



**Key Parameters**

$V_{RRM}$	= 5200V
$I_{F(AV)}$	= 820A
$I_{FSM}$	= 8000A
$V_{F(TO)}$	= 1.0V
$r_F$	= 0.62mΩ

**Features**

- Full blocking capability over wide temperature range
- Hermetically sealed ceramic package
- High case non-rupture current

**Applications**

- Traction Rectifiers
- Uncontrolled Rectifiers
- Welding
- Induction Heating / Melting

**Ordering Information**

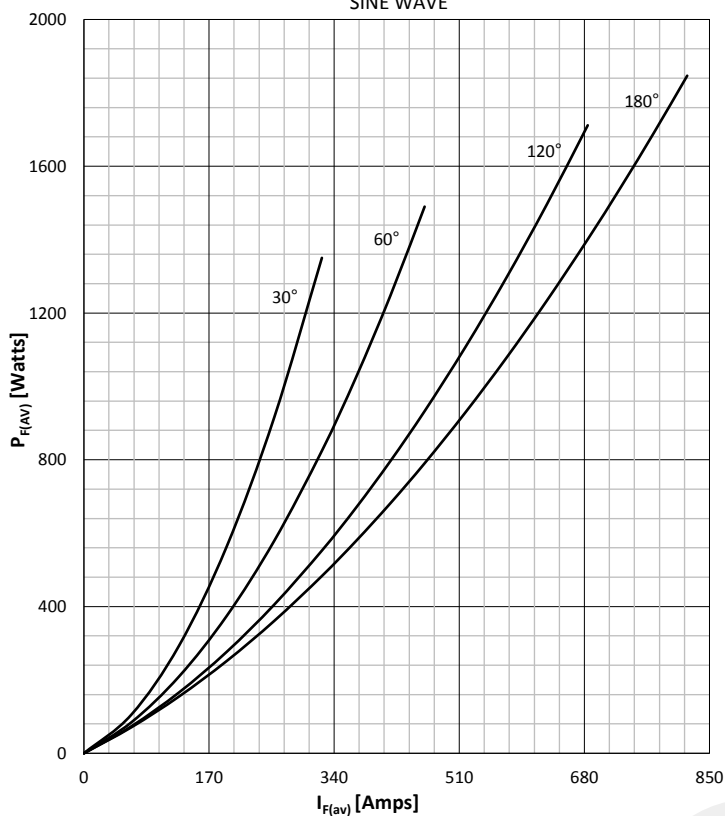
MS D	820	C	XX
Rectifier Diode	Current code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = $V_{RRM}$
Order Code MS D820C52 : 5200V $V_{RRM}$ , Capsule Diode			

Prepared by : ABA	Date of Publication : 25.03.2015
Approved by : RBS	Revision : 0

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		150	4400 - 5200	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		150	4600 - 5400	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	150	100	mA
<b>CONDUCTING</b>					
I <sub>F(AV)</sub>	Mean forward current	180° sin, 50 Hz, T <sub>c</sub> =85°C, double side cooled 180° sin, 50 Hz, T <sub>c</sub> =100°C, double side cooled		820 690	A
I <sub>FRMS</sub>	RMS current	T <sub>c</sub> =85°C, double side cooled		1287	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	8000	A
			150	7000	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	320 x 10 <sup>3</sup>	A <sup>2</sup> s
			150	245 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>F</sub>	Forward voltage	On-state current = 1500A	150	1.94	V
V <sub>F(TO)</sub>	Threshold voltage		150	1.0	V
r <sub>F</sub>	Forward slope resistance		150	0.62	mΩ
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, sin 180°	Junction to case, double side cooled		0.035	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, double side cooled		0.015	°C/W
T <sub>j</sub>	Max. junction temperature			150	°C
T <sub>stg</sub>	Storage temperature			-40 .... 150	°C
M	Clamping force			16 - 18	KN
W	Weight (Approx.)			280	gm
			Prepared by : ABA	Date of Publication : 25.03.2015	
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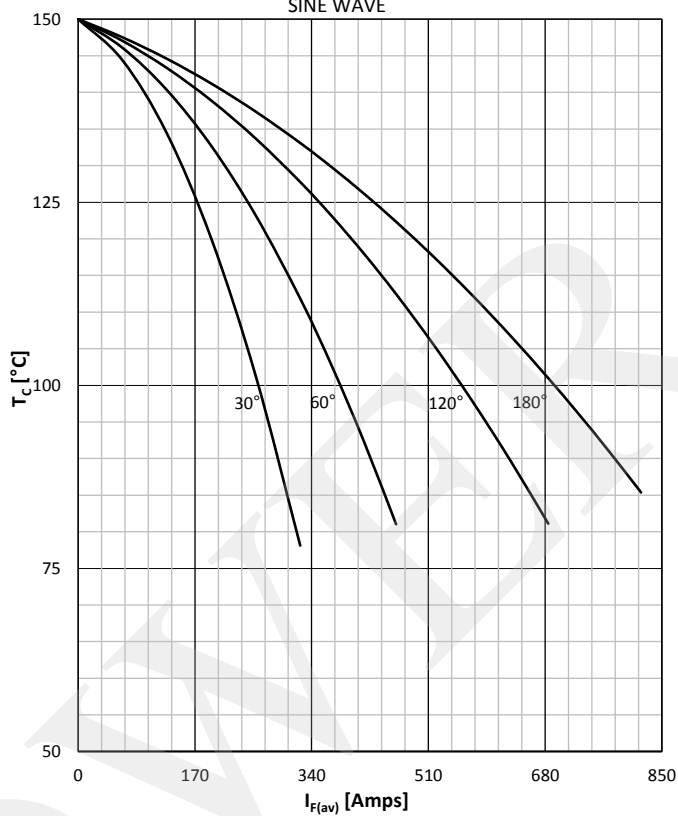
DISSIPATION CHARACTERISTICS

