



**Key Parameters**

$V_{RRM}$	= 400V
$I_{F(AV)}$	= 5100A
$I_{FSM}$	= 54000A
$V_{F(TO)}$	= 0.76V
$r_F$	= 0.070m $\Omega$

**Features**

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

**Applications**

- Uncontrolled Rectifiers
- Welding

**Ordering Information**

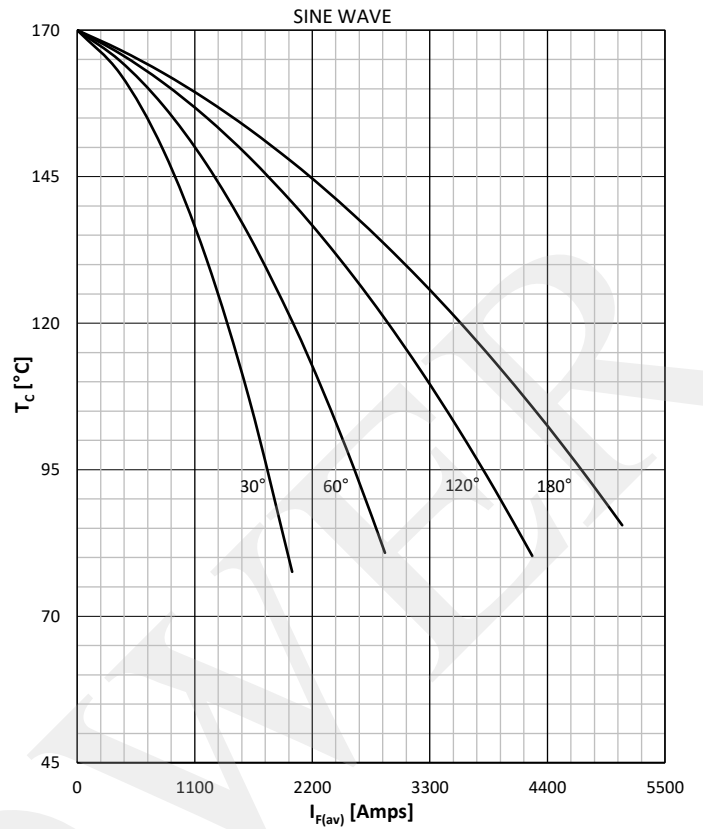
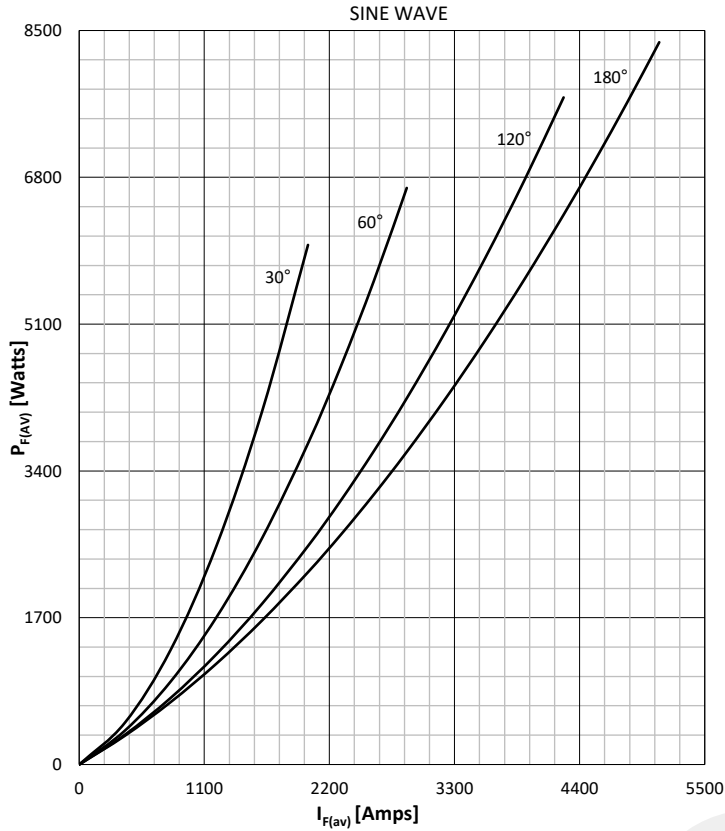
MS DW	5100	C	XX
Welding Diode	Current code	C - Capsule package with Alloyed silicon technology	Voltage Code Code X 100 = $V_{RRM}$
Order Code MS DW5100C04 : 400V $V_{RRM}$ , Capsule Welding Diode			

