

Rectifier module

$V_{RRM} = 800V$ to $1600V$

$I_{(AV)} = 500A$

Features

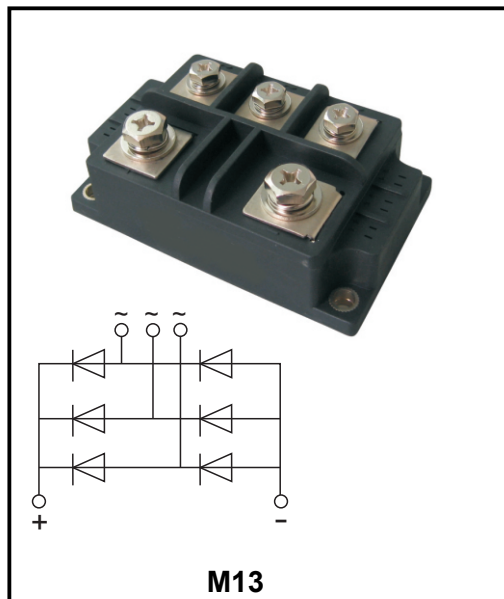
- ◆ Low reverse leakage current
- ◆ High surge current capability
- ◆ Compliant to RoHS directive 2011/65/EU

Applications

- ◆ Industrial power supply
- ◆ DC supply for PWM inverter
- ◆ Supplies for DC power equipment

Mechanical Data

- ◆ Case : M13
- ◆ Polarity: Polarity symbols being marked on body
- ◆ Mounting torque: 22.0kgf.cm max
- ◆ Weight: About 1000 grams



Maximum Ratings @ $T_a = 25^{\circ}C$ unless otherwise noted

Parameter	Symbols	MDS500-08	MDS500-10	MDS500-12	MDS500-14	MDS500-16	Units
Maximum recurrent peak reverse voltage	V_{RRM}	800	1000	1200	1400	1600	V
Average rectified output current with heatsink, $T_c = 100^{\circ}C$	$I_{(AV)}$	500					A
Peak surge forward current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	5000					A
Rating for fusing, $1ms < t < 8.3ms$, $T_j = 25^{\circ}C$, Rating of per diode	I^2t	55000					A ² S
Junction temperature	T_j	$-40 \sim +150$					$^{\circ}C$
Storage temperature	T_{STG}	$-40 \sim +125$					$^{\circ}C$
Dielectric, strength terminals to case AC 1 minute	V_{dis}	2.5					KV
Peak Forward Voltage $I_F = 500A$	V_F	1.2					V
Peak Reverse Current $V_R = V_{RRM}$, Pulse measurement Rating of per diode	$T_j = 25^{\circ}C$	0.5					mA
	$T_j = 125^{\circ}C$						
Junction to case thermal resistance, with heatsink	$R_{\theta JC}$	0.18					$^{\circ}C/W$

