



## A1A:200.XX

### VOLTAGE RATINGS

Part Number	V <sub>RRM</sub> , V <sub>R</sub> (V) Max. rep. peak reverse voltage		V <sub>RSM</sub> , V <sub>R</sub> (V) Max. non- rep. peak reverse voltage
	T <sub>J</sub> = 0 to 180°C	T <sub>J</sub> = -40 to 0°C	
A1A:200.02	200	200	300
A1A:200.04	400	400	500
A1A:200.06	600	600	700
A1A:200.08	800	800	900
A1A:200.10	1000	1000	1100
A1A:200.12	1200	1200	1300
A1A:200.14	1400	1400	1500
A1A:200.16	1600	1600	1700

**This datasheet applies to:**

**Metric thread: A1A:200.XX,  
A1B:200.XX**

**Inch thread: A2A:200.XX,  
A2B:200.XX**

### MAXIMUM ALLOWABLE RATINGS

PARAMETER	VALUE	UNITS	NOTES
T <sub>J</sub> Junction Temperature	-40 to 180	°C	-
T <sub>stg</sub> Storage Temperature	-40 to 180	°C	-
I <sub>F(AV)</sub> Max. Av. current @ Max. T <sub>C</sub>	200	A	180° half sine wave
	125	°C	
I <sub>F(RMS)</sub> Nom. RMS current	314	A	-
I <sub>FSM</sub> Max. Peak non-rep. surge current	3950	A	50 Hz half cycle sine wave Initial T <sub>J</sub> = 180°C, rated V <sub>RRM</sub> applied after surge.
	4140		60 Hz half cycle sine wave
	4700		50 Hz half cycle sine wave Initial T <sub>J</sub> = 180°C, no voltage applied after surge.
	4920		60 Hz half cycle sine wave
I <sup>2</sup> t Max. I <sup>2</sup> t capability	78	kA <sup>2</sup> s	t = 10ms Initial T <sub>J</sub> = 180°C, rated V <sub>RRM</sub> applied after surge.
	71		t = 8.3 ms
	110		t = 10ms Initial T <sub>J</sub> = 180°C, no voltage applied after surge.
	101		t = 8.3 ms
I <sup>2</sup> t <sup>1/2</sup> Max. I <sup>2</sup> t <sup>1/2</sup> capability	1100	kA <sup>2</sup> s <sup>1/2</sup>	Initial T <sub>J</sub> = 180°C, no voltage applied after surge. I <sup>2</sup> t for time t <sub>x</sub> = I <sup>2</sup> t <sup>1/2</sup> * t <sub>x</sub> <sup>1/2</sup> . (0.1 < t <sub>x</sub> < 10ms).
F Mounting Force	14(125)	N.m(Lbf.in)	-



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## CHARACTERISTICS

PARAMETER	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
V <sub>FM</sub> Peak forward voltage	---	---	1.4	V	Initial T <sub>J</sub> = 25°C, 50-60Hz half sine, I <sub>peak</sub> = 630A.
V <sub>F(TO)1</sub> Low-level threshold	---	---	0.9	V	T <sub>J</sub> = 180°C
V <sub>F(TO)2</sub> High-level threshold	---	---	1		Av. power = V <sub>F(TO)</sub> * I <sub>F(AV)</sub> + r <sub>F</sub> * [I <sub>F(RMS)</sub> ] <sup>2</sup>
r <sub>F1</sub> Low-level resistance	---	---	0.79	m	Use low values for I <sub>FM</sub> < I <sub>F(AV)</sub>
r <sub>F2</sub> High-level resistance	---	---	0.64		
I <sub>RM</sub> Peak reverse current	---	---	12	mA	T <sub>J</sub> = 180°C. Max. rated V <sub>RRM</sub>
R <sub>thJC</sub> Thermal resistance, junction-to-case	---	---	0.275	°C/W	DC operation
	---	---	0.3	°C/W	180° sine wave
	---	---	0.335	°C/W	120° rectangular wave
R <sub>thCS</sub> Thermal resistance, case-to-sink	---	---	0.1	°C/W	Mtg. Surface smooth, flat and greased. Single side.
wt Weight	---	120(4.2)	---	g(oz.)	---
Case Style	DO-205AC(DO-30)			---	---

