

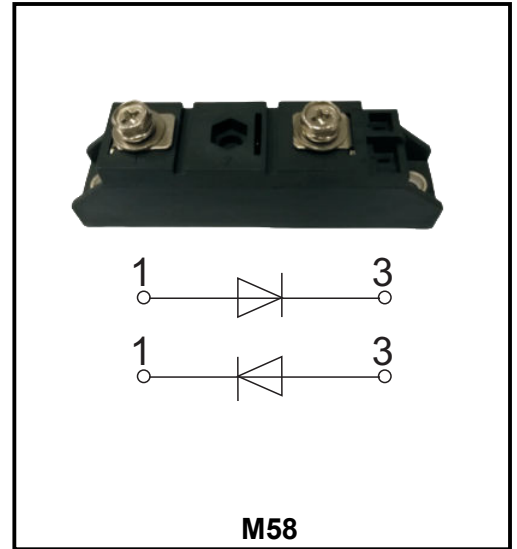
**Rectifier module**
**Reverse Voltage - 800V to 1600V**
**Forward Current - 50A**

### 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



### Maximum Ratings @ Ta = 25°C unless otherwise noted

PARAMETER	Symbols	MD50-08	MD50-10	MD50-12	MD50-14	MD50-16	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	800	1000	1200	1400	1600	V
Maximum RMS voltage	$V_{RMS}$	560	700	840	980	1120	V
Maximum DC Blocking Voltage	$V_{DC}$	800	1000	1200	1400	1600	V
Average rectified output current with heatsink, $T_c=100^\circ\text{C}$	$I_{(AV)}$	50					A
Peak Forward Surge Current 8.3ms Single Half SineWave Superimposed on Rated Load	$I_{FSM}$	1400					A
Rating for fusing, $1\text{ms} < t < 8.3\text{ms}$ , $T_j=25^\circ\text{C}$ , Rating of per diode	$I^2t$	16263					A <sup>2</sup> S
Junction temperature	$T_j$	-40~+150					°C
Storage temperature	$T_{STG}$	-40~+125					°C
Dielectric strength terminals to case AC 1 minute	$V_{dis}$	2.5					KV
Forward Voltage Per Leg @ $I_F=50\text{A}$	$V_F$	1.3					V
Peak Reverse Current $T_j=25^\circ\text{C}$ $V_R=V_{RRM}$ Pulse measurement Rating of per diode $T_j=125^\circ\text{C}$	$I_R$	0.5 10					mA
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.18					°C/W

**Characteristic Curve**

FIG1. Derating Curve For Output Rectified Current

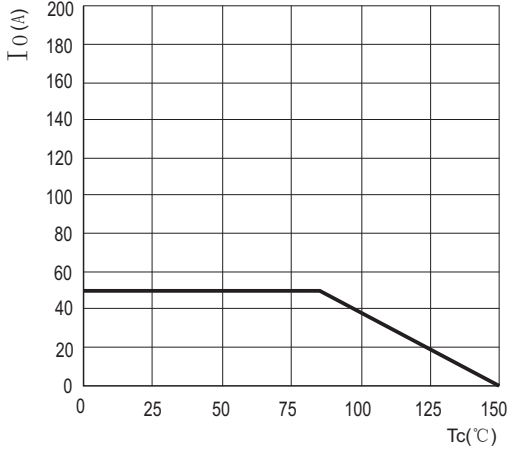


FIG2. Maximum Non-Repetitive Peak Forward Surge Current Per Bridge Element

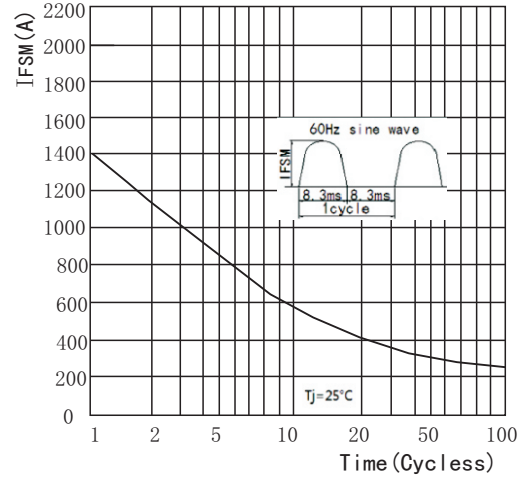


FIG3. Typical Reverse Characteristics Per Bridge Element

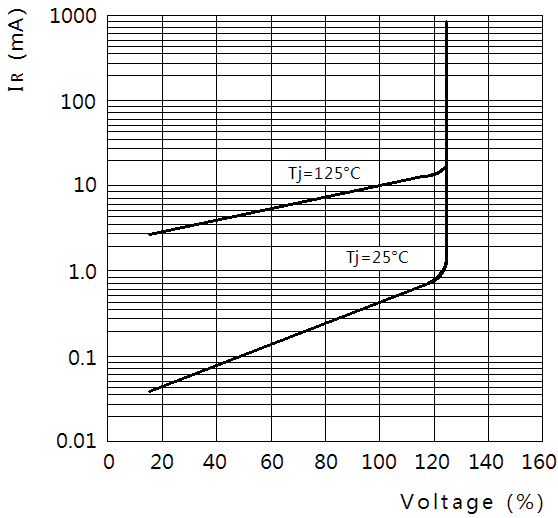
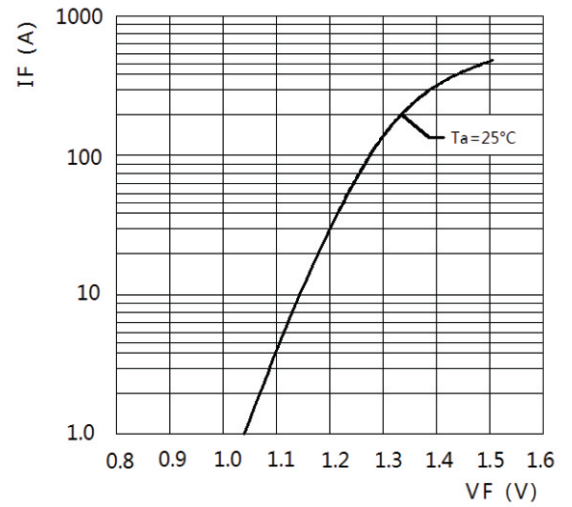


FIG4. Typical Forward Characteristics Per Bridge Element