SINE WAVE



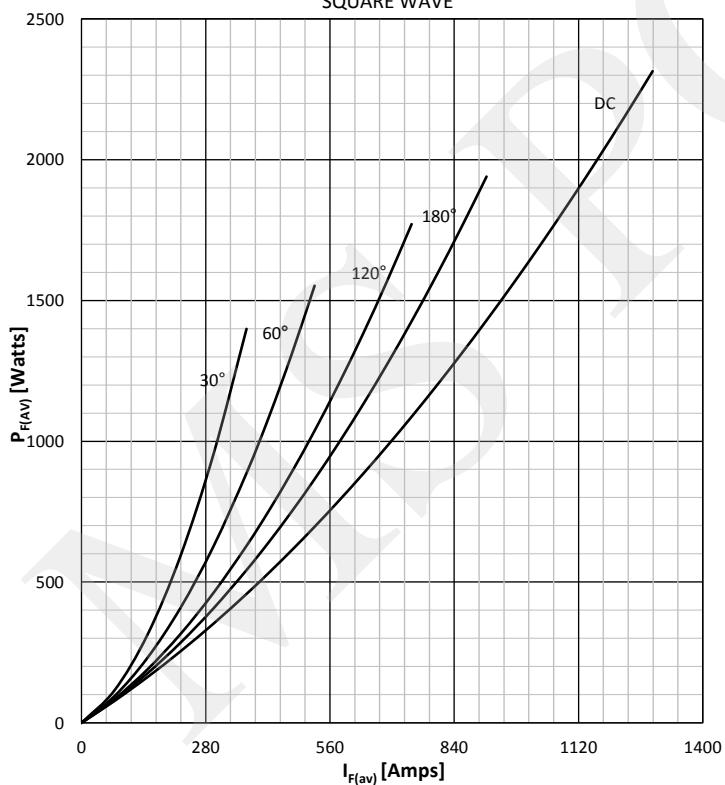
FORWARD CURRENT DERATING CURVE

SINE WAVE



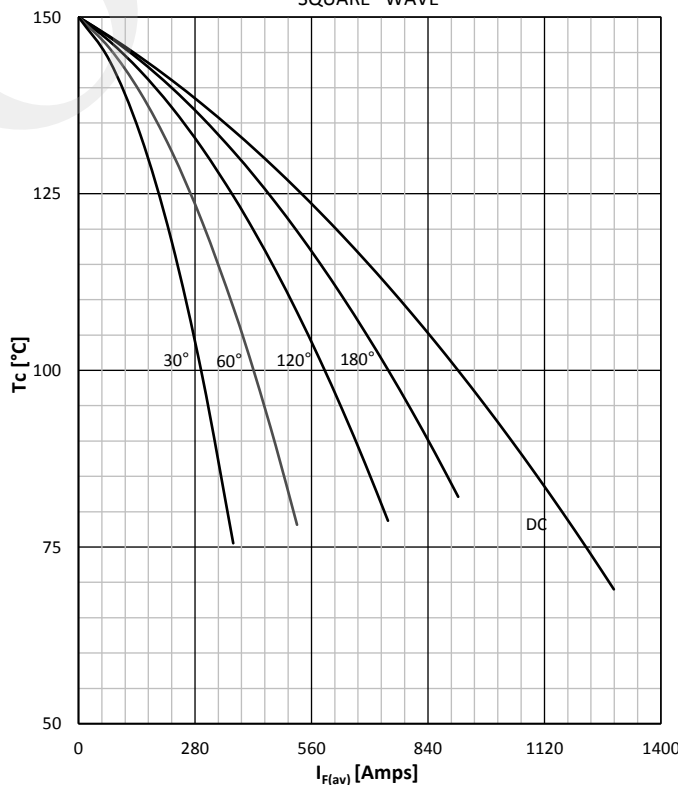
DISSIPATION CHARACTERISTICS

SQUARE WAVE



FORWARD CURRENT DERATING CURVE

SQUARE WAVE



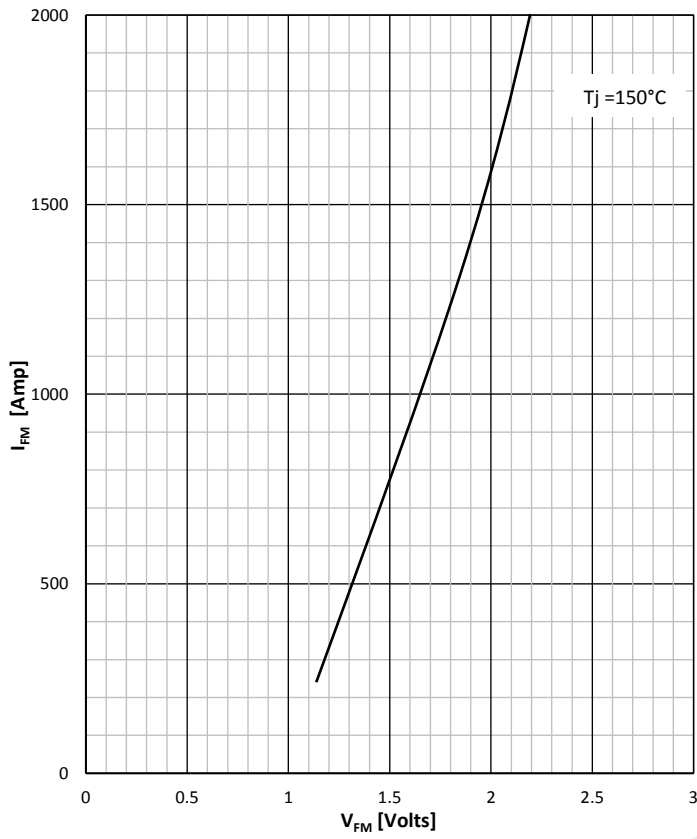
