

Glass Passivated ThreePhase Rectifier Bridge

Reverse Voltage : 1200 V - 1800 V

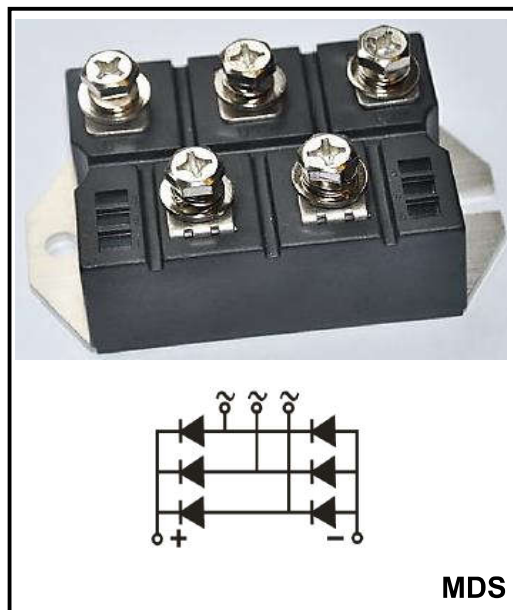
Forward Current : 250 A

Features

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

Mechanical Data

- ◆ Three phase bridge rectifier
- ◆ Blocking voltage:1200 to 1800V
- ◆ Heat transfer through aluminum oxide DBC ceramic isolated metal baseplate
- ◆ Glass passivated chip



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Module Type

Parameter	Symbols	MDS250-12	MDS250-16	MDS250-18	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1200V	1600V	1800V	V
Maximum RMS voltage	V_{RMS}	1300V	1700V	1900V	V
Characteristics	Symbol	Values			Units
Three phase, full wave $T_c=100^\circ\text{C}$	I_D	250			A
$t=10\text{mS}$ $T_{vj}=45^\circ\text{C}$	I_{FSM}	2800			A
$t=10\text{mS}$ $T_{vj}=45^\circ\text{C}$	I^2t	39200			A^2s
a.c.50HZ;r.m.s.;1min	Visol	3000			V
	T_{vj}	-40 to +150			$^\circ\text{C}$
	T_{stg}	-40 to +125			$^\circ\text{C}$
To terminals(M6)	M_t	$5\pm 15\%$			Nm
To heatsink(M6)	M_s	$5\pm 15\%$			Nm
Module (Approximately)	Weight	230			g
Module	$R_{th(j-c)}$	0.09			$^\circ\text{C/W}$
Module	$R_{th(c-s)}$	0.025			$^\circ\text{C/W}$
$T=25^\circ\text{C}$ $I_F=250\text{A}$	V_{FM}	1.45(TYP.)	1.70(MAX.)		V
$T_{vj}=25^\circ\text{C}$ $V_{RD}=V_{RRM}$	I_{RD}	20(MAX.)			μA
$T_{vj}=150^\circ\text{C}$ $V_{RD}=V_{RRM}$		10(MAX.)			mA

