

## Glass Passivated Rectifier Diode Modules



**V<sub>RRM</sub>** 800 to 1800V  
**I<sub>FAV</sub>** 36 A

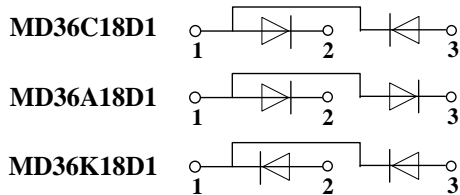
### Applications

- 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>
MD36C08D1	MD36A08D1	MD36K08D1	800V	900V
MD36C12D1	MD36A12D1	MD36K12D1	1200V	1300V
MD36C16D1	MD36A16D1	MD36K16D1	1600V	1700V
MD36C18D1	MD36A18D1	MD36K18D1	1800V	1900V

### Maximum Ratings

Symbol	Conditions	Values	Units
I <sub>FAV</sub>	Single phase ,half wave 180° conduction T <sub>c</sub> =104°C	36	A
I <sub>FSM</sub>	t=10mS T <sub>vj</sub> =45°C	650	A
i <sup>2</sup> t	t=10mS T <sub>vj</sub> =45°C	2100	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

### Thermal Characteristics

Symbol	Conditions	Values	Units
R <sub>th(j-c)</sub>	Per diode	0.6	°C/W
R <sub>th(j-c)</sub>	Per Module	0.3	°C/W
R <sub>th(c-s)</sub>	Module	0.1	°C/W

### Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V <sub>FM</sub>	T=25°C I <sub>F</sub> =100A	—	1.25	1.40	V
I <sub>RD</sub>	T <sub>vj</sub> =150°C V <sub>RD</sub> =V <sub>RRM</sub>	—	—	5	mA