Maximum Allowable Case Temperature

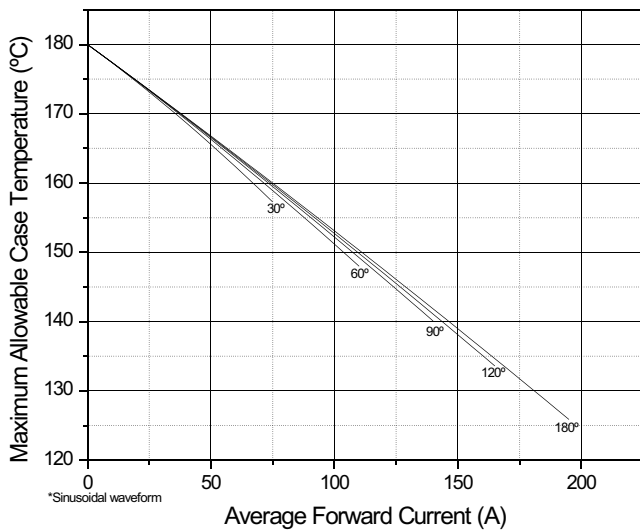


Fig. 1 - Current Ratings Characteristics

Maximum Allowable Case Temperature

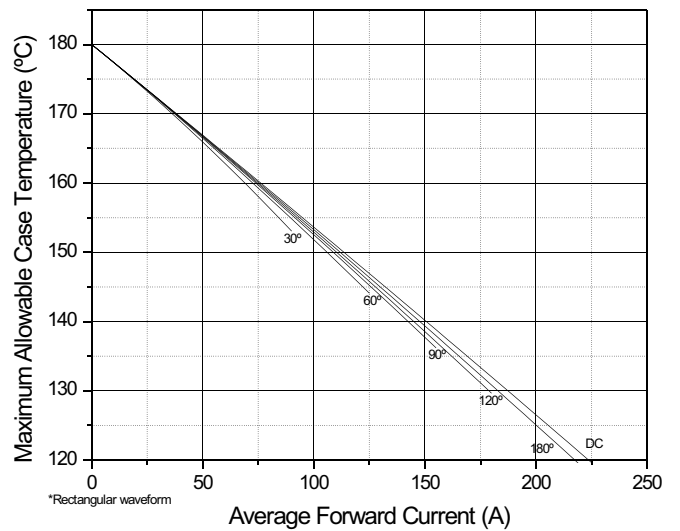
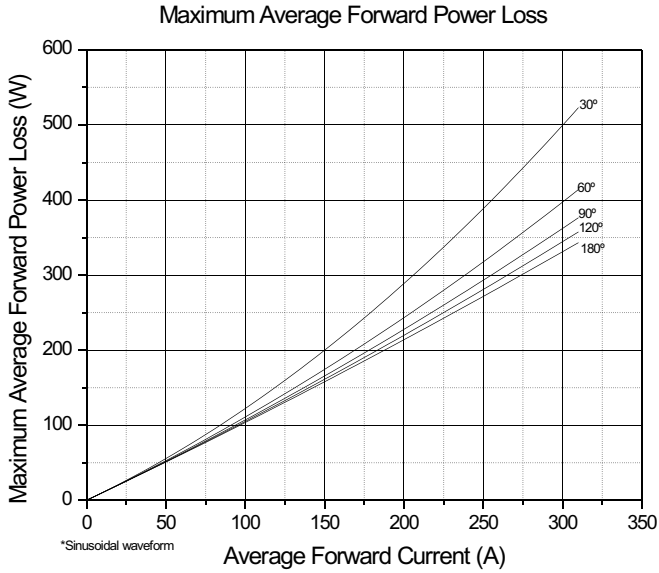


