



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 @ Max. T _C	950	A	180° half sine wave
	125	°C	
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.
	15.0		60 Hz half cycle sine wave
	17.0		50 Hz half cycle sine wave Initial T _J = 175°C, no voltage applied after surge.
	17.8		60 Hz half cycle sine wave
I ² t Max. I ² t capability	937	kA ² s	t = 10ms Initial T _J = 175°C, rated V _{RRM} applied after surge.
	1025		t = 8.3 ms
	1325		t = 10ms Initial T _J = 175°C, no voltage applied after surge.
	1450		t = 8.3 ms
I ² t ^{1/2} Max. I ² t ^{1/2} capability	14500	kA ² s ^{1/2}	Initial T _J = 175°C, no voltage applied after surge. for time t _x = I ² t ^{1/2} * t _x ^{1/2} . (0.1 < t _x < 10ms).
F Mounting Force	1250	N(Lbf)	-



A5A:1100.XX

CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V_{FM} Peak forward voltage	---	1.60	1.79	V	Initial $T_J = 25^{\circ}\text{C}$, 50-60Hz half sine, $I_{peak} = 2984\text{A}$.
$V_{F(TO)1}$ Low-level threshold	---	---	0.788	V	$T_J = 175^{\circ}\text{C}$
$V_{F(TO)2}$ 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	$T_J = 175^{\circ}\text{C}$. Max. rated V_{RRM}
R_{thJC} Thermal resistance, junction-to-case	---	---	0.05	$^{\circ}\text{C/W}$	DC operation, double side
	---	---	0.054	$^{\circ}\text{C/W}$	180° sine wave, double side
	---	---	0.055	$^{\circ}\text{C/W}$	120° rectangular wave, duble side
R_{thCS} Thermal resistance, case-to-sink	---	---	0.015	$^{\circ}\text{C/W}$	Mtg. Surface smooth, flat and greased.
wt Weight	---	255(9)	---	g(oz.)	---
Case Style	TO-200AC				---

