

Key Parameters

V_{RRM}	= 1800V
$I_{D(AV)}$	= 110A
I_{FSM}	= 1150A
$V_{F(TO)}$	= 0.85V
r_F	= 4.0mΩ

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

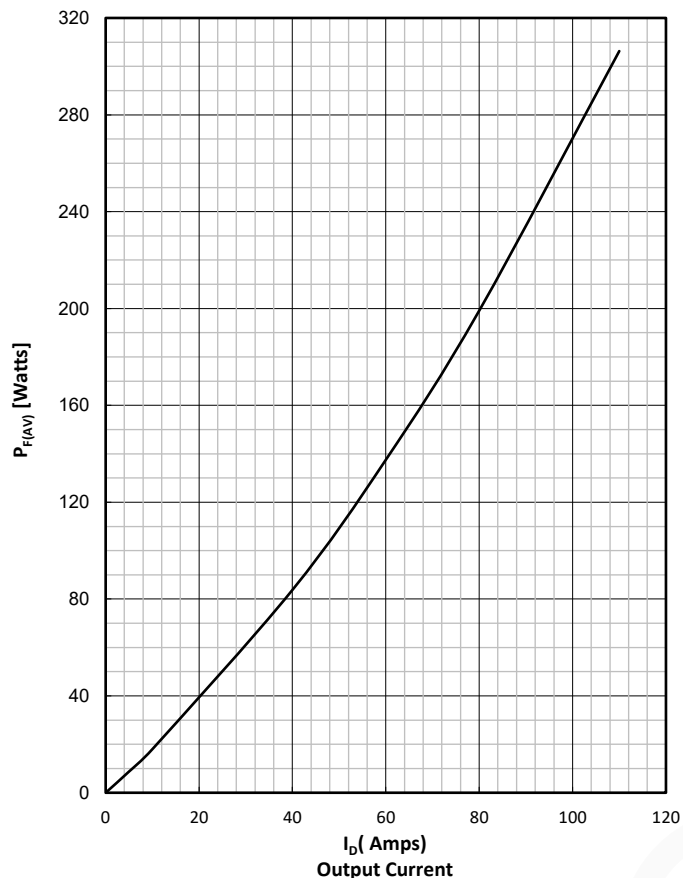
Ordering Information

MDQ	102	- X X
Single Phase Diode bridge rectifier	Current Code	Voltage Code Code X 100 = V_{RRM}
Order Code MDQ102-18 : 1800V V_{RRM} , Single Phase Diode bridge rectifier		