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Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		170	200 - 400	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		170	200 - 400	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	170	50	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		5100	A
I <sub>FRMS</sub>	RMS current	T <sub>c</sub> =85°C, double side cooled		8007	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	54000	A
			170	52000	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	14580 x 10 <sup>3</sup>	A <sup>2</sup> s
			170	13520 x 10 <sup>3</sup>	A <sup>2</sup> s
V <sub>F</sub>	Forward voltage	On-state current = 4000A	170	1.08	V
V <sub>F(TO)</sub>	Threshold voltage		170	0.76	V
r <sub>F</sub>	Forward slope resistance		170	0.070	mΩ
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, sin 180°	Junction to case, double side cooled		0.01	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, double side cooled		0.005	°C/W
T <sub>j</sub>	Max. junction temperature			170	°C
T <sub>stg</sub>	Storage temperature			-40 .... 170	°C
M	Clamping force			22	KN
W	Weight (Approx.)			140	gm
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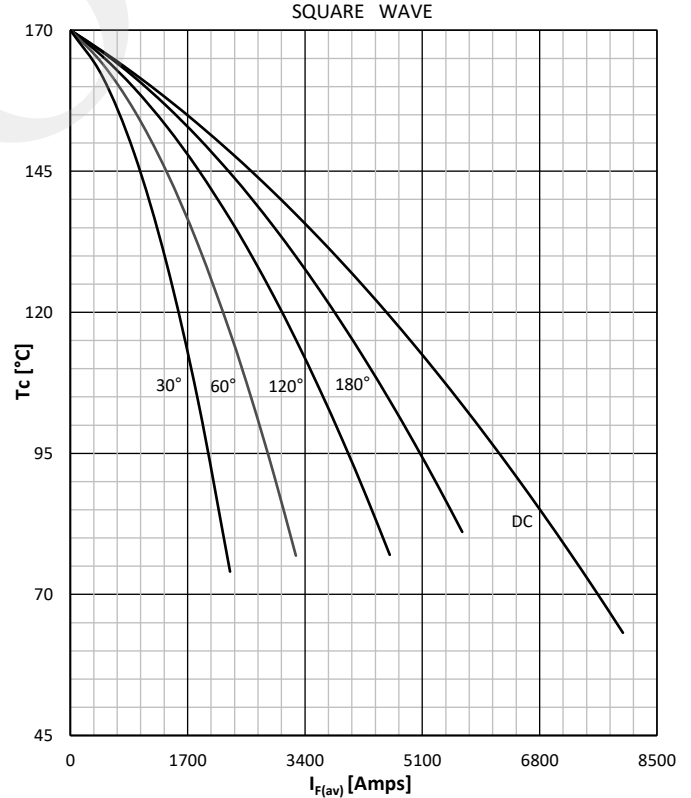
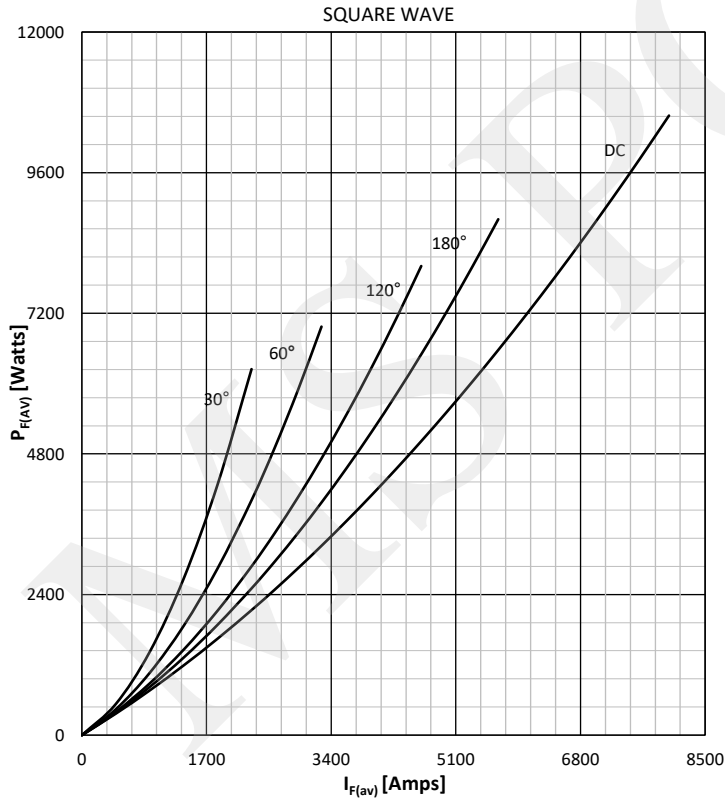
DISSIPATION CHARACTERISTICS

FORWARD CURRENT DERATING CURVE



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FORWARD CURRENT DERATING CURVE