Characteristic Curve

FIG1.Derating Curve For Output Rectified Current

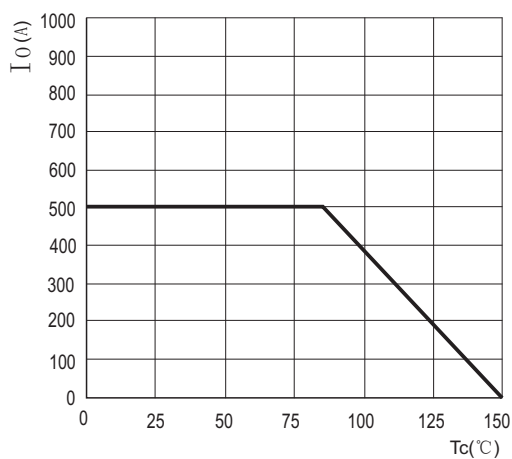


FIG2 .Maximum Non-Repetitive Peak Forward Surge Current Per Bridge Element

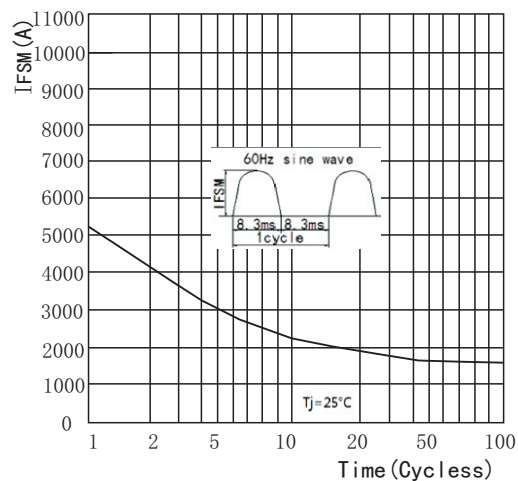


FIG3.Typical Reverse Characteristics Per Bridge Element

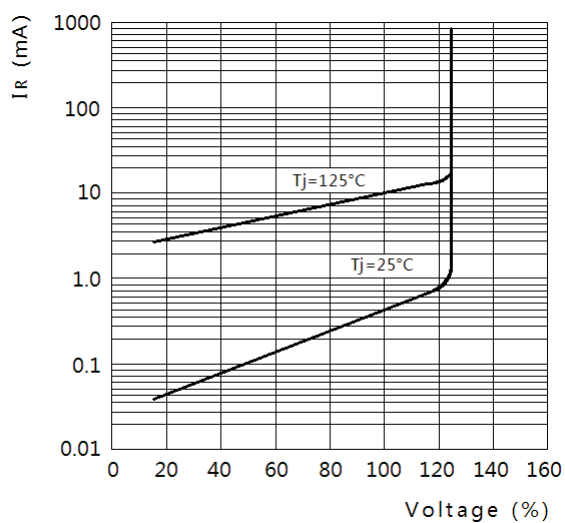
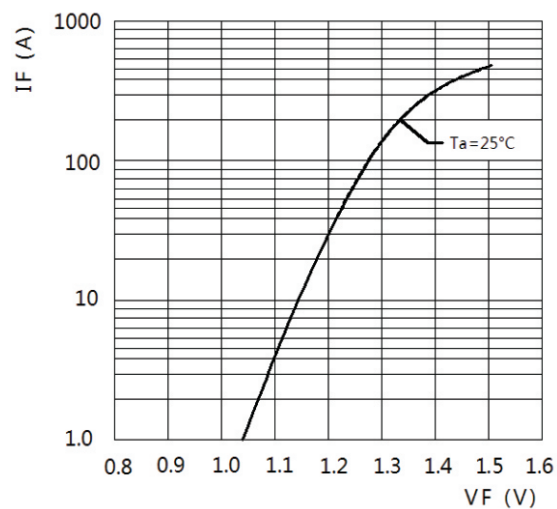
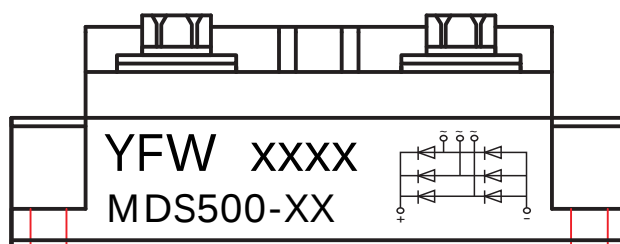


FIG4.Typical Forward Characteristics Per Bridge Element



Marking Diagram



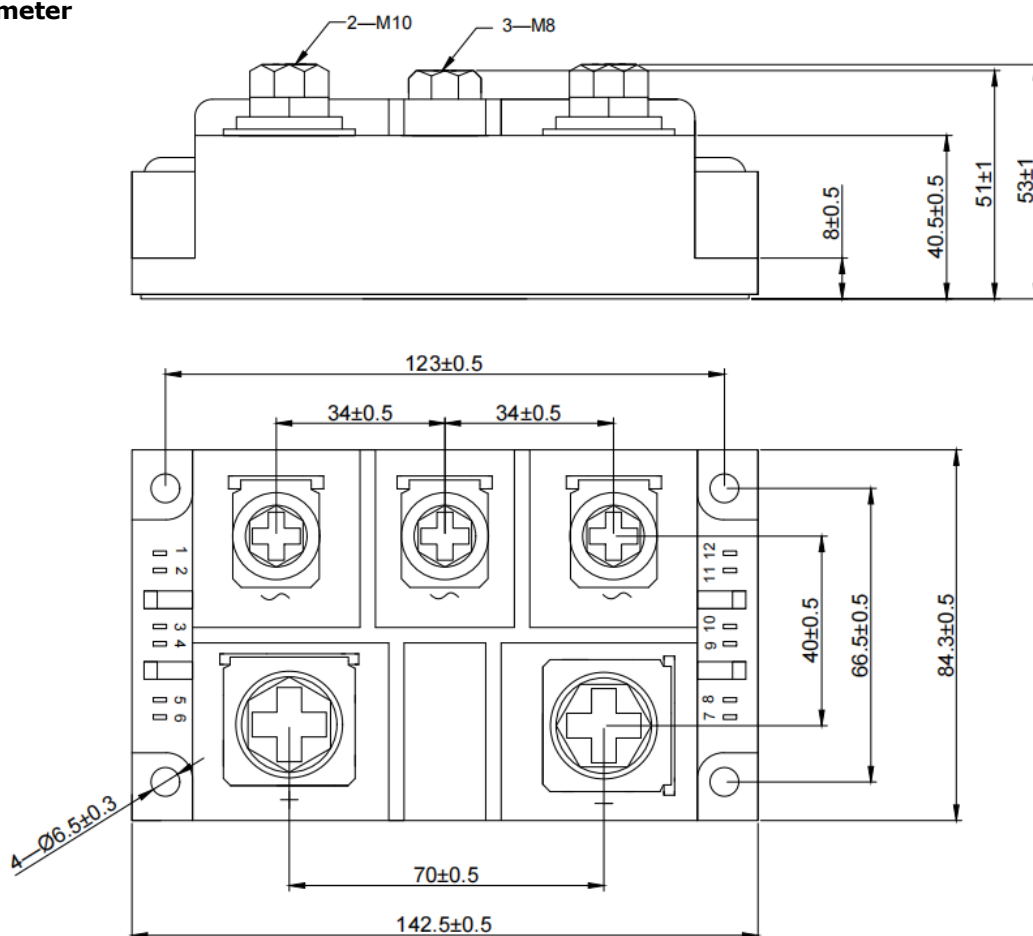
Ordering information

Model name	Package	Unit Weight	Base Quantity
MDS500-XX	M13	-	1pcs/ Box

Package Dimensions

M13

unit: Millimeter



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