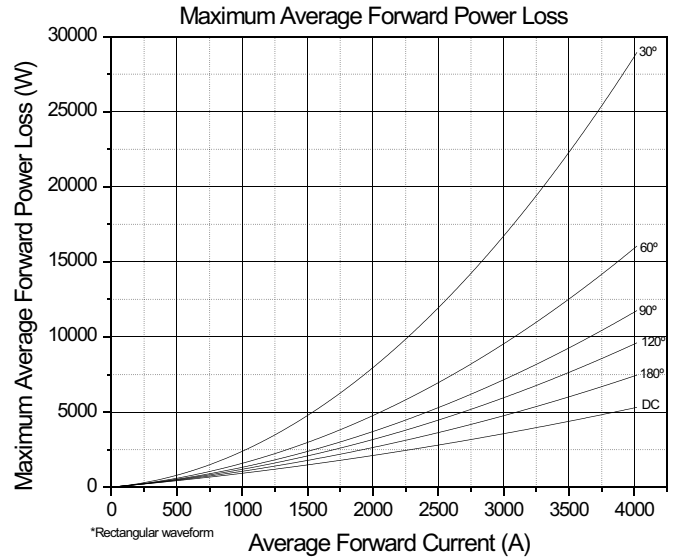
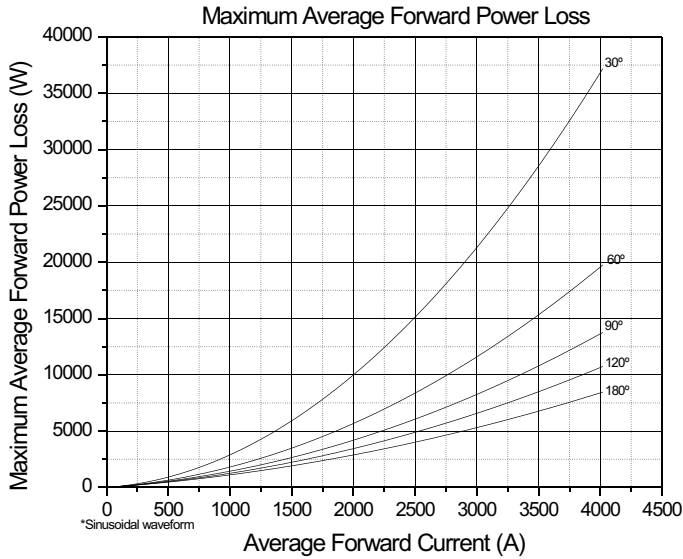


Fig. 3 - Average Forward Power Loss Characteristics

Fig. 4 - Average Forward Power Loss Characteristics

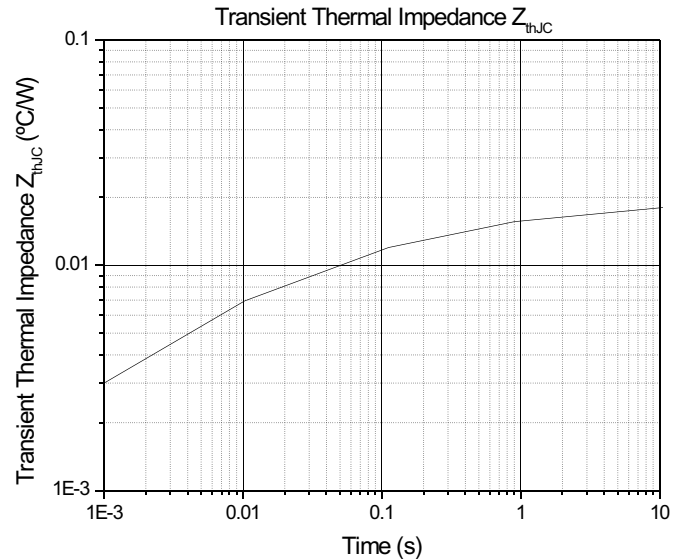
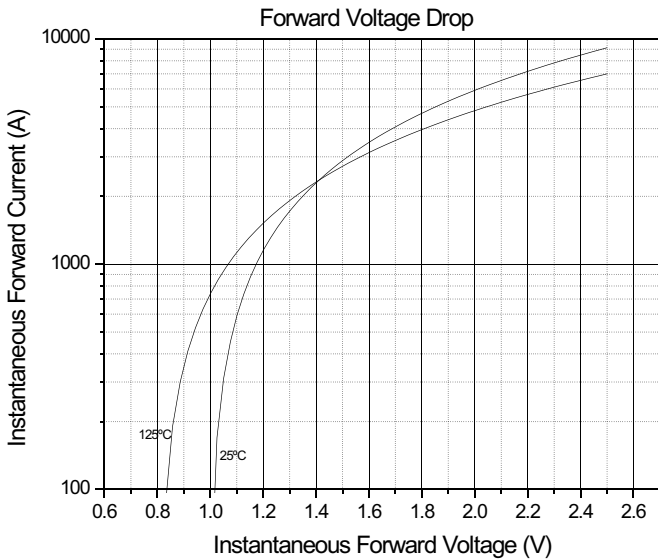


