

**Key Parameters**

$V_{RRM}$	= 1600V
$I_{D(AV)}$	= 50A
$I_{FSM}$	= 500A
$V_{F(TO)}$	= 0.75V
$r_F$	= 8.0mΩ

**Features**

- Full blocking capability over wide temperature range
- Heat transfer through isolated metal base plate
- Hard soldered joints for high reliability

**Applications**

- Power Supplies
- Uncontrolled Rectifiers
- Field supply for DC motors

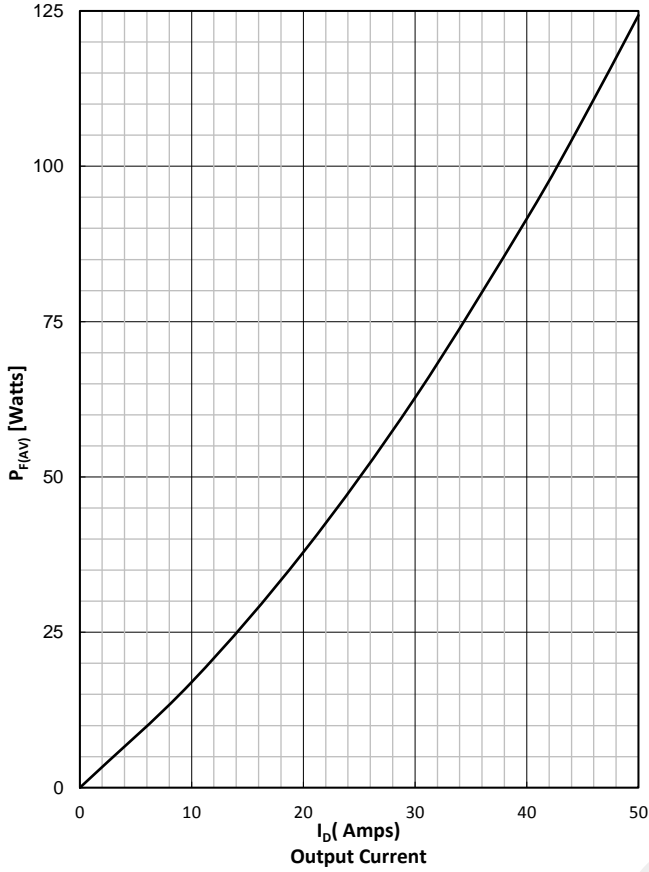
**Ordering Information**

<b>MDQ</b>	<b>50</b>	<b>- X X</b>
Single Phase Diode bridge rectifier	Current Code	Voltage Code Code X 100 = $V_{RRM}$
Order Code MDQ50-16 : 1600V $V_{RRM}$ , Single Phase Diode bridge rectifier		

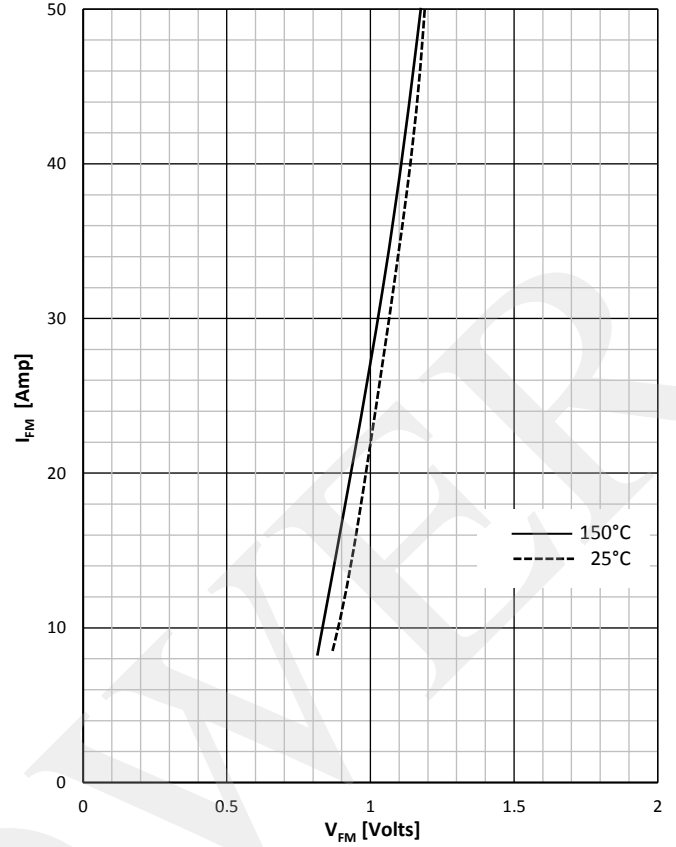
Prepared by : ABA	Date of Publication : 15.07.2015
Approved by : RBS	Revision : 1