Prepared by : ABA

Date of Publication : 25.03.2015

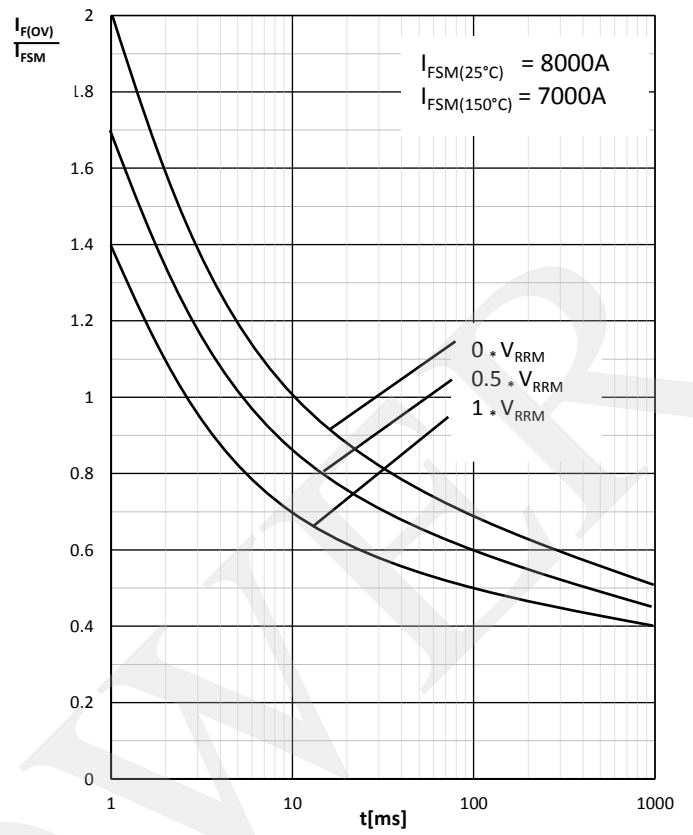
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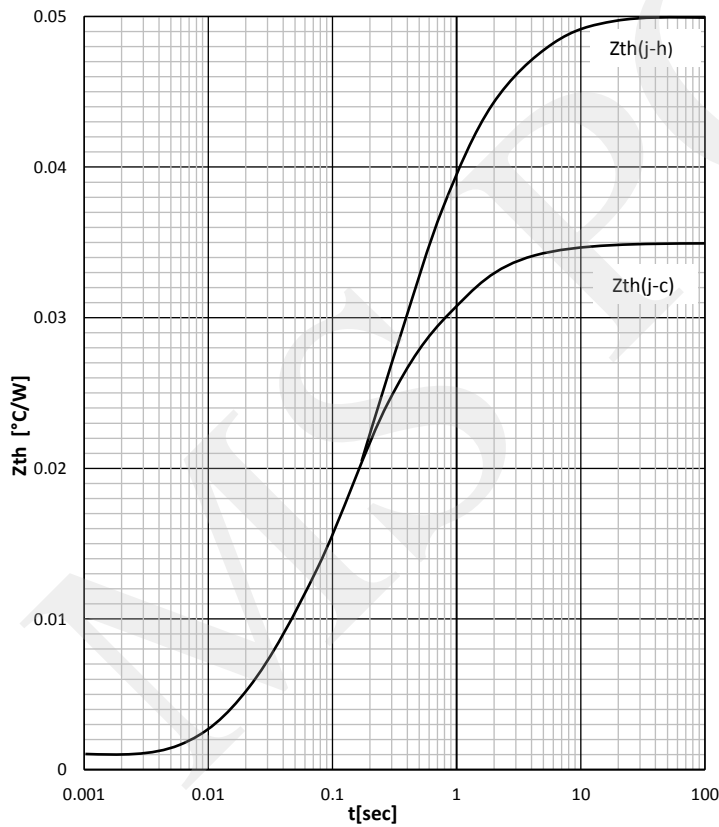
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE



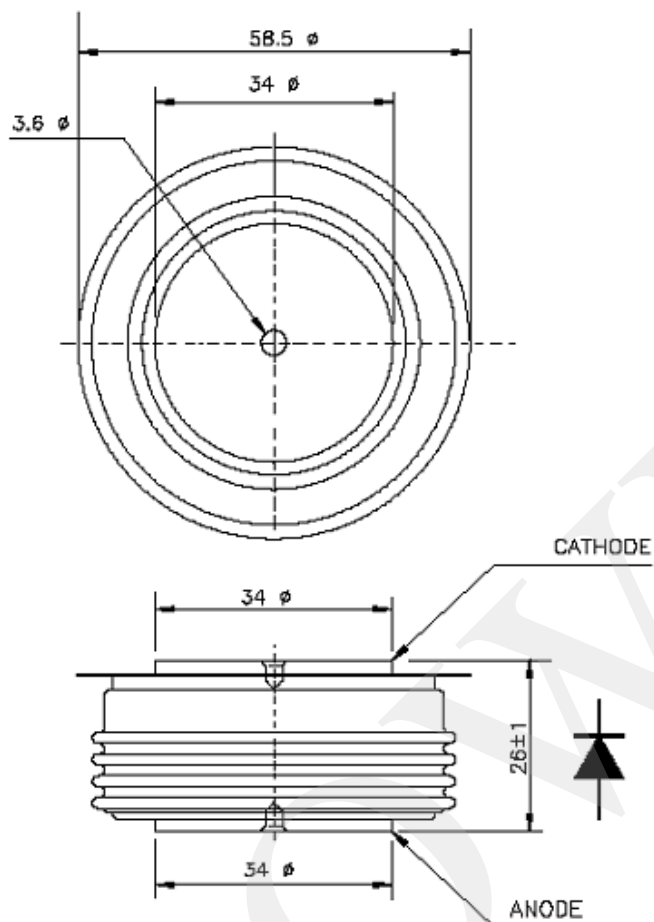
Prepared by : ABA

Date of Publication : 25.03.2015

Approved by : RBS

Revision : 0

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Prepared by : ABA

Date of Publication : 25.03.2015

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