Fig. 5 - Forward Voltage Drop Characteristics

Fig. 6 - Transient Thermal Impedance Z_{thJC} Characteristics



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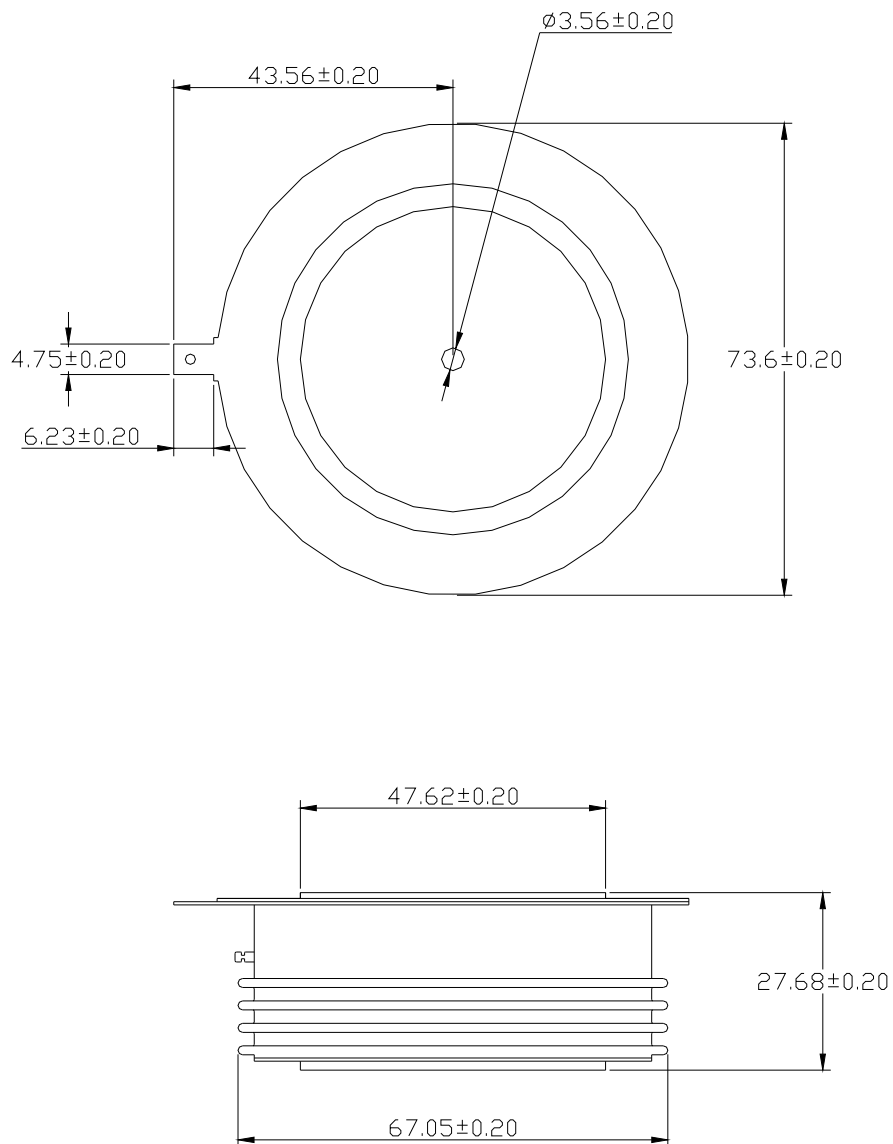


Fig. 7 - Outline Characteristics