



Glass Passivated Rectifier Diode Modules

V_{RRM} 800 to 1800V
I_{FAV} 50 A

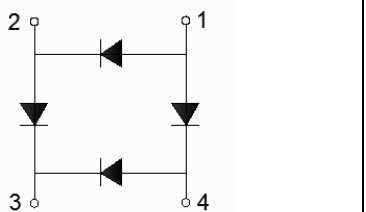
Applications

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

Circuit



Module Type

TYPE	V _{RRM}	V _{RSM}
MD50H08FJ	800V	900V
MD50H12FJ	1200V	1300V
MD50H16FJ	1600V	1700V
MD50H18FJ	1800V	1900V

Maximum Ratings

Symbol	Conditions	Values	Units
I _{FAV}	Single phase ,half wave 180° conduction T _c =104°C	50	A
I _{FSM}	t=10mS T _{vj} =45°C	650	A
i ² t	t=10mS T _{vj} =45°C	2100	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(M4)	1±15%	Nm
Ms	To heat sink(M4)	1.2±15%	Nm
Weight	Module (Approximately)	27	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	0.6	°C/W
R _{th(c-s)}	Module	0.1	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C I _F =100A	—	1.25	1.40	V
I _{RD}	T _{vj} =150°C V _{RD} =V _{RRM}	—	—	1	mA



