



Glass Passivated Three Phase Rectifier Bridge

P2D50S18

VOLTAGE RANGE 800 to 1800V
CURRENT 50 Ampere

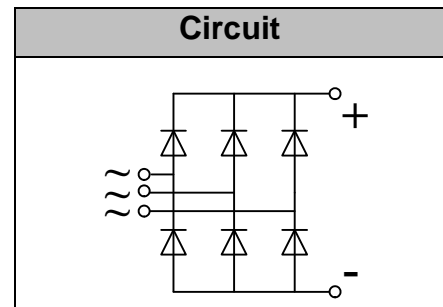
Applications

- Three phase rectifiers for power supplies
- Rectifiers for DC motor field supplies
- Battery charger rectifiers
- Input rectifiers for variable frequency drives



Features

- Three phase bridge rectifier
- Blocking voltage: 800 to 1800V
- Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- Glass passivated chip



Module Type

TYPE	VRRM	VRSM
P2D50S08	800V	900V
P2D50S12	1200V	1300V
P2D50S16	1600V	1700V
P2D50S18	1800V	1900V

Maximum Ratings

Symbol	Item	Conditions	Values	Units
ID	Output current (D.C)	Tc=110°C	50	A
IFSM	Forward surge current, max.	t=10mS Tvj =45°C	460	A
i ² t	Value for fusing		1050	A ² s
Visol	Isolation Breakdown Voltage(R.M.S)	a.c.50HZ;r.m.s.;1min	3000	V
Tvj	Operating Junction Temperature		-40 to +150	°C
Tstg	Storage Temperature		-40 to +150	°C
Mounting Torque	To terminals(M5)		3±15%	Nm
	To heatsink(M5)		5±15%	Nm
Weight	Approximate Weight	Module	145	g

Thermal Characteristics

Symbol	Item	Conditions	Values	Units
Rth(j-c)	Thermal Impedance, max.	Per Module	0.28	°C/W

Electrical Characteristics

Symbol	Item	Conditions	Values			Units
			Min.	Typ.	Max.	
VFM	Forward Voltage Drop, max.	T=25°C IF =150A		1.45	1.80	V
IRRM	Repetitive Peak Reverse Current, max.	Tvj =25°C VRD=VRRM			0.3	mA
		Tvj =150°C VRD=VRRM			5	mA



