



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	$^\circ\text{C}$	-
T_{stg} Storage Temperature	-40 to 180	$^\circ\text{C}$	-
$I_{F(AV)}$ Max. Av. current @ Max. T_C	400	A	180° half sine wave
	125	$^\circ\text{C}$	
$I_{F(RMS)}$ Nom. RMS current	800	A	-
I_{FSM} Max. Peak non-rep. surge current	8.56	kA	50 Hz half cycle sine wave Initial $T_J = 180^\circ\text{C}$, rated V_{RRM} applied after surge.
	9.33		60 Hz half cycle sine wave
	10.18		50 Hz half cycle sine wave Initial $T_J = 180^\circ\text{C}$, no voltage applied after surge.
	11.10		60 Hz half cycle sine wave
I^2t Max. I^2t capability	303	kA^2s	$t = 10\text{ms}$ Initial $T_J = 180^\circ\text{C}$, rated V_{RRM} applied after surge.
	331		$t = 8.3\text{ms}$
	429		$t = 10\text{ms}$ Initial $T_J = 180^\circ\text{C}$, no voltage applied after surge.
	468		$t = 8.3\text{ms}$
$I^{2t^{1/2}}$ Max. $I^{2t^{1/2}}$ capability	3800	$\text{kA}^2\text{s}^{1/2}$	Initial $T_J = 180^\circ\text{C}$, no voltage applied after surge. I^{2t} for time $t_x = I^{2t^{1/2}} * t_x^{1/2}$. ($0.1 < t_x < 10\text{ms}$).
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	---

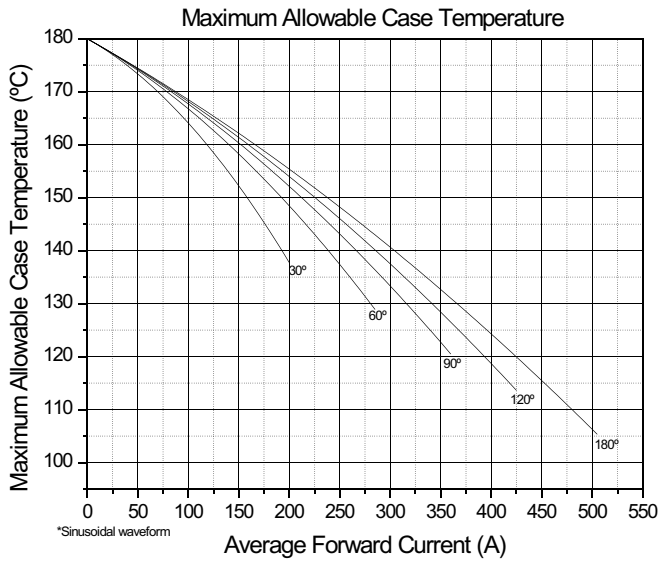


Fig. 1 - Current Ratings Characteristics

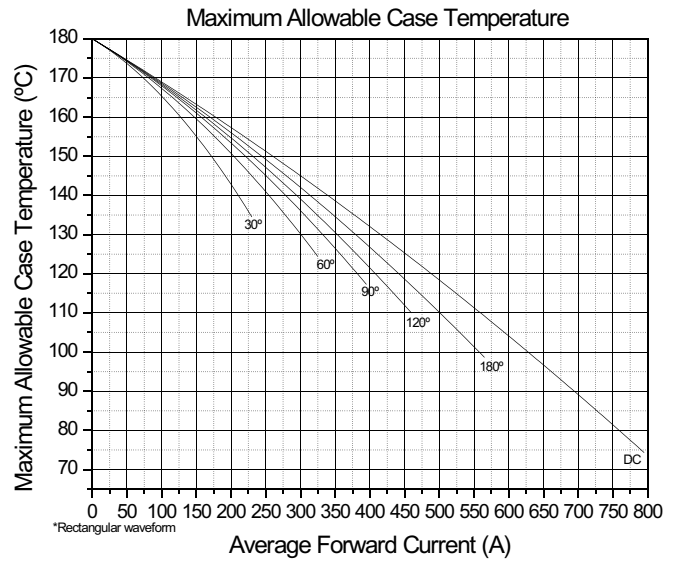


Fig. 2 - Current Ratings Characteristics



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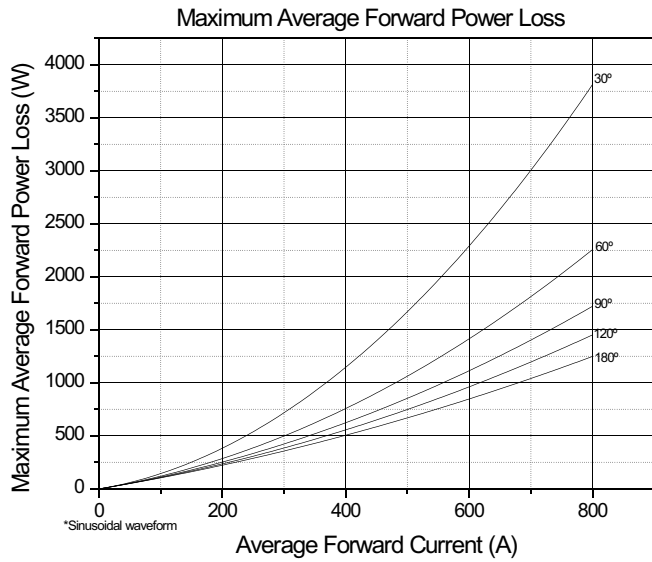