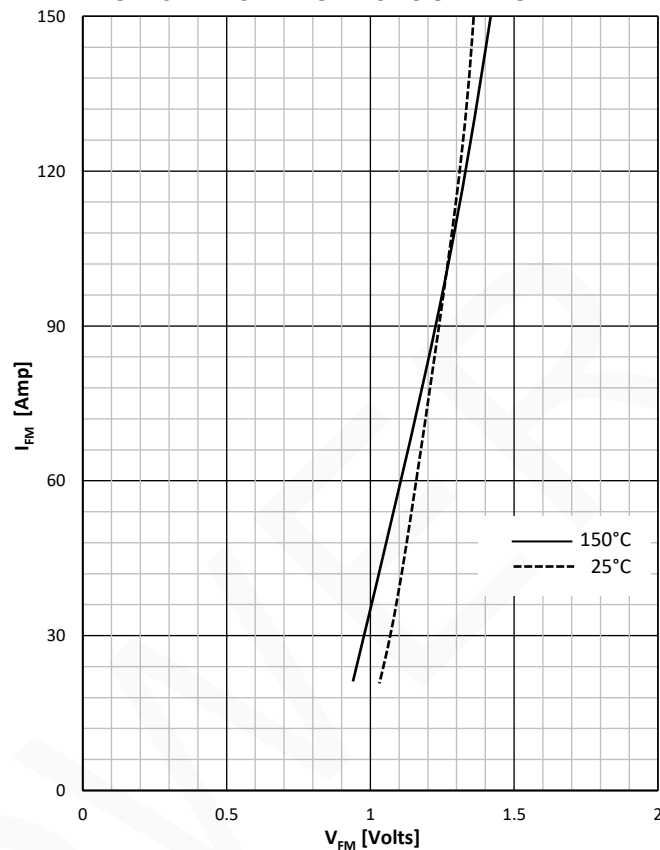
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Symbol	Characteristic	Conditions	T _j [°C]	Value	Unit
BLOCKING					
V _{RRM}	Repetitive peak reverse voltage		150	200 - 1800	V
V _{RSM}	Non-repetitive peak reverse voltage		150	300 - 1900	V
I _{RRM}	Repetitive peak reverse current	V = V _{RRM}	150	10	mA
CONDUCTING					
I _{D (AV)}	DC output current	T _c =85°C		110	A
I _{FSM}	Surge forward current	Sine wave, 10 ms Without reverse voltage	25	1150	A
			150	1000	A
I ² t	I ² t	Sine wave, 10 ms Without reverse voltage	25	6612	A ² s
			150	5000	A ² s
V _F	Forward voltage	On-state current = 150A	25	1.35	V
V _{F(TO)}	Threshold voltage		150	0.85	V
r _F	Forward slope resistance		150	4	mΩ
MOUNTING					
R _{th(j-c)}	Thermal impedance, sin 180°	Junction to case, per arm per bridge		0.80 0.20	°C/W
R _{th(c-h)}	Thermal impedance	Case to heatsink, per bridge		0.05	°C/W
T _j	Max. junction temperature			150	°C
T _{stg}	Storage temperature			-40 150	°C
V _{ISOL}	Insulation test voltage, RMS	F=50Hz, 1min		2.5	KV
M1	Mounting torque			4 ± 15%	Nm
M2	Terminal connection torque			4 ± 15%	Nm
W	Weight (Approx.)			150	gm
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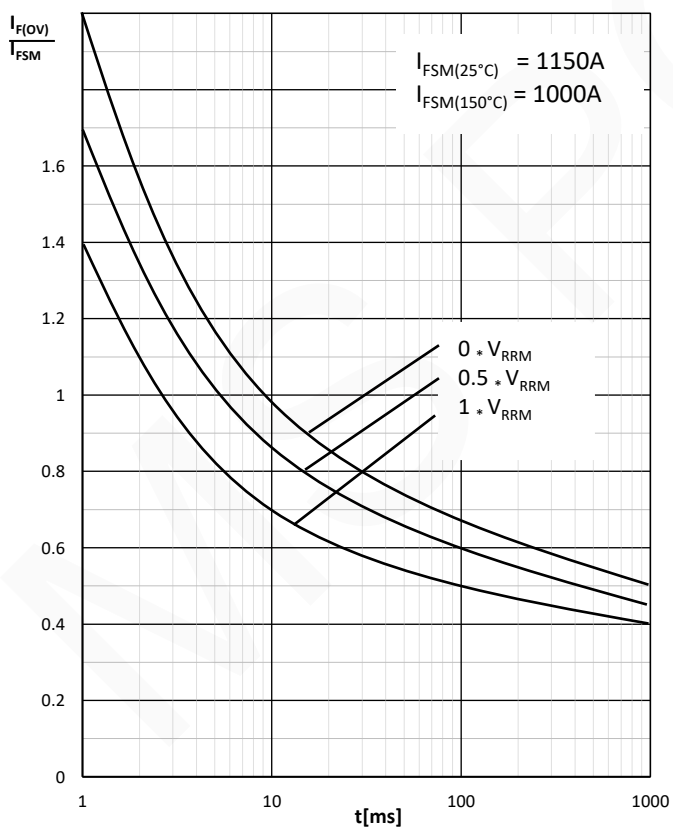
POWER DISSIPATION VS OUTPUT CURRENT