Rating and Characteristic Curves

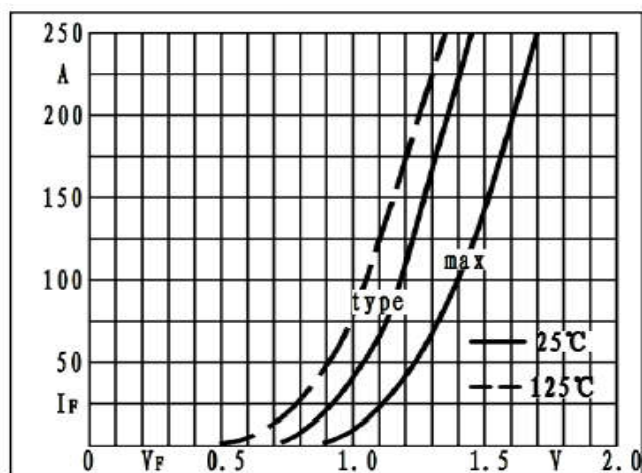


Fig1. Forward characteristics

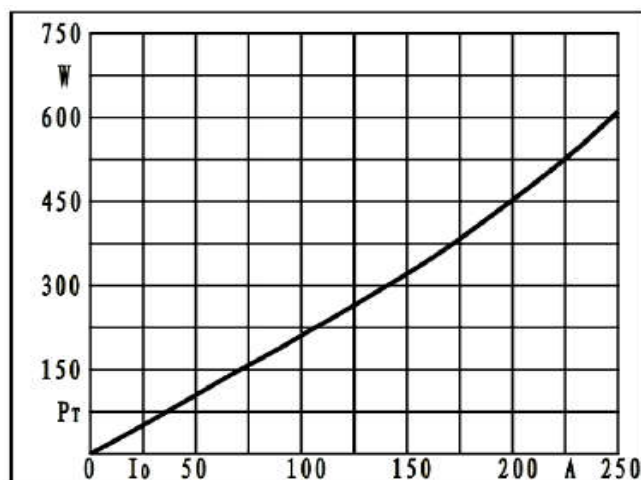


Fig2. Power dissipation

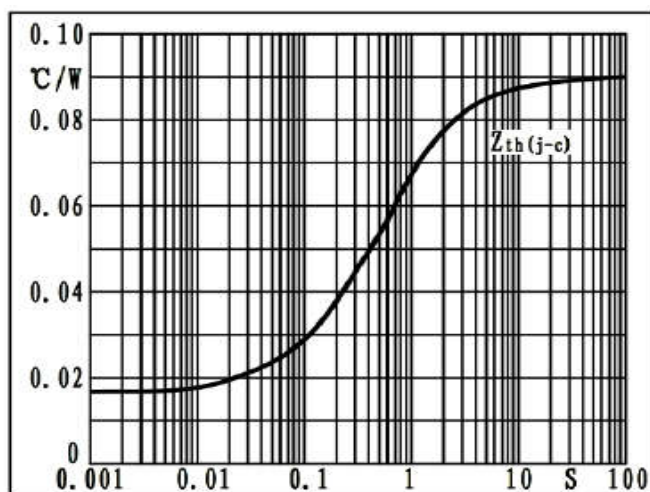


Fig3. Transient thermal impedance

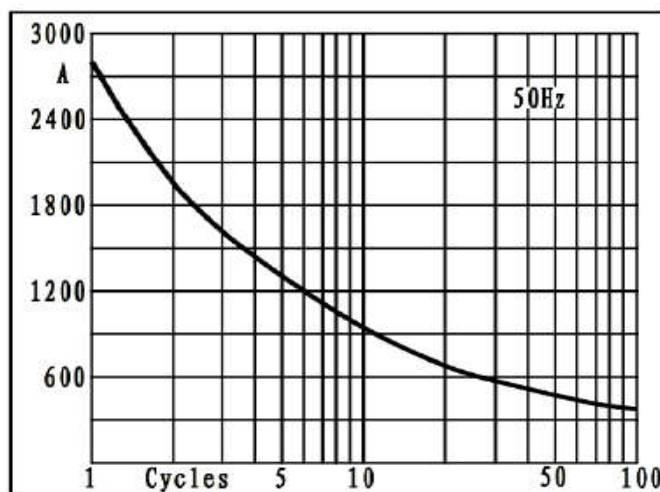


Fig4. Max non-repetitive forward surge current

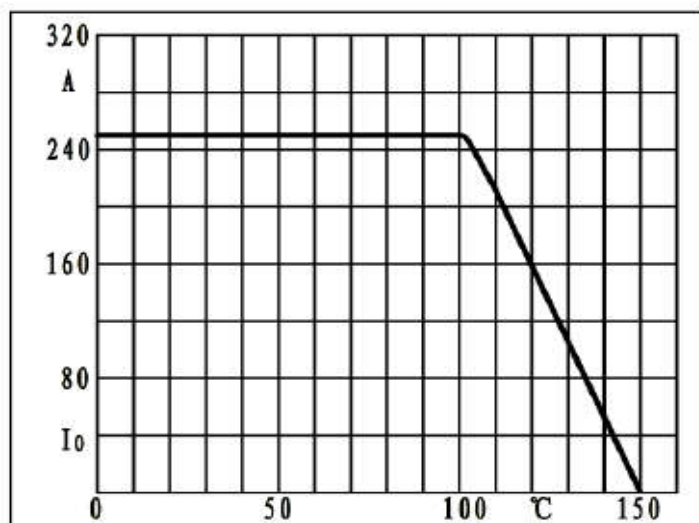


Fig5. Forward current derating curve

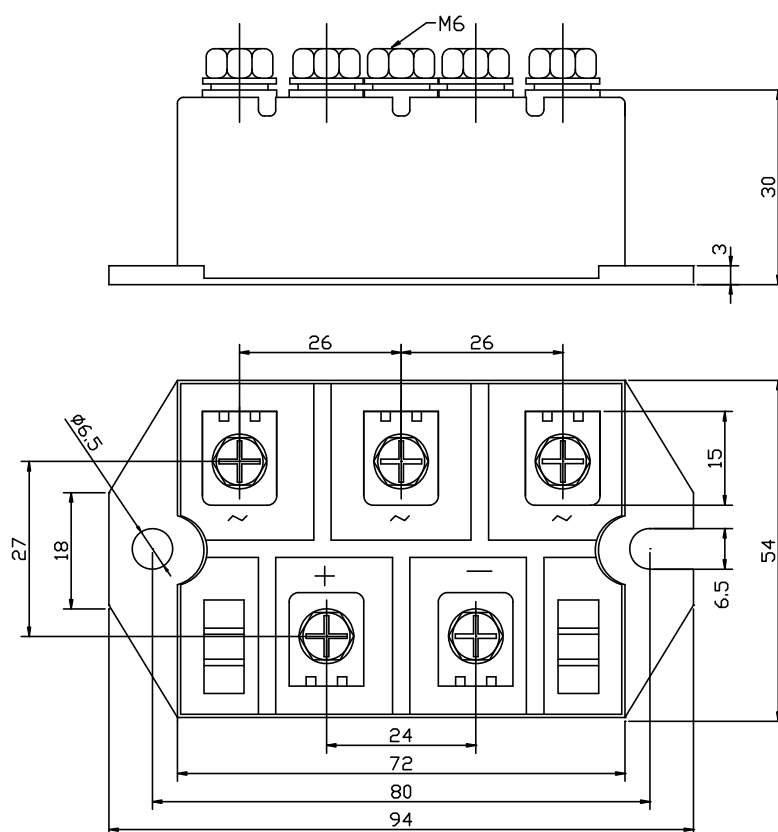
Ordering information

Model name	Package	Unit Weight	Base Quantity
MDSXXX-XX	MDS	-	6pcs/ Box

Package Dimensions

MDS

unit: Millimeter



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