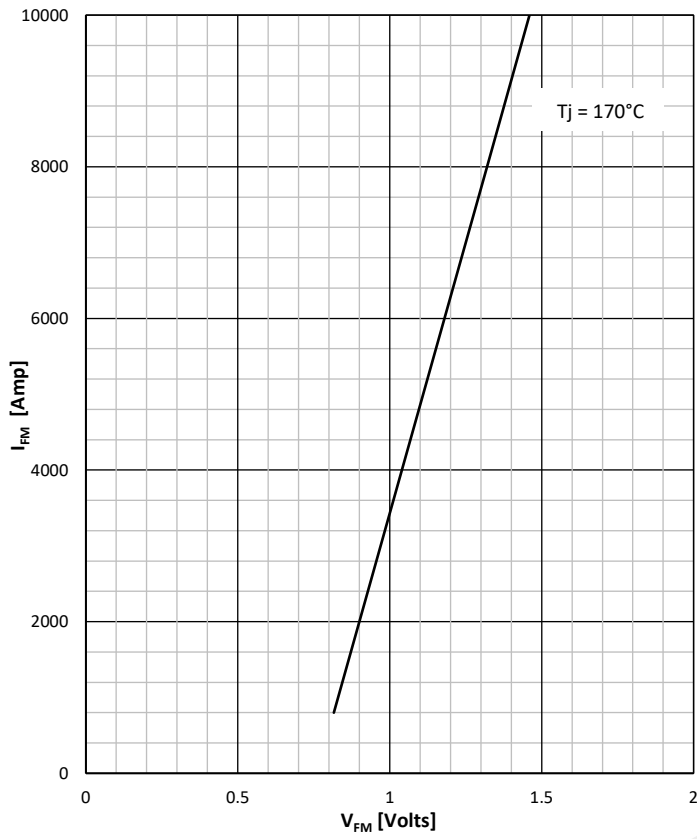
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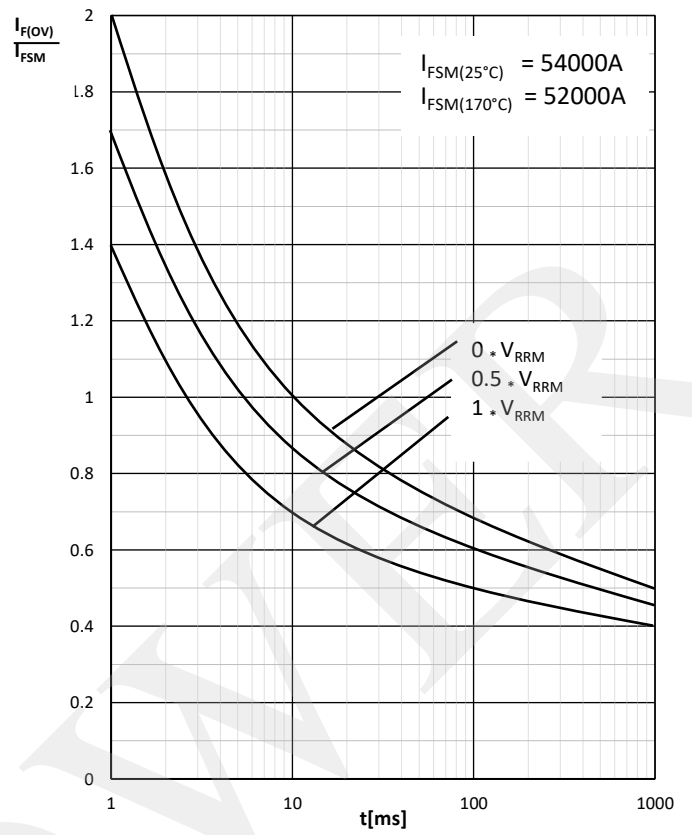
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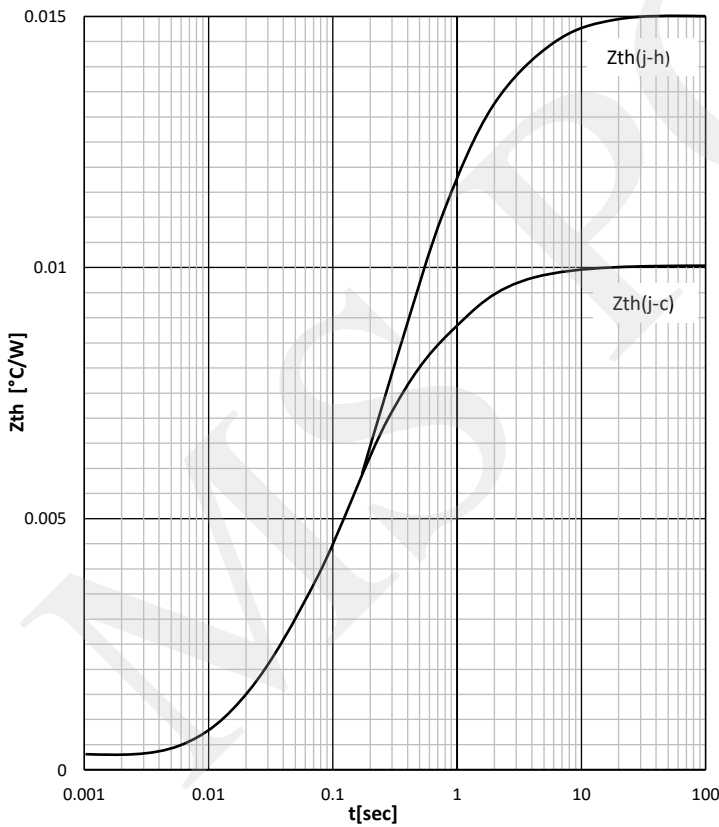
FORWARD CHARACTERISTIC