Symbol	Characteristic	Conditions	T <sub>j</sub> [°C]	Value	Unit
<b>BLOCKING</b>					
V <sub>RRM</sub>	Repetitive peak reverse voltage		150	200 - 1600	V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		150	300 - 1700	V
I <sub>RRM</sub>	Repetitive peak reverse current	V = V <sub>RRM</sub>	150	5	mA
<b>CONDUCTING</b>					
I <sub>D(AV)</sub>	DC output current	T <sub>c</sub> =55°C		50	A
I <sub>FSM</sub>	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	500	A
			150	400	A
I <sup>2</sup> t	I <sup>2</sup> t	Sine wave, 10 ms Without reverse voltage	25	1250	A <sup>2</sup> s
			150	800	A <sup>2</sup> s
V <sub>F</sub>	Forward voltage	On-state current = 50A	25	1.20	V
V <sub>F(TO)</sub>	Threshold voltage		150	0.75	V
r <sub>F</sub>	Forward slope resistance		150	8	mΩ
<b>MOUNTING</b>					
R <sub>th(j-c)</sub>	Thermal impedance, sin 180°	Junction to case, per arm per bridge		3.05 0.76	°C/W
R <sub>th(c-h)</sub>	Thermal impedance	Case to heatsink, per bridge		1.0	°C/W
T <sub>j</sub>	Max. junction temperature			150	°C
T <sub>stg</sub>	Storage temperature			-40 .... 150	°C
V <sub>ISOL</sub>	Insulation test voltage, RMS	F=50Hz, 1min		2.5	KV
M1	Mounting torque			3 ± 15%	Nm
W	Weight (Approx.)			25	gm
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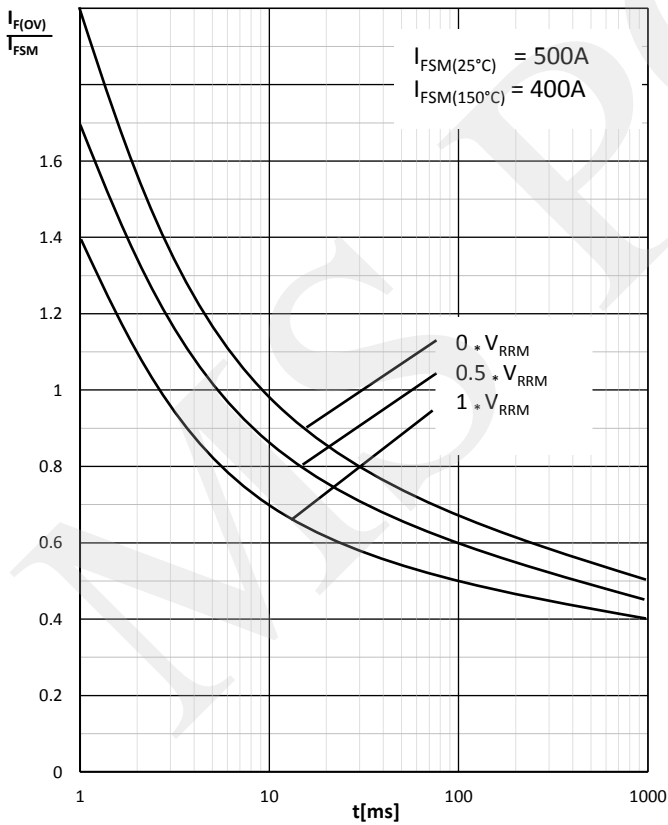
POWER DISSIPATION Vs OUTPUT CURRENT