## Performance Curves

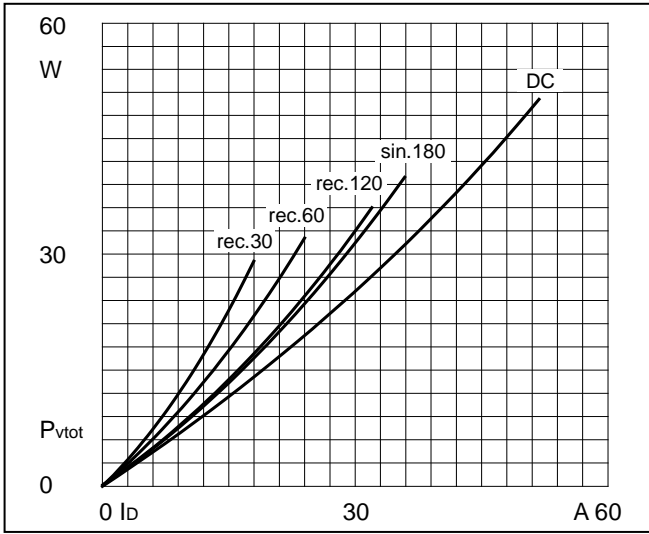


Fig1. Power dissipation

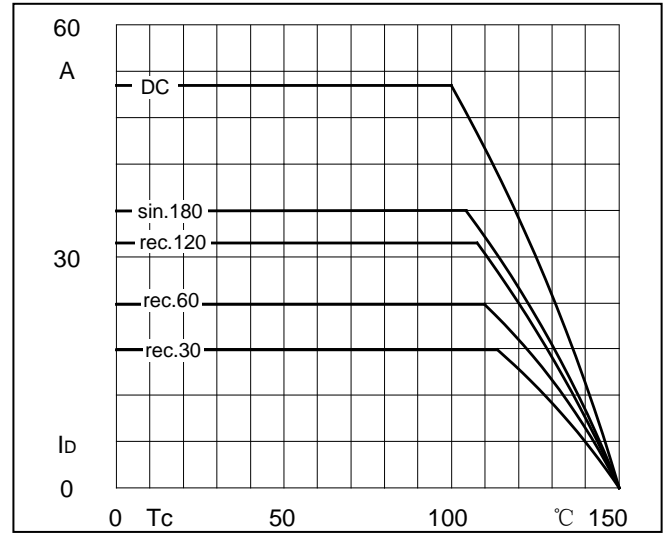


Fig2. Forward Current Derating Curve

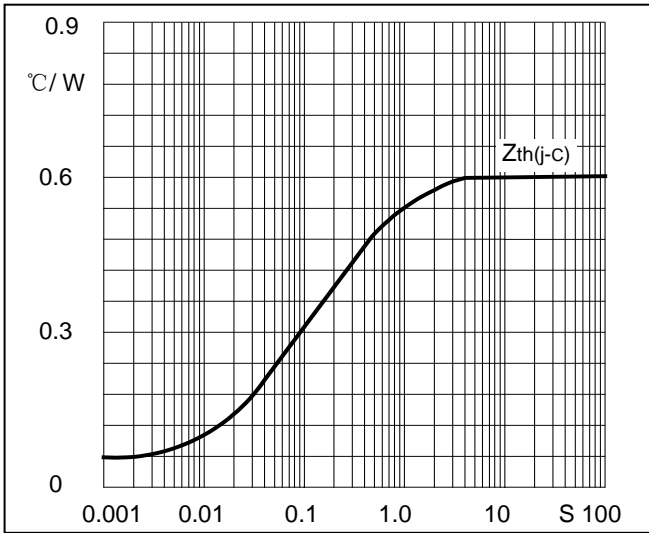


Fig3. Transient thermal impedance

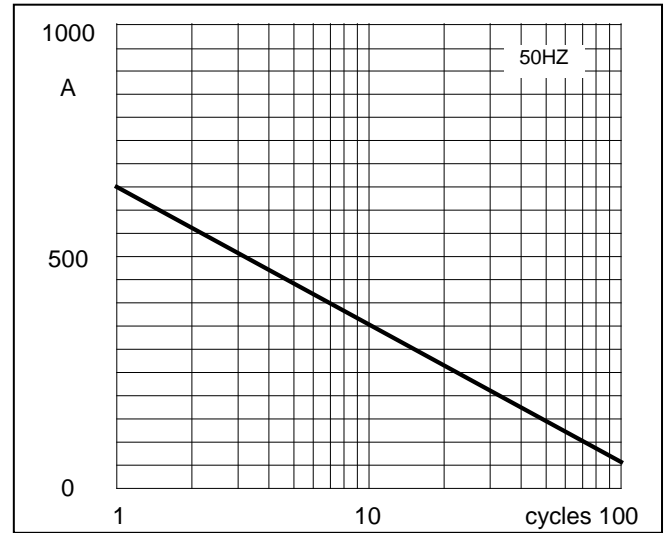


Fig4. Max Non-Repetitive Forward Surge Current

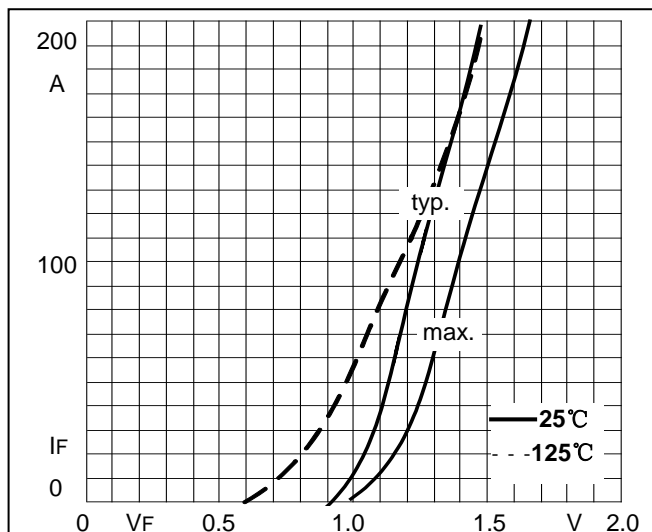
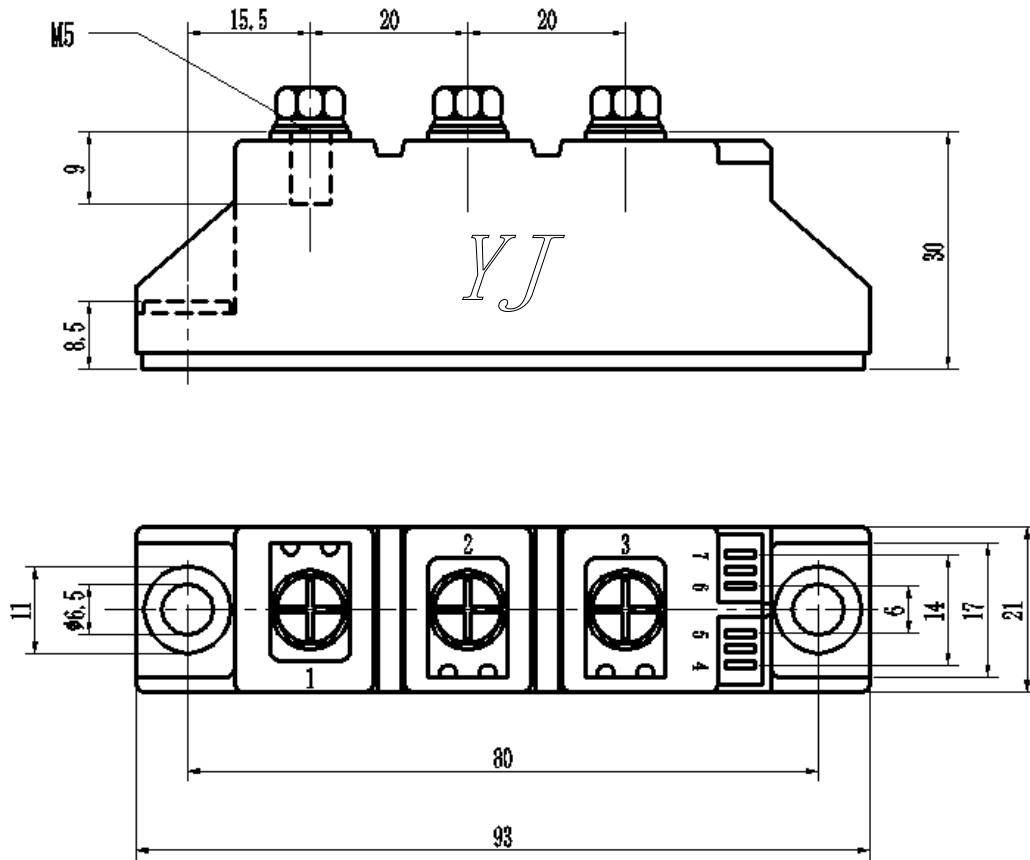


Fig5. Forward Characteristics

## Package Outline Information

CASE: D1



Dimensions in mm