SURGE CHARACTERISTICS

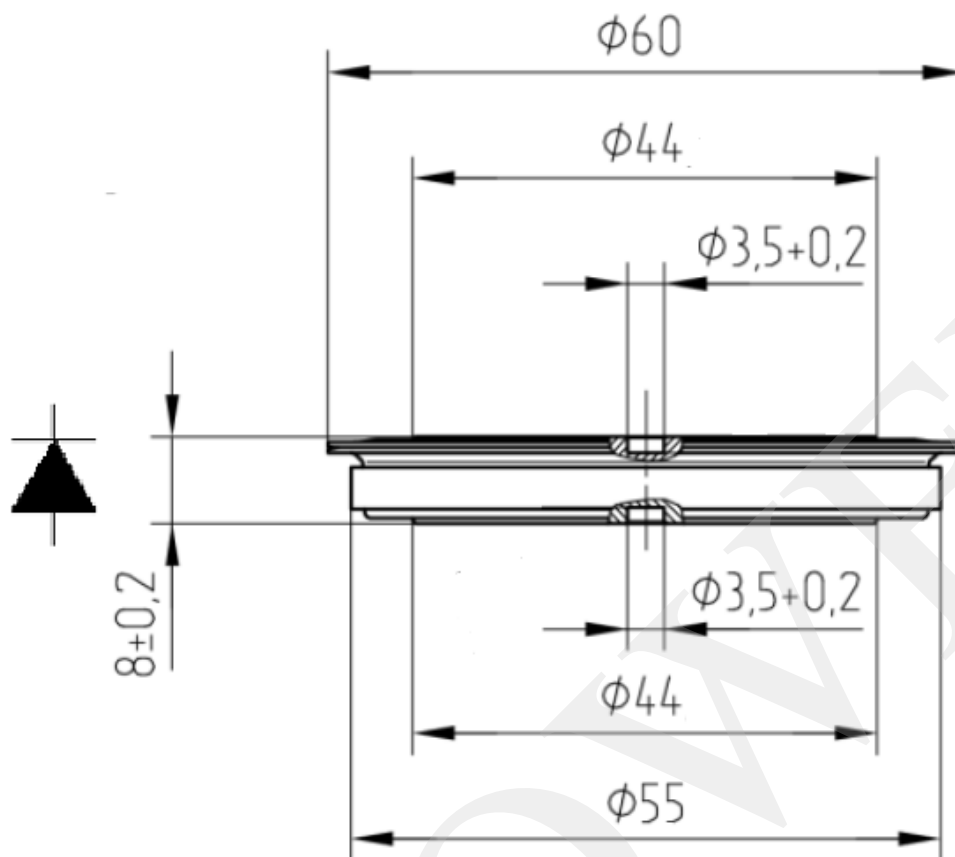


TRANSIENT THERMAL IMPEDANCE, DSC



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Outline



**MS Power GmbH**

Mergenthalerallee 79-81  
65760 Eschborn, Germany  
Web: [www.mspowergroup.com](http://www.mspowergroup.com)  
Mail: [info@mspowergroup.de](mailto:info@mspowergroup.de)

**Sales & Enquiry:**

[sales@mspowergroup.de](mailto:sales@mspowergroup.de)

**Technical Support:**

[solution@mspowergroup.de](mailto:solution@mspowergroup.de)

**After sales Service:**

[service@mspowergroup.de](mailto:service@mspowergroup.de)

Phone: +49 (0) 6196/7768 666

Fax: +49 (0) 6196/7757 888



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