



A5A:450.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:450.14	1400	1400
A5A:450.16	1600	1600	1700
A5A:450.18	1800	1800	1900
A5A:450.20	2000	2000	2100
A5A:450.22	2200	2200	2300
A5A:450.24	2400	2400	2500
A5A:450.26	2600	2500	2700

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	360	A	180° half sine wave
	125	°C	
I _{F(RMS)} Nom. RMS current	700	A	-
I _{FSM} Max. Peak non-rep. surge current	5.95	kA	50 Hz half cycle sine wave Initial T _J = 175°C, rated V _{RRM} applied after surge.
	6.48		60 Hz half cycle sine wave
	7.02		50 Hz half cycle sine wave Initial T _J = 175°C, no voltage applied after surge.
	7.72		60 Hz half cycle sine wave
I ² t Max. I ² t capability	161	kA ² s	t = 10ms Initial T _J = 175°C, rated V _{RRM} applied after surge.
	175		t = 8.3 ms
	228		t = 10ms Initial T _J = 175°C, no voltage applied after surge.
	248		t = 8.3 ms
I ² t ^{1/2} Max. I ² t ^{1/2} capability	2720	kA ² s ^{1/2}	Initial T _J = 175°C, no voltage applied after surge. I ² t for time t _x = I ² t ^{1/2} * t _x ^{1/2} . (0.1 < t _x < 10ms).
F Mounting Force	450	N.m	-



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CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V_{FM} Peak forward voltage	---	1.75	1.99	V	Initial $T_J = 25^\circ\text{C}$, 50-60Hz half sine, $I_{peak} = 1131\text{A}$.
$V_{F(TO)1}$ Low-level threshold	---	---	0.83	V	$T_J = 175^\circ\text{C}$ Av. power = $V_{F(TO)} * I_{F(AV)} + r_F * [I_{F(RMS)}]^2$
$V_{F(TO)2}$ High-level threshold	---	---	0.864		
r_{F1} Low-level resistance	---	---	0.876	m	Use low values for $I_{FM} < I_{F(AV)}$
r_{F2} High-level resistance	---	---	0.658		
I_{RM} Peak reverse current	---	25	40	mA	$T_J = 175^\circ\text{C}$. Max. Rated V_{RRM}
R_{thJC} Thermal resistance, junction-to-case	---	---	0.080	$^\circ\text{C/W}$	DC operation, double side
	---	---	0.092	$^\circ\text{C/W}$	180° sine wave, double side
	---	---	0.094	$^\circ\text{C/W}$	120° rectangular wave, double side
R_{thCS} Thermal resistance, case-to-sink	---	---	0.03	$^\circ\text{C/W}$	Mtg. Surface smooth, flat and greased.
wt Weight	---	57(2.0)	---	g(oz.)	---
Case Style	DO-200AA			JEDEC	---