Fig. 3 - On-State Power Loss Characteristics

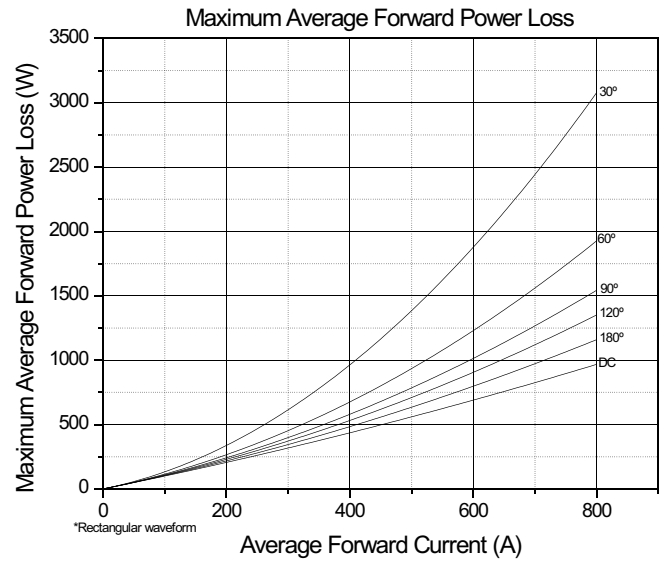


Fig. 4 - On-State Power Loss Characteristics

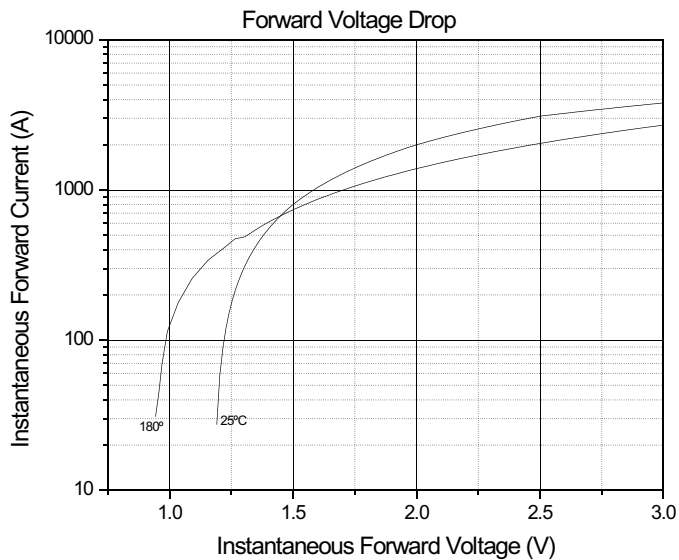


Fig. 5 - Forward Voltage Drop Characteristics

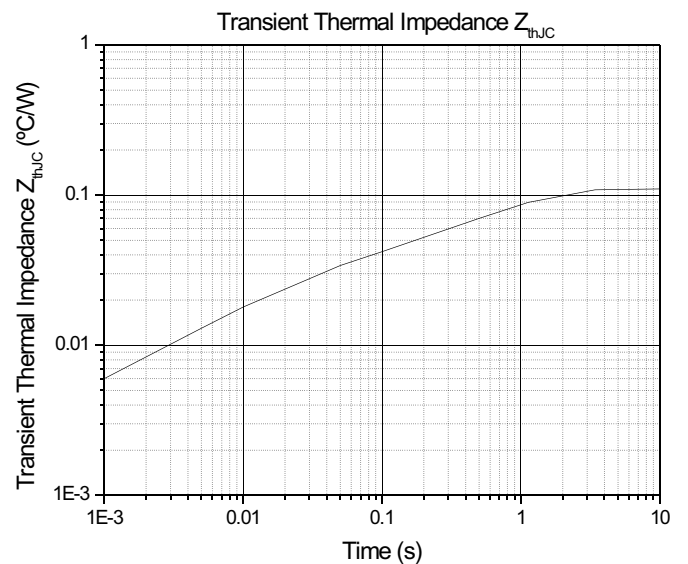


Fig. 6 - Transient Thermal Impedance Characteristics



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DO-205AD (DO-13)

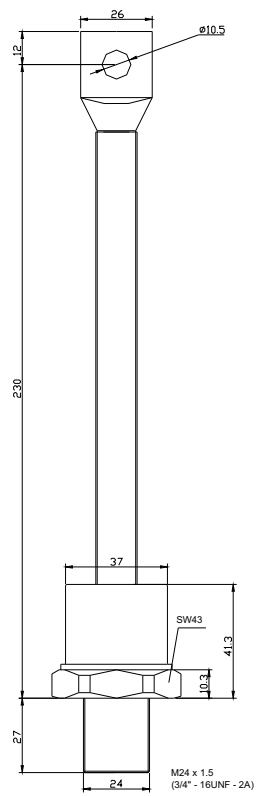


Fig. 7 - Outline Characteristics