

Glass Passivated Rectifier Diode Modules

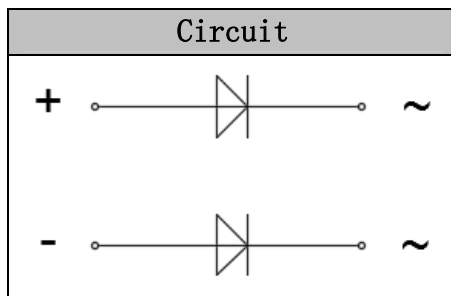
VRRM 800 to 1800V
ID 60A

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



Module Type

TYPE	VRRM	VRSM
MD60DU08M7	800V	900V
MD60DU12M7	1200V	1300V
MD60DU16M7	1600V	1700V
MD60DU18M7	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
ID	Single phase ,half wave 180° conduction Tc=100°C	60	A
IFSM	t=10mS Tvj =45°C	1150	A
i ² t	t=10mS Tvj =45°C	6600	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min	3000	V
T _{vj}		-40 to +150	°C
T _{stg}		-40 to +125	°C
Mt	To terminals(M5)	3±15%	Nm
Ms	To heatsink(M5)	5±15%	Nm
Weight	Module (Approximately)	130	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	1.1	°C/W
R _{th(c-s)}	Module (Approximately)	0.07	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C IF =60A		0.95	1.05	V
	T=25°C IF =200A	—	1.3	1.45	V
I _{RD}	T _{vj} =25°C VRD=VRRM	—	—	0.03	mA
	T _{vj} =150°C VRD=VRRM			5	mA