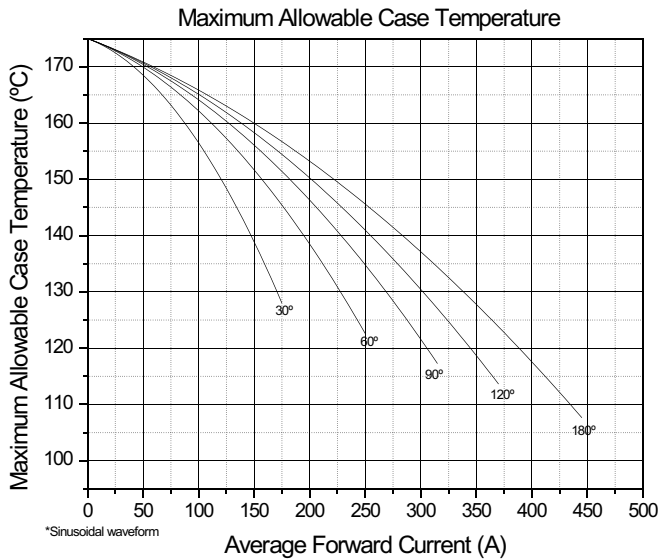


Fig. 1 - Current Ratings Characteristics

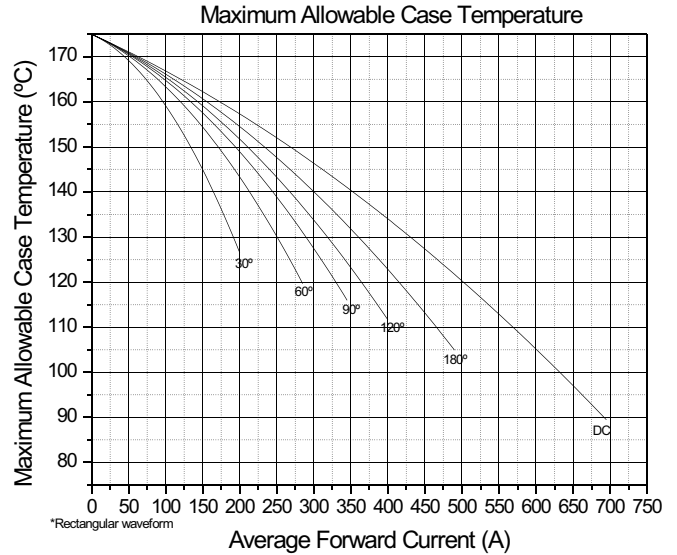


Fig. 2 - Current Ratings Characteristics



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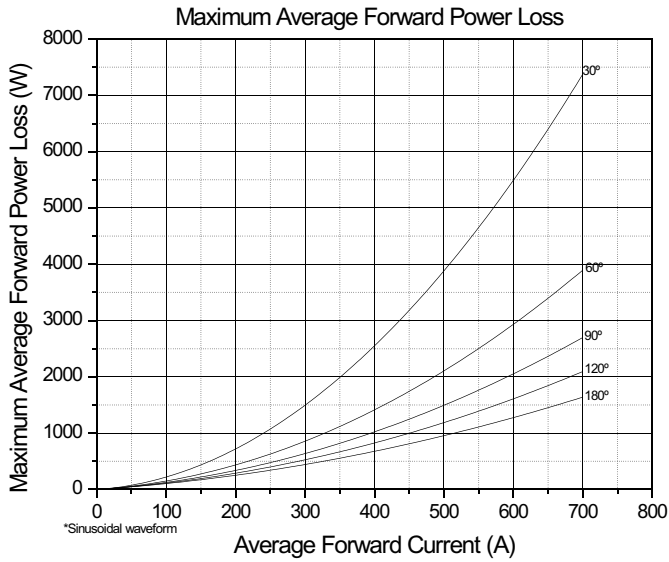


