



# MD60C08D1 THRU MD60C18D1

## RECTIFIER DIODE MODULE

Reverse Voltage - 800 to 1800 Volts    Forward Current - 60 Ampere



### Glass Passivated Rectifier Diode Modules

**V<sub>RRM</sub>** 800 to 1800V

**I<sub>FAV</sub>** 60 A

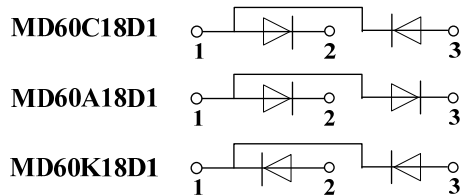
#### Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

#### Features

- Blocking voltage:800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- UL recognized applied for file no. E360040

#### Circuit



#### Module Type

TYPE			V <sub>RRM</sub>	V <sub>RSM</sub>
MD60C08D1	MD60A08D1	MD60K08D1	800V	900V
MD60C12D1	MD60A12D1	MD60K12D1	1200V	1300V
MD60C16D1	MD60A16D1	MD60K16D1	1600V	1700V
MD60C18D1	MD60A18D1	MD60K18D1	1800V	1900V

#### Maximum Ratings

Symbol	Conditions	Values	Units
I <sub>FAV</sub>	Single phase ,half wave 180° conduction T <sub>c</sub> =100°C	60	A
I <sub>FSM</sub>	t=10mS T <sub>vj</sub> =45°C	1150	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	6600	A <sup>2</sup> s
V <sub>isol</sub>	a.c.50HZ;r.m.s.;1min	3000	V
T <sub>vj</sub>		-40 to +150	°C
T <sub>stg</sub>		-40 to +125	°C
M <sub>t</sub>	To terminals(M5)	3±15%	Nm
M <sub>s</sub>	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	100	g



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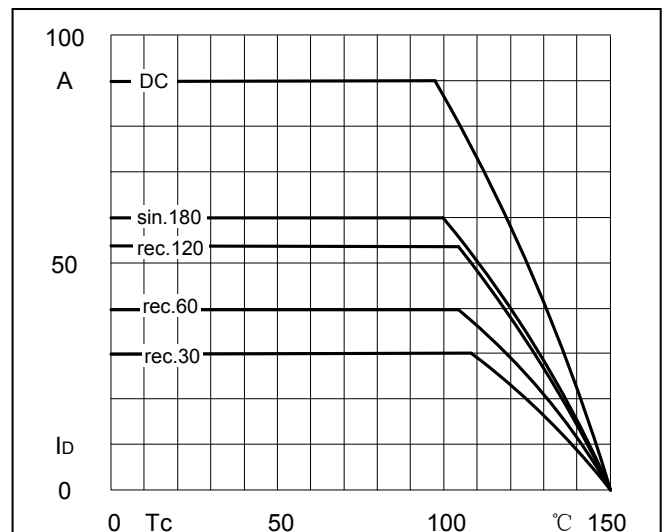
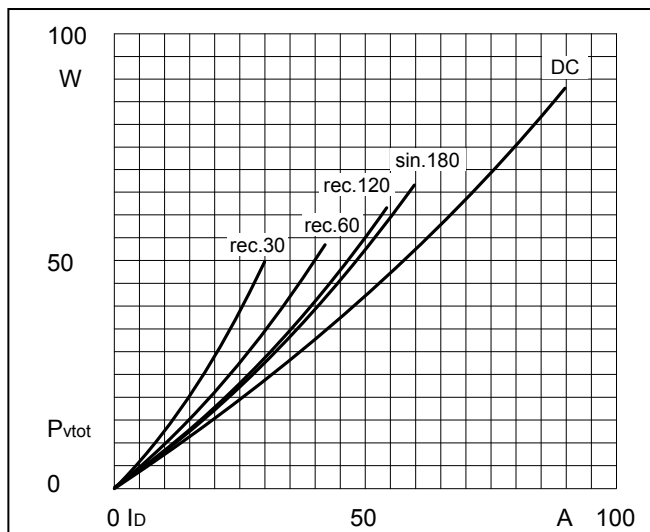
### Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	Per diode	0.59	$^{\circ}C/W$
$R_{th(c-s)}$	Module	0.1	$^{\circ}C/W$

### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25 $^{\circ}C$ I <sub>F</sub> =200A	—	1.30	1.45	V
I <sub>RD</sub>	T <sub>vj</sub> =150 $^{\circ}C$ V <sub>RD</sub> =V <sub>RRM</sub>	—	—	5	mA

### Performance Curves





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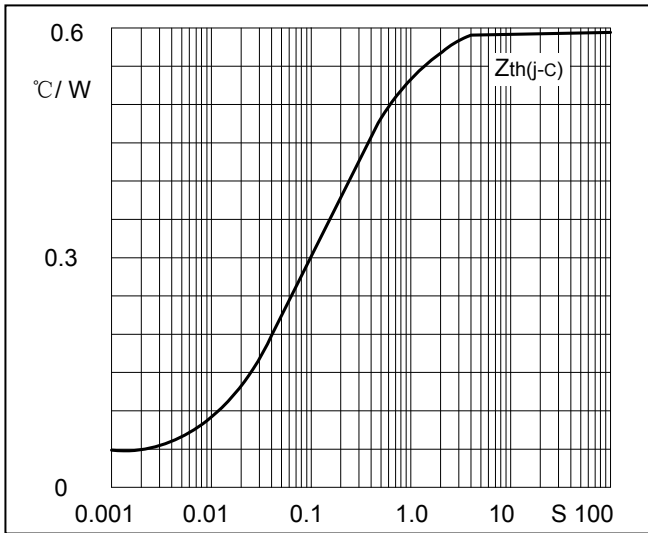