Performance Curves

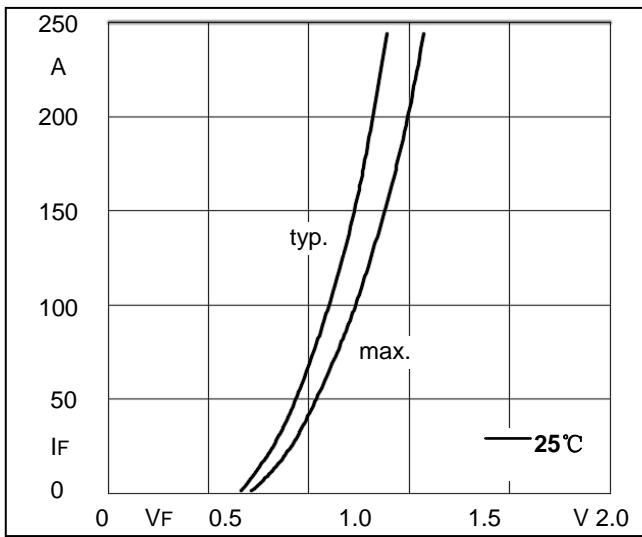


Fig1. Forward Characteristics

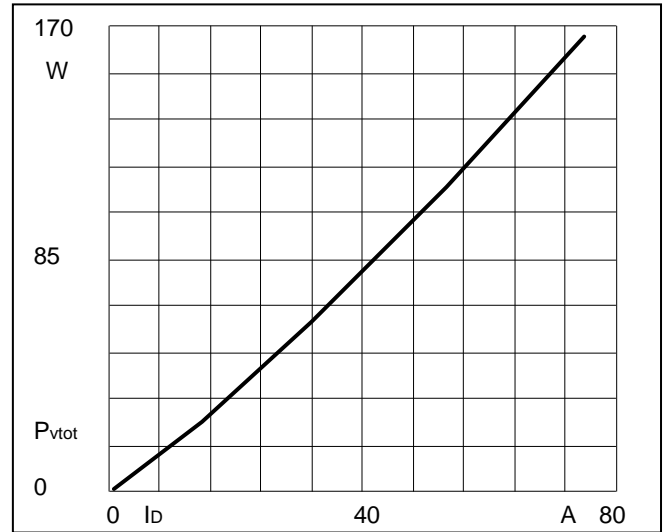


Fig2. Power dissipation

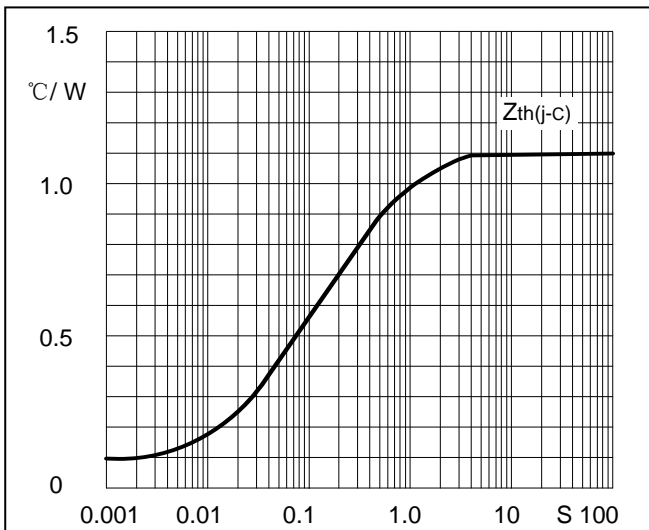


Fig3. Transient thermal impedance

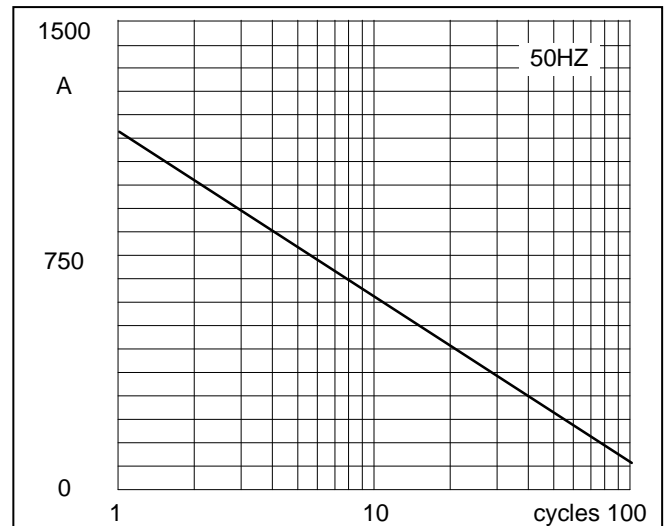


Fig4. Max Non-Repetitive Forward Surge Current

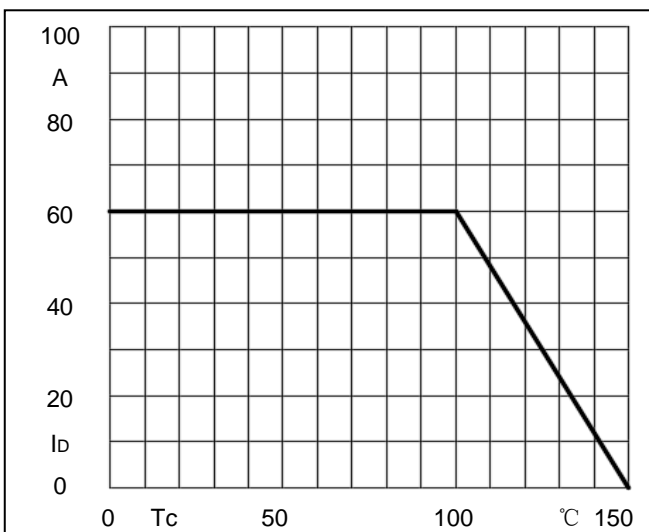
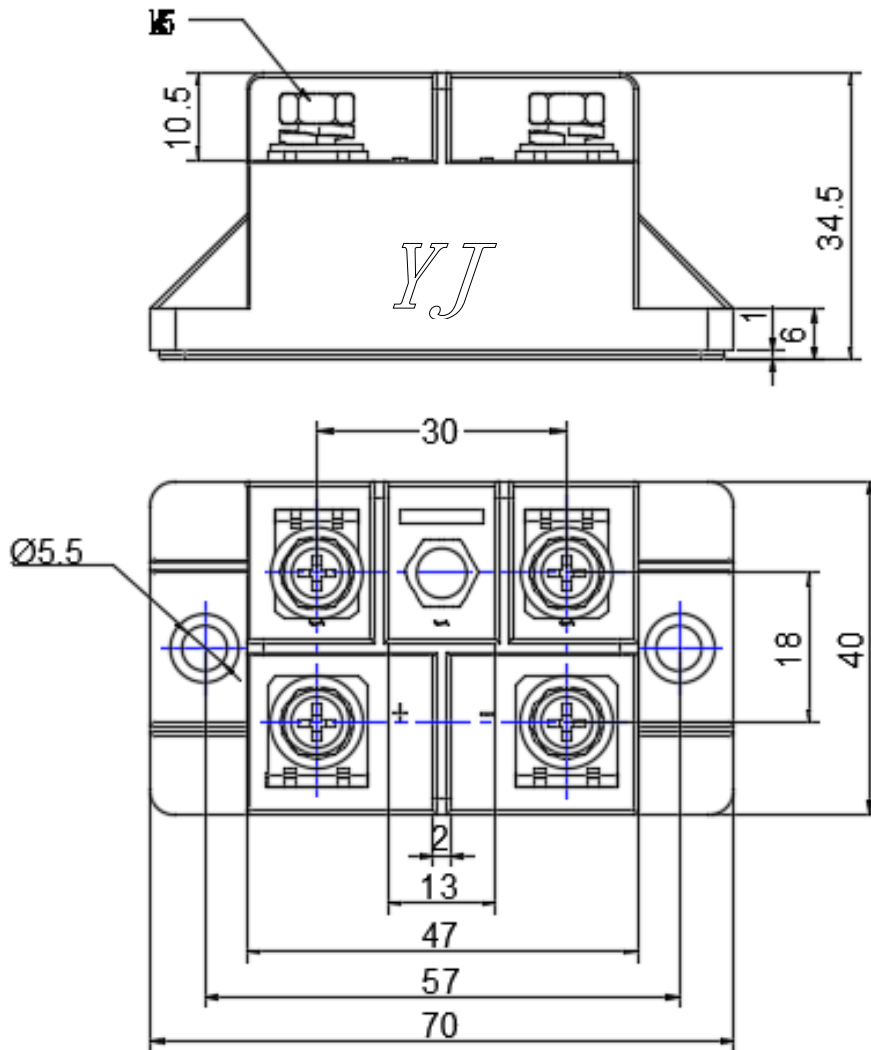


Fig5. Forward Current Derating Curve

Package Outline Information

CASE: M7



Dimensions in mm