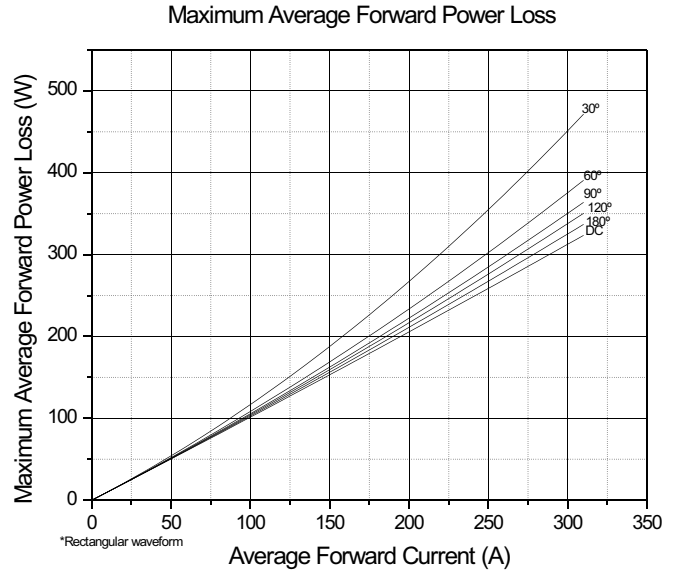
Fig. 2 - Current Ratings Characteristics



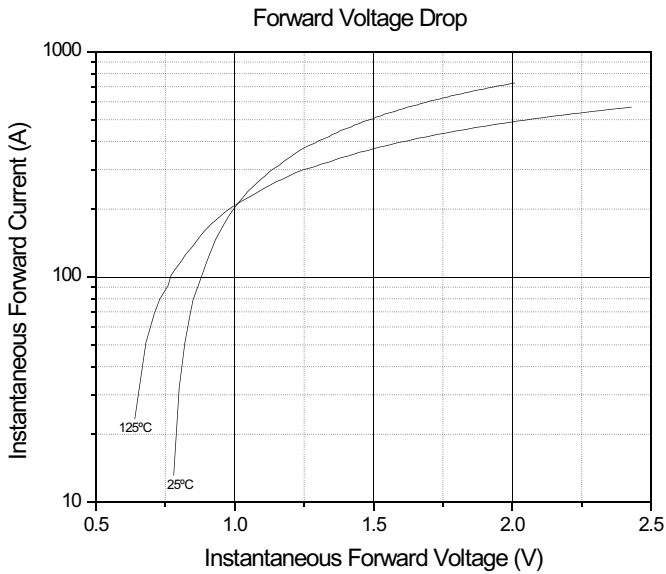
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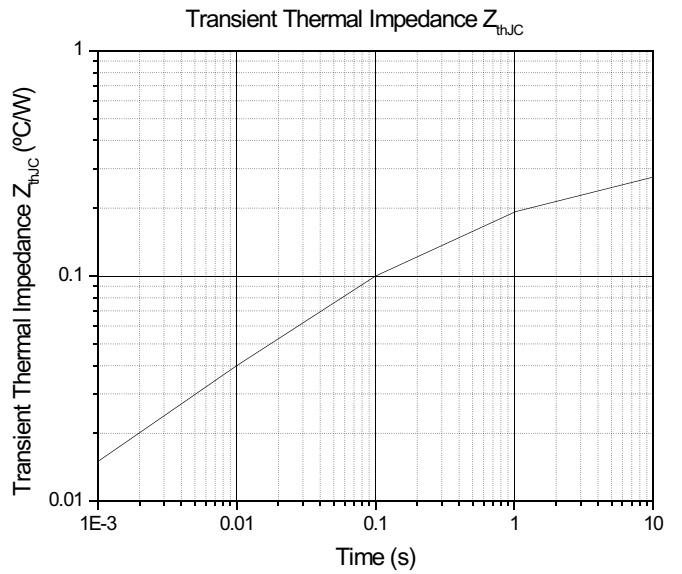
**Fig. 3 - Forward Power Loss Characteristics**



**Fig. 4 - Forward Power Loss Characteristics**



**Fig. 5 - Forward Voltage Drop Characteristics**



**Fig. 6 - Transient Thermal Impedance Characteristics**



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**DO-205AC (DO-30)**