Performance Curves

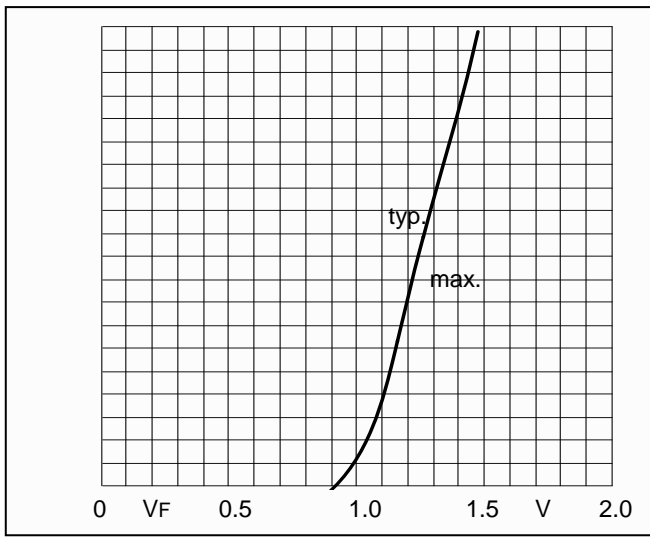


Fig1 Forward Characteristics

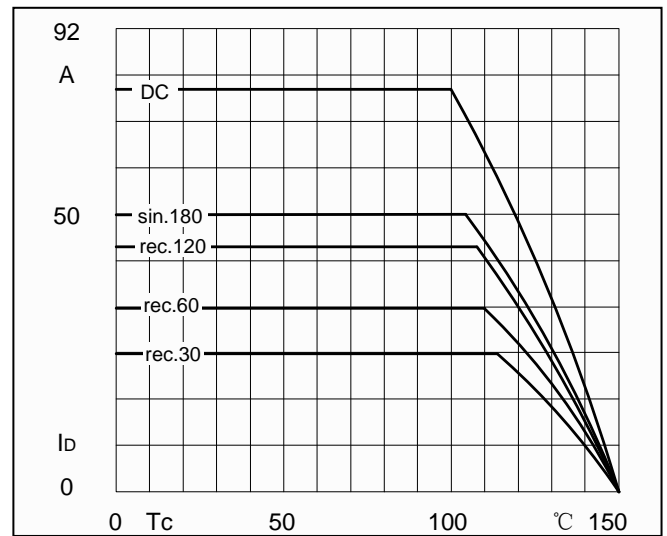


Fig2. Forward Current Derating Curve

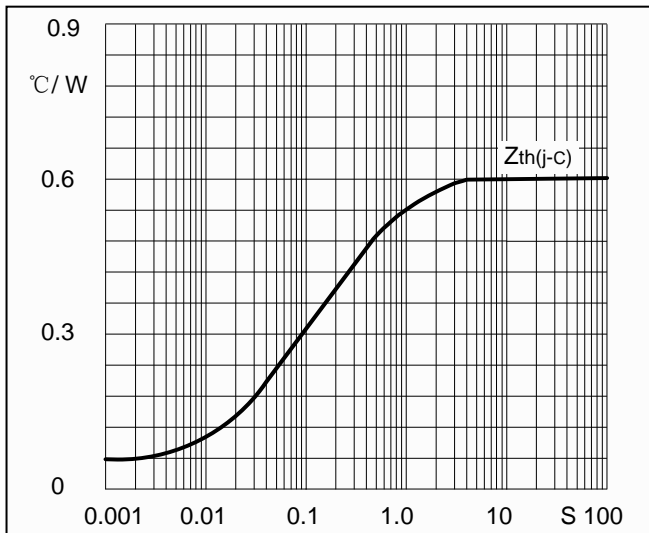


Fig3. Transient thermal impedance

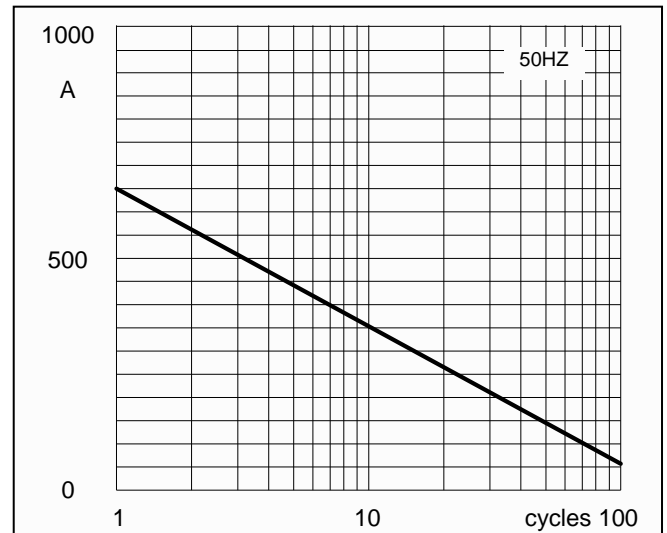
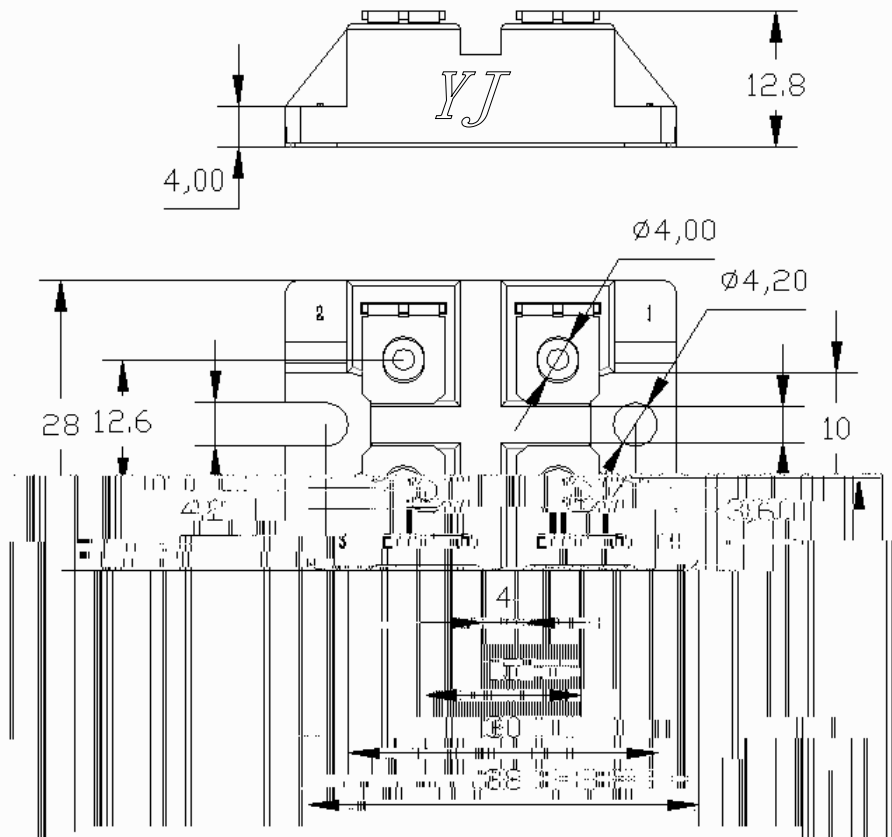


Fig4. Max Non-Repetitive Forward Surge Current

Package Outline Information

CASE:FJ



Dimensions in mm