Fig3. Transient thermal impedance

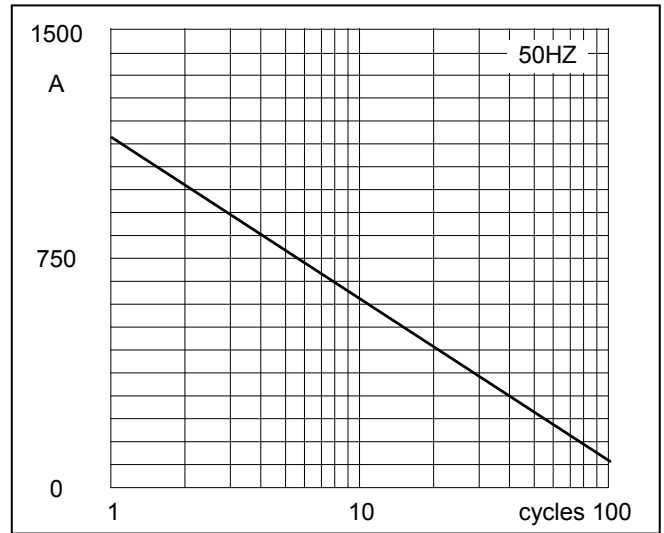


Fig4. Max Non-Repetitive Forward Surge Current

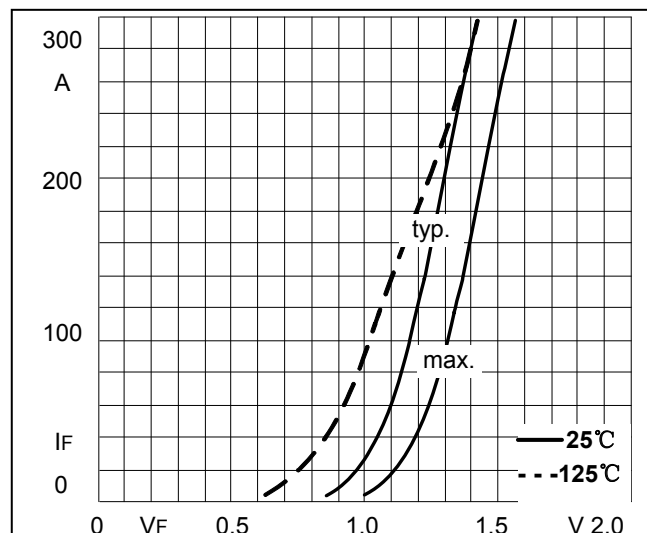


Fig5. Forward Characteristics



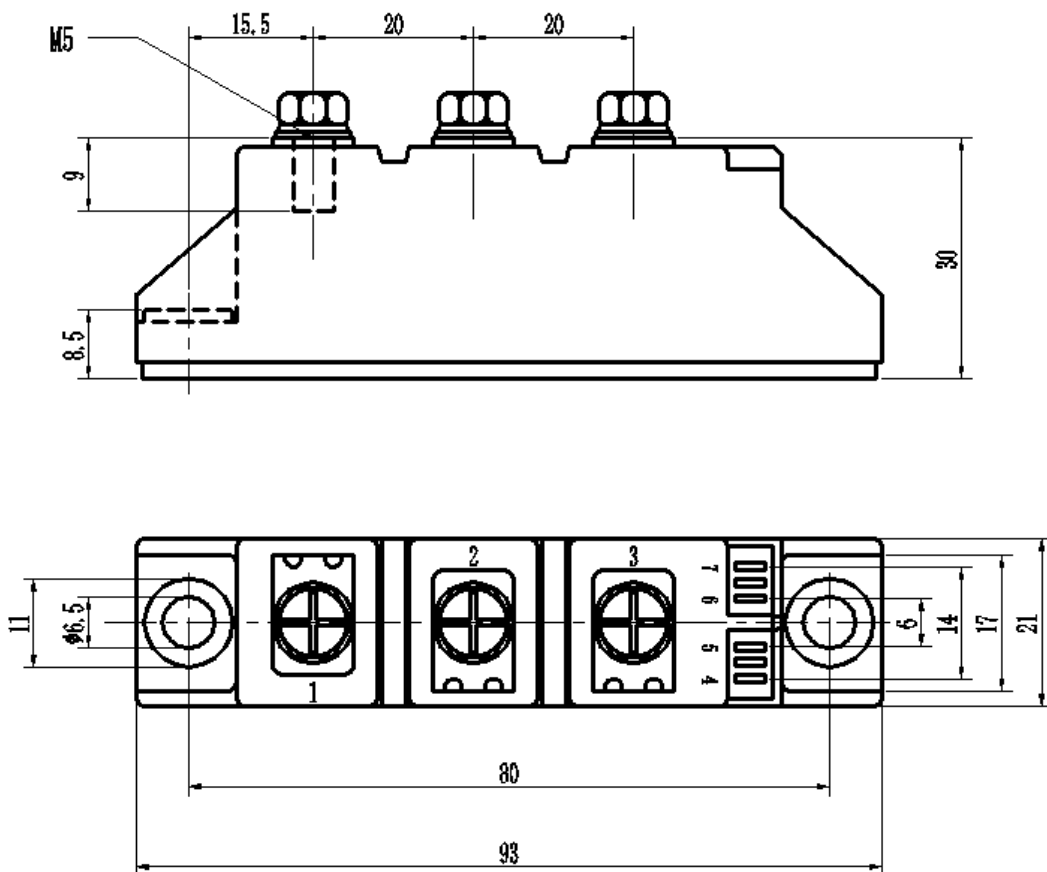
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### Package Outline Information

CASE: D1



Dimensions in mm