Fig. 3 - On-State Power Loss Characteristics

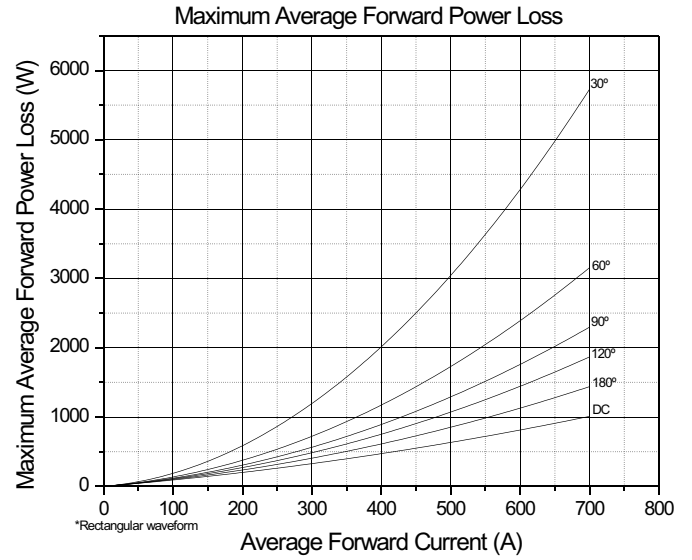


Fig. 4 - On-State Power Loss Characteristics

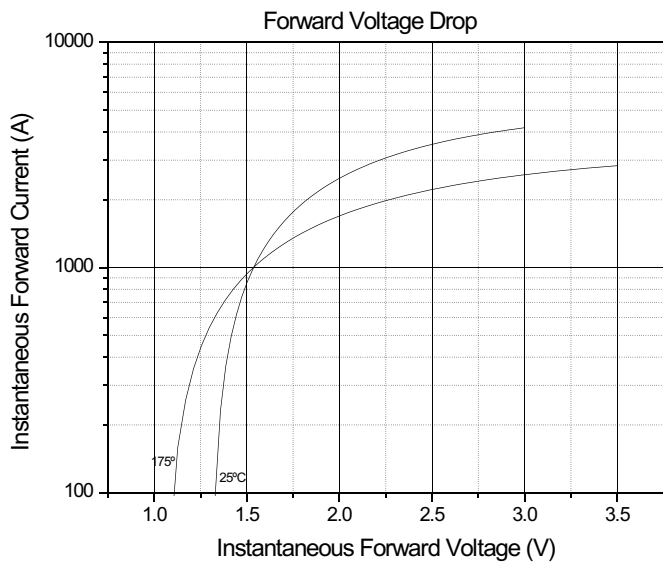


Fig. 5 - Forward Voltage Drop Characteristics

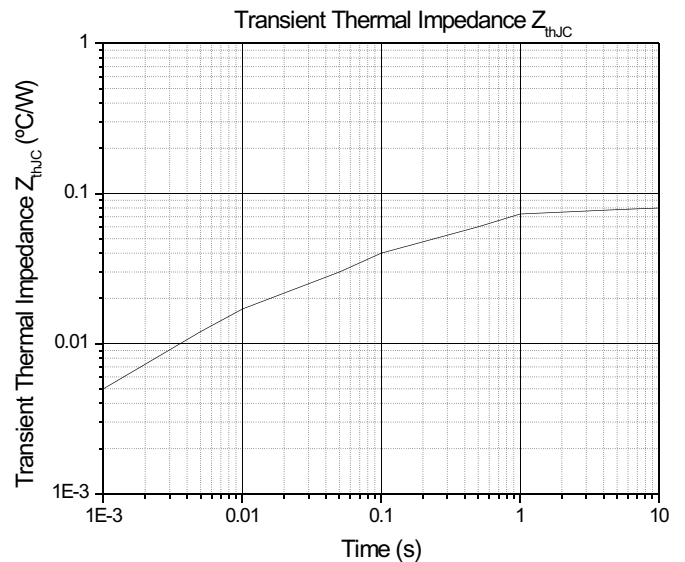


Fig. 6 - Transient Thermal Impedance Characteristics



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TO-200AA

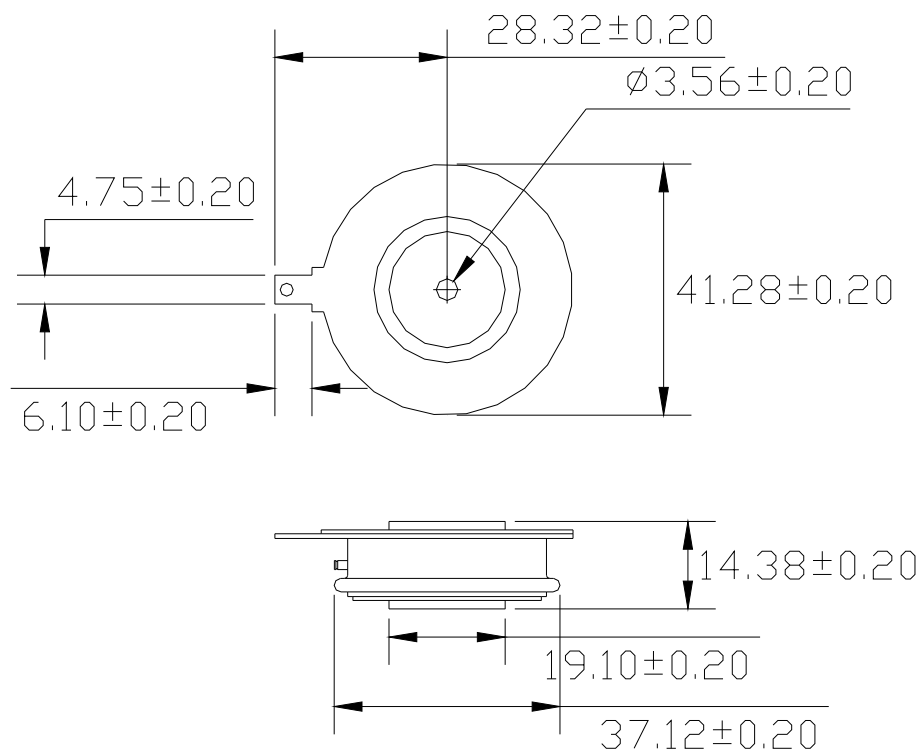


Fig. 7 - Outline Characteristics