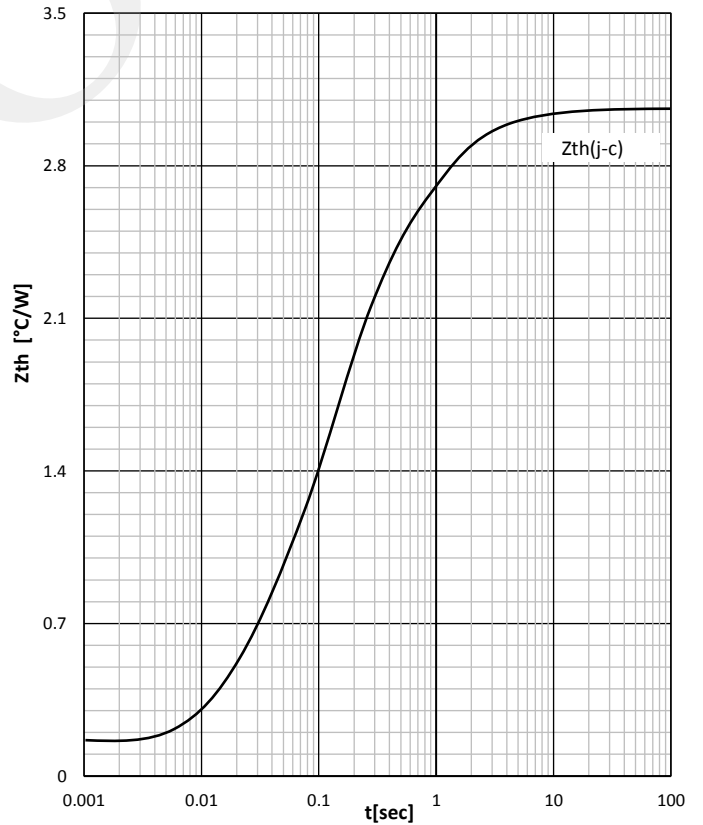
ON -STATE CHARACTERISTIC OF A DIODE ARM



SURGE CHARACTERISTICS

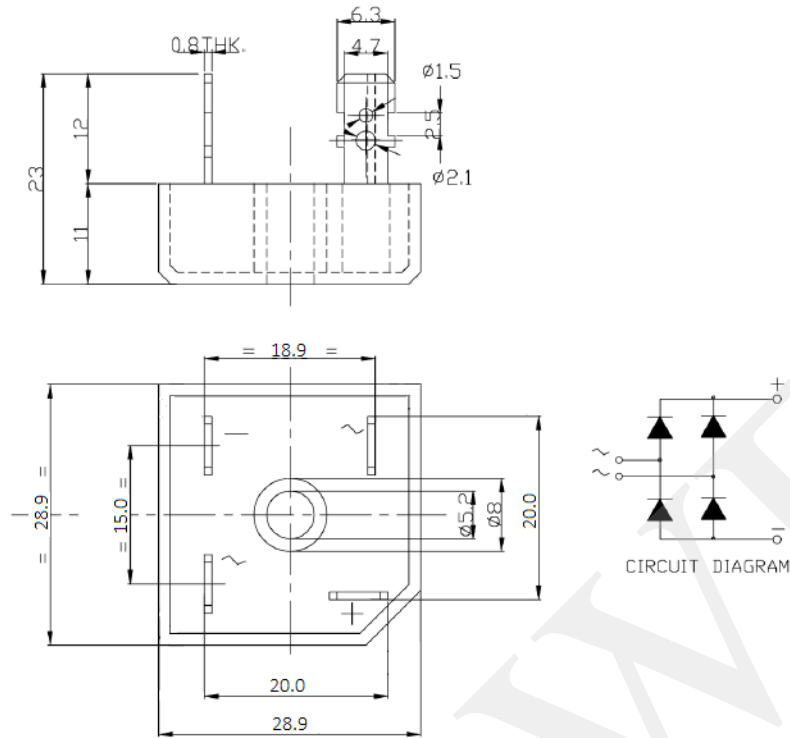


TRANSIENT THERMAL IMPEDANCE, PER ARM



Prepared by : ABA	Date of Publication : 15.07.2015
Approved by : RBS	Revision : 1

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