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Performance Curves

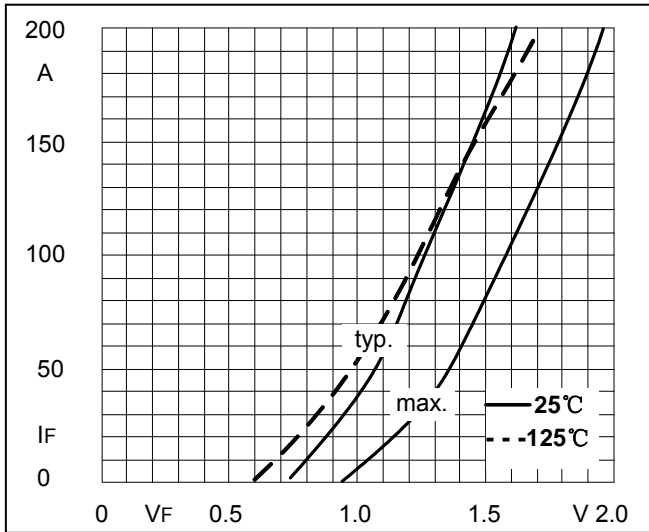


Fig1. Forward Characteristics

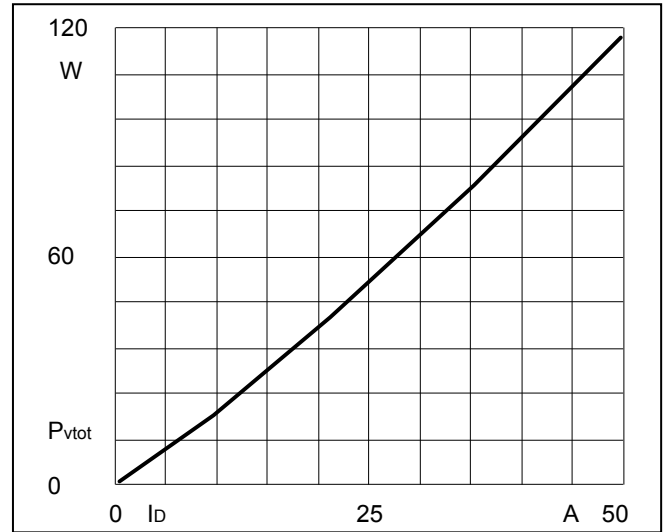


Fig2. Power dissipation

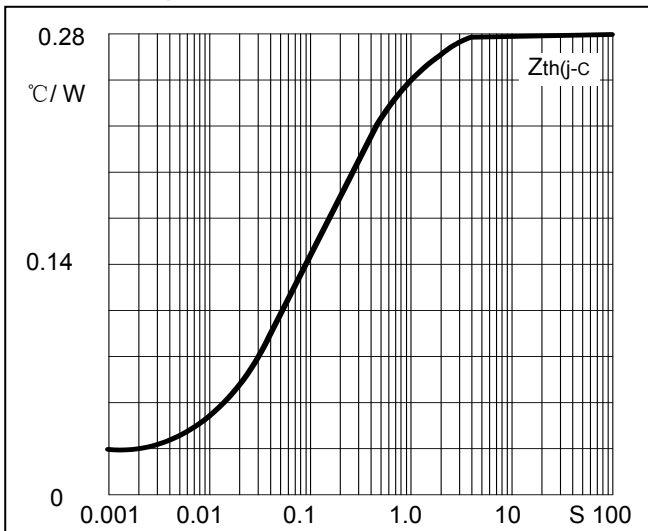


Fig3. Transient thermal impedance

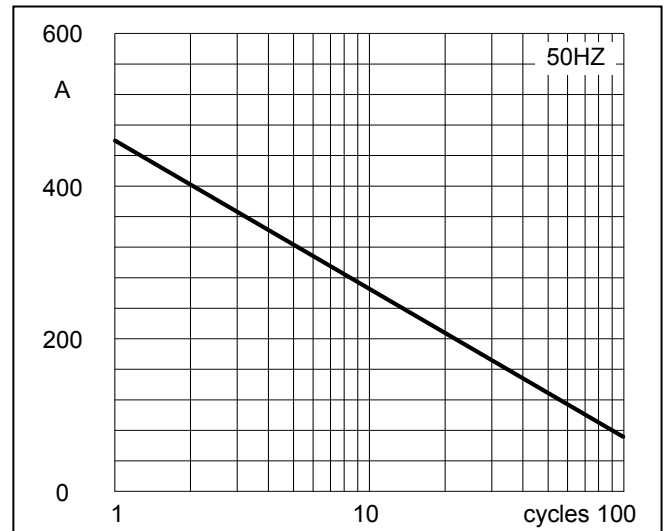


Fig4. Max Non-Repetitive Forward Surge Current

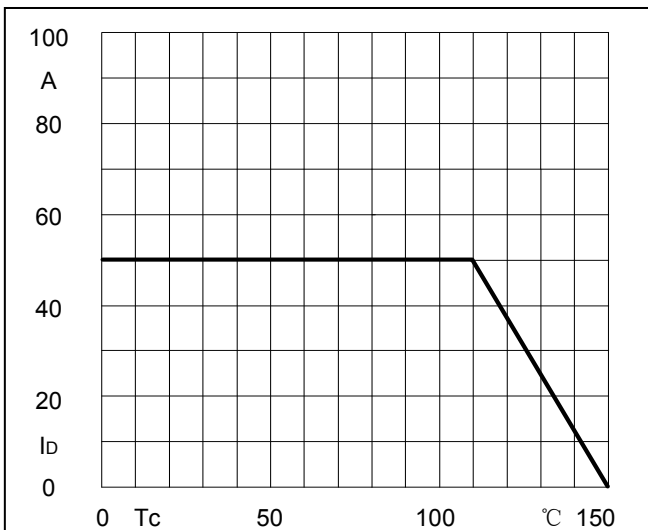


Fig5. Forward Current Derating Curve



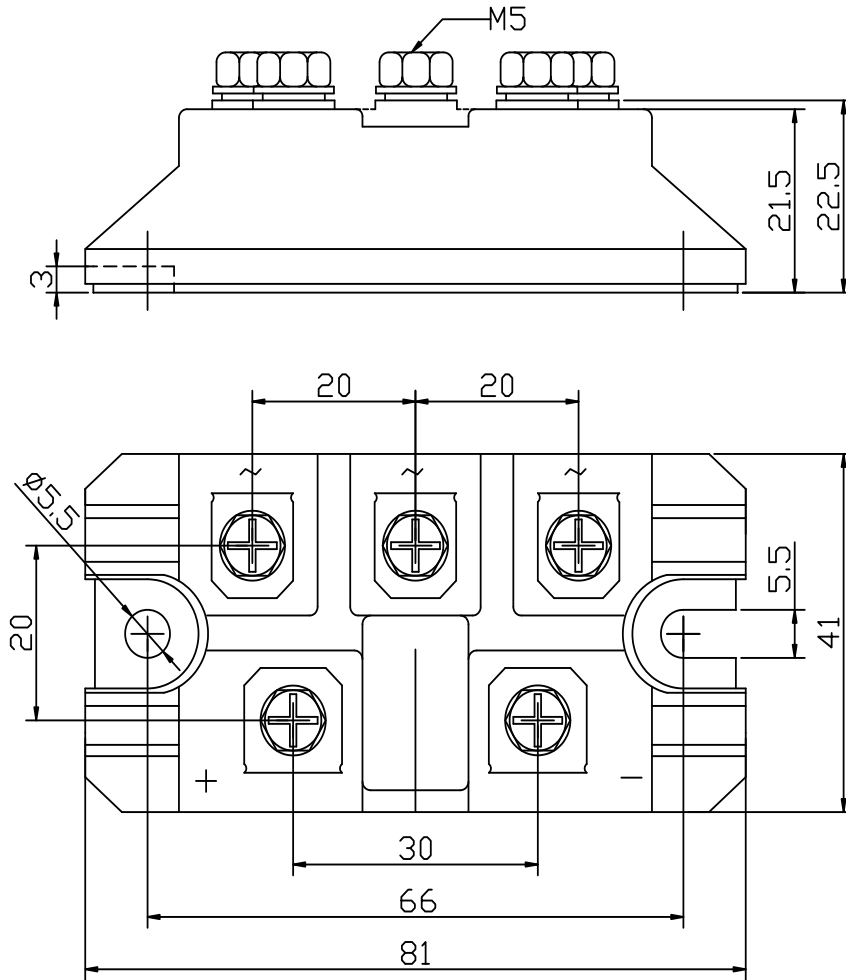
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Package Outline Information

CASE: P2



Dimensions in mm