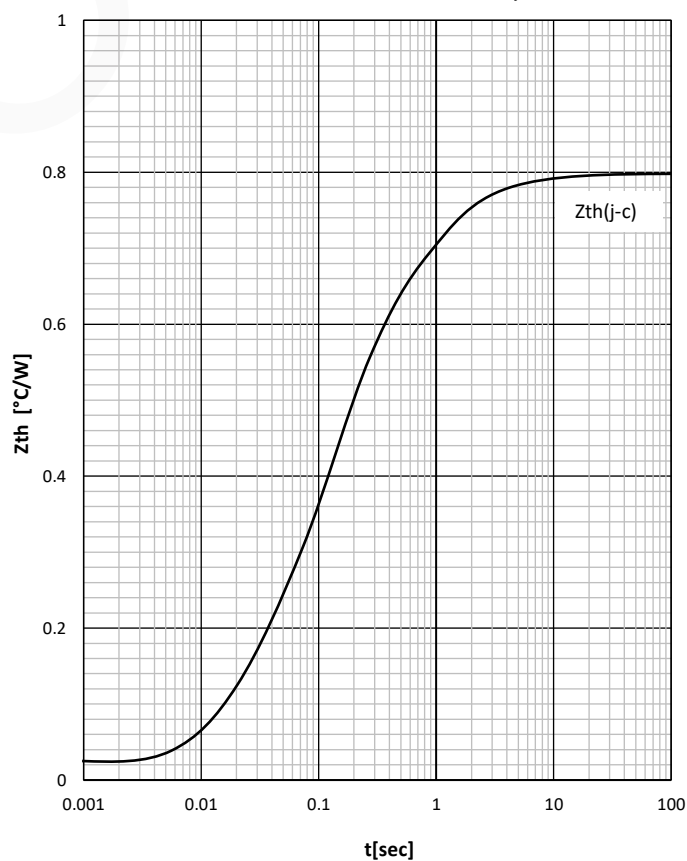
ON -STATE CHARACTERISTIC OF A DIODE ARM



SURGE CHARACTERISTICS



TRANSIENT THERMAL IMPEDANCE, PER ARM



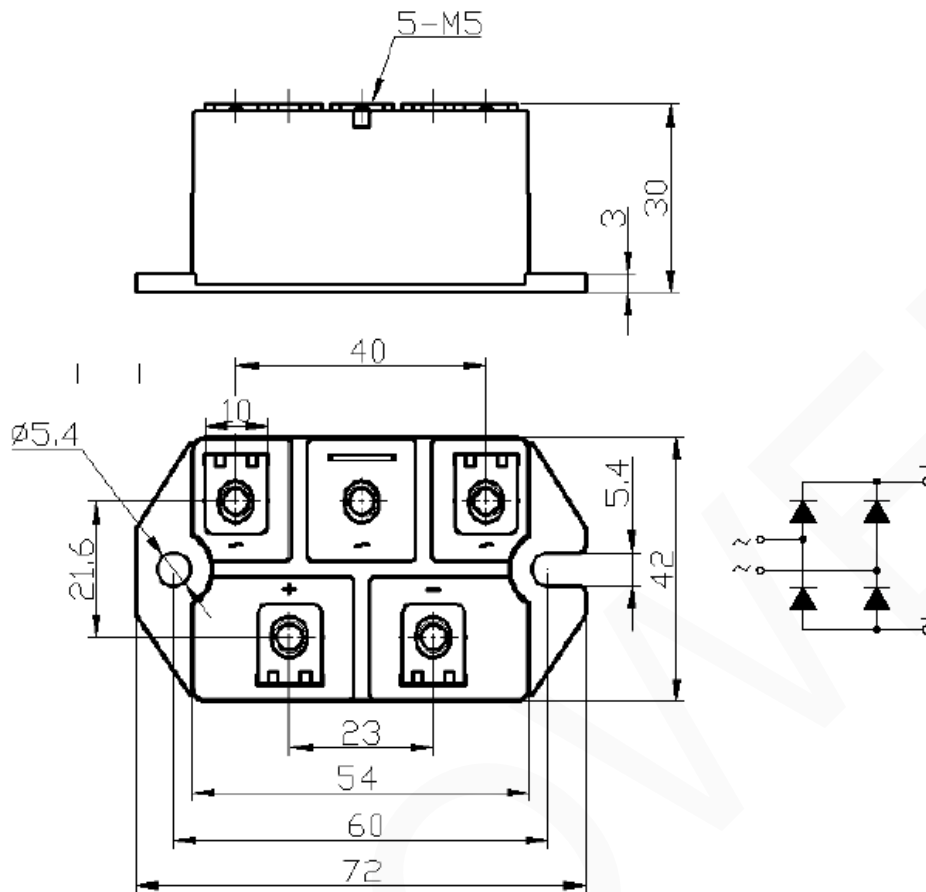
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