



Glass Passivated Rectifier Diode Modules

VRRM 2000V
IFAV 165 Amp

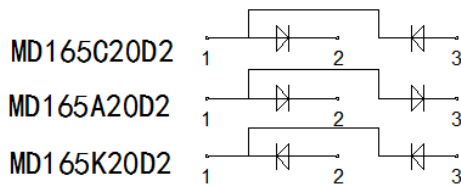
Applications

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

Features

- Blocking voltage:2000V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip
- UL recognized applied for file no. E360040

Circuit



Module Type

TYPE			VRRM	VRSM
MD165C20D2	MD165A20D2	MD165K20D2	2000V	2100V

Maximum Ratings

Symbol	Conditions	Values	Units
IFAV	Single phase ,half wave 180° conduction Tc=101°C	165	A
IFSM	t=10mS Tvj =45°C	6000	A
i ² t	t=10mS Tvj =45°C	180000	A ² s
V _{isol}	a.c.50HZ;r.m.s.;1min	3000	V
Tvj		-40 to +150	°C
T _{stg}		-40 to +125	°C
Mt	To terminals(M6)	5±15%	Nm
Ms	To heatsink(M6)	5±15%	Nm
Weight	Module (Approximately)	160	g

Thermal Characteristics

Symbol	Conditions	Values	Units
R _{th(j-c)}	Per diode	0.21	°C/W
R _{th(c-s)}	Module	0.05	°C/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V _{FM}	T=25°C IF =300A	—	1.20	1.40	V
I _{RD}	Tvj=150°C VRD=VRRM	—	—	9	mA
r _f	T _J =25°C		1.25		mΩ
V _{f0}			0.82		V