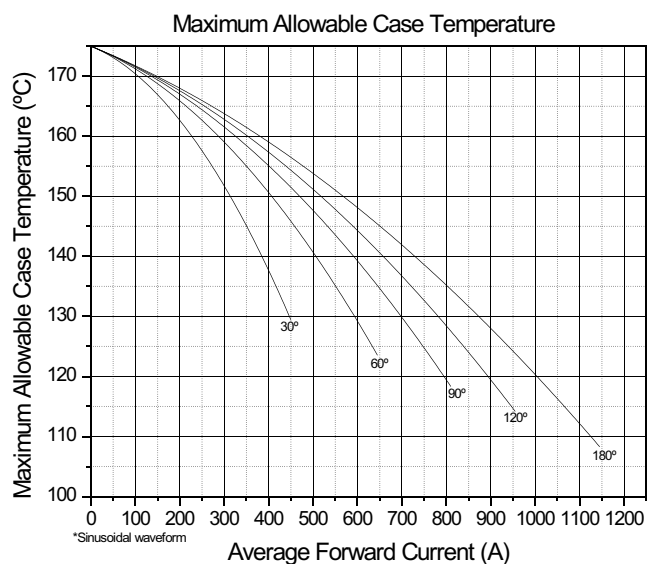


Fig. 1 - Current Ratings Characteristics

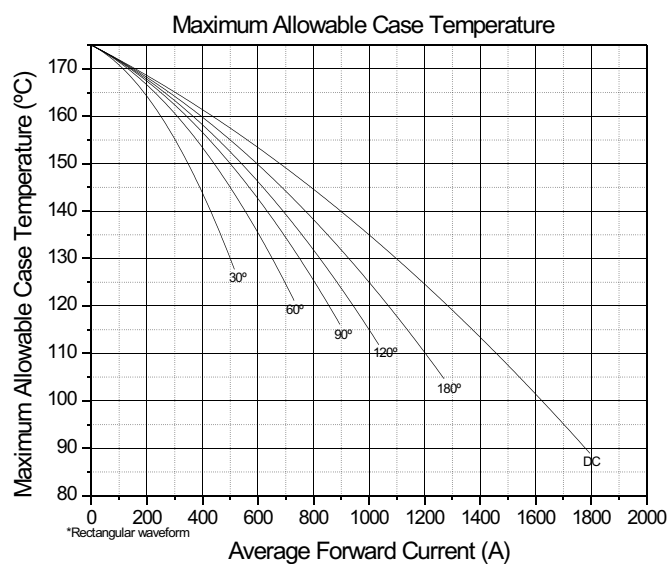


Fig. 2 - Current Ratings Characteristics



A5A:1100.XX



Fig. 3 - On-State Power Loss Characteristics

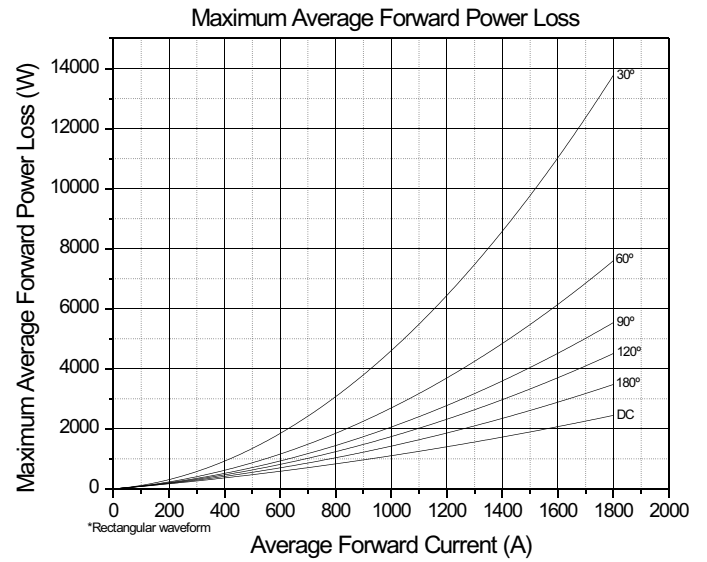


Fig. 4 - On-State Power Loss Characteristics

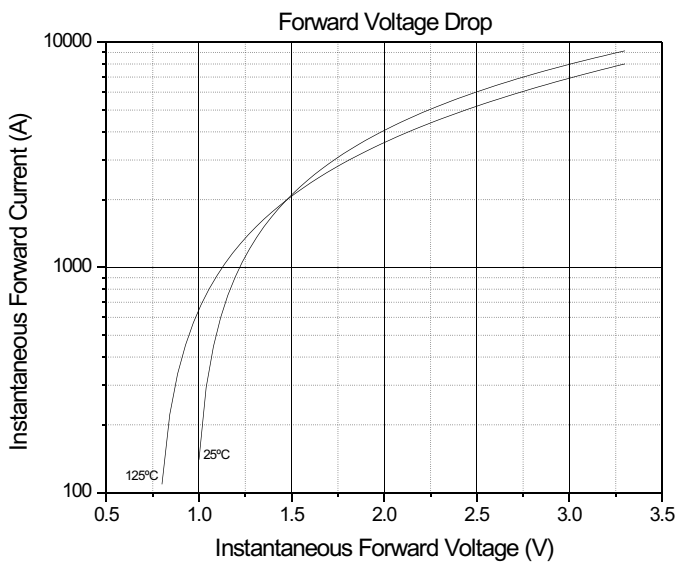


Fig. 5 - Forward Voltage Drop Characteristics

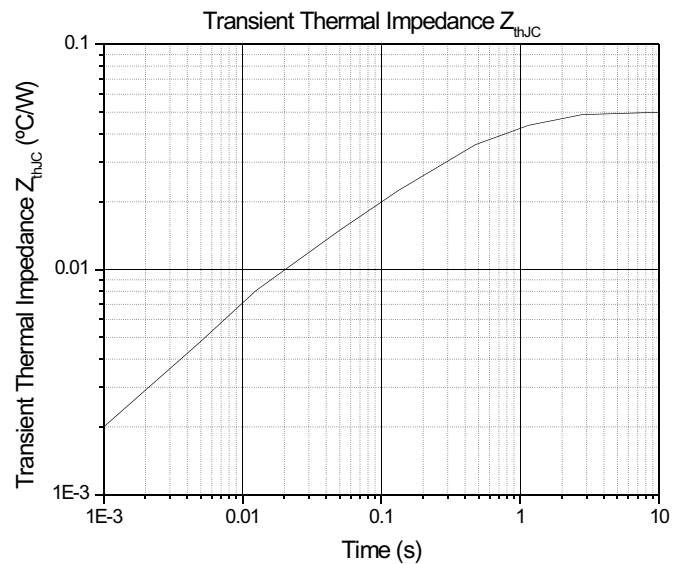


Fig. 6 - Transient Thermal Impedance Characteristics



A5A:1100.XX

TO-200AC

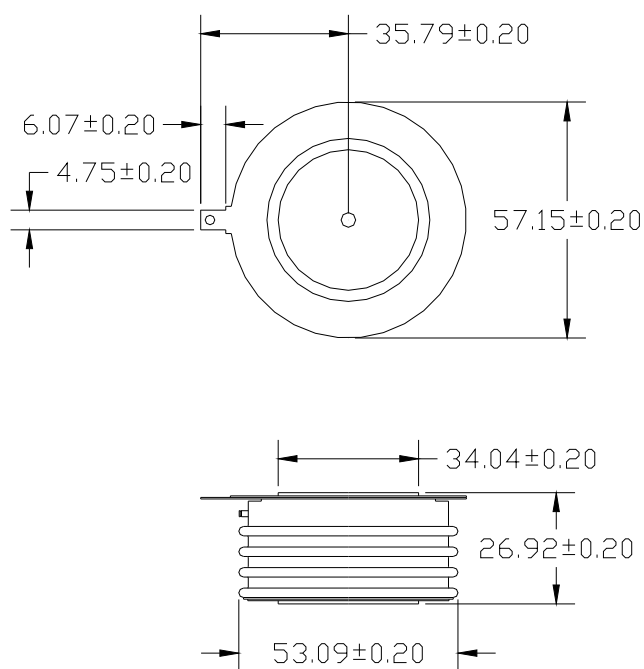


Fig. 7 - Outline Characteristics