Performance Curves

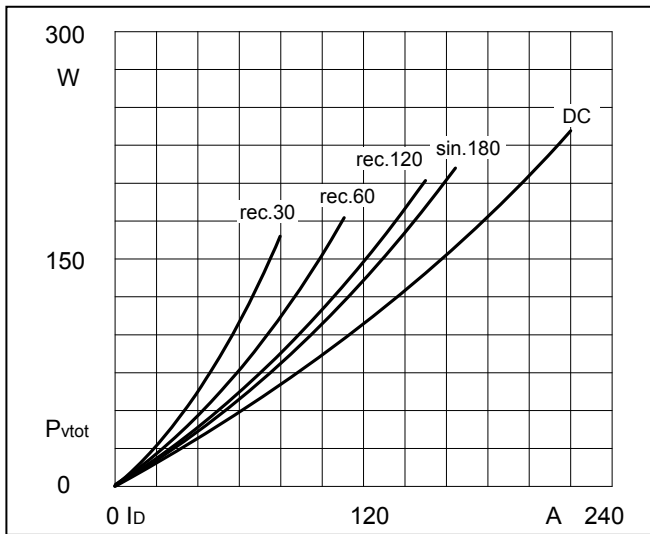


Fig1. Power dissipation

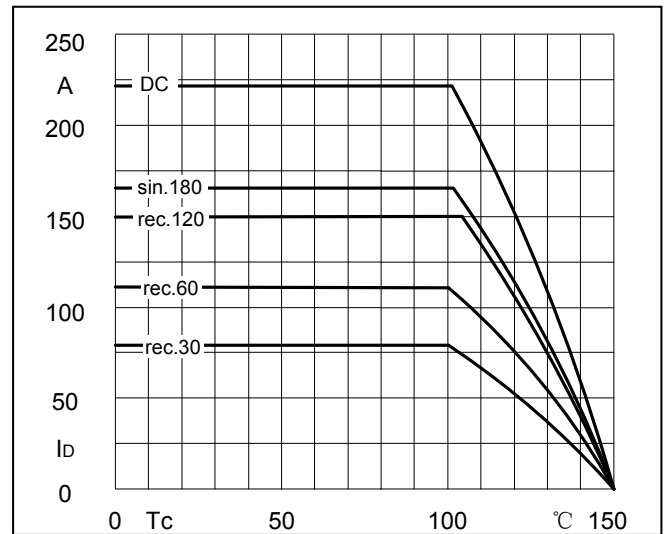


Fig2. Forward Current Derating Curve

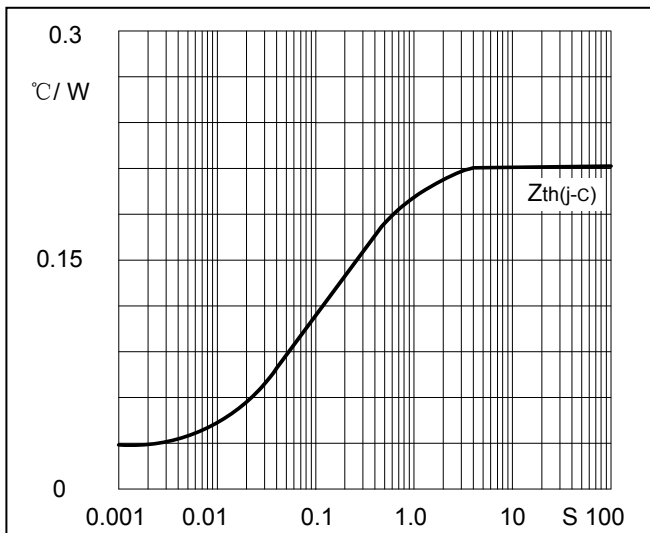


Fig3. Transient thermal impedance

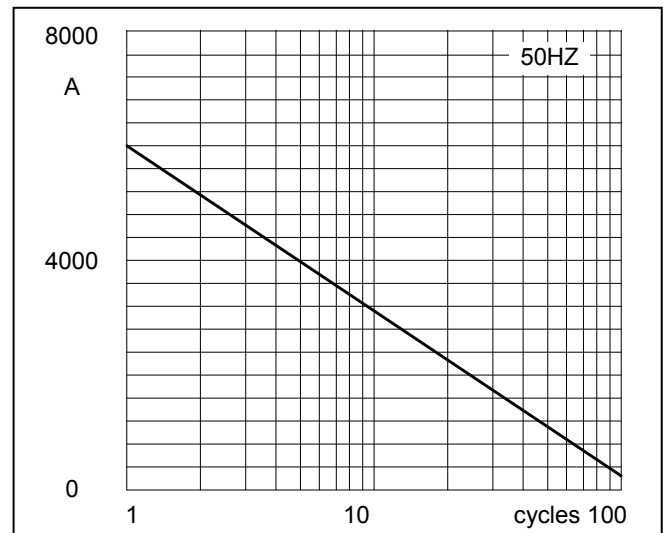


Fig4. Max Non-Repetitive Forward Surge Current

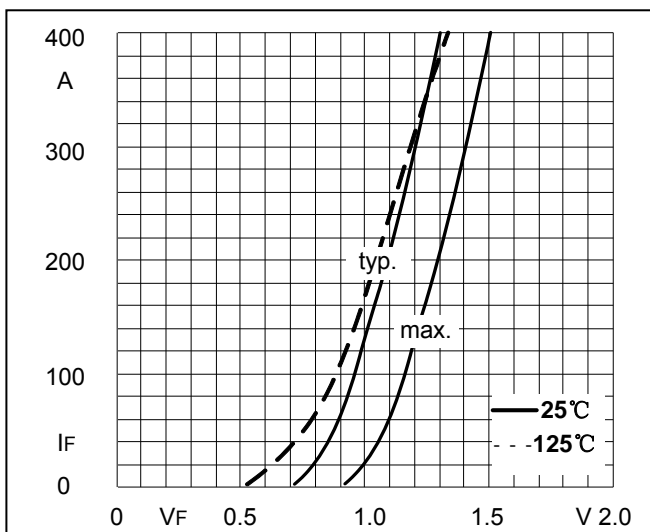
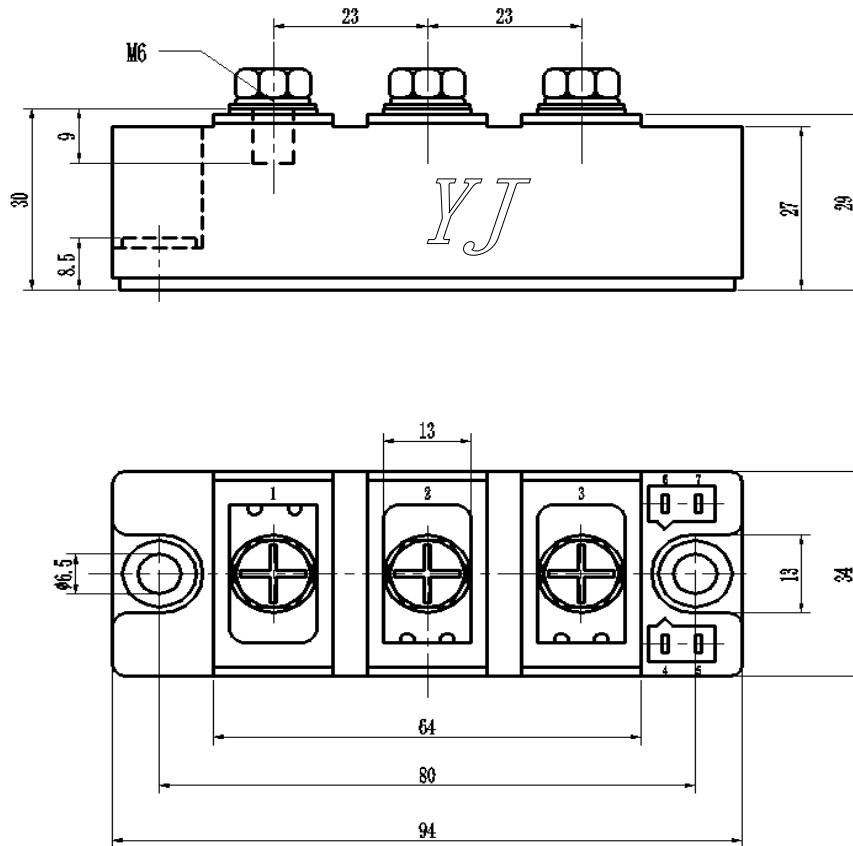


Fig5. Forward Characteristics



Package Outline Information

CASE: D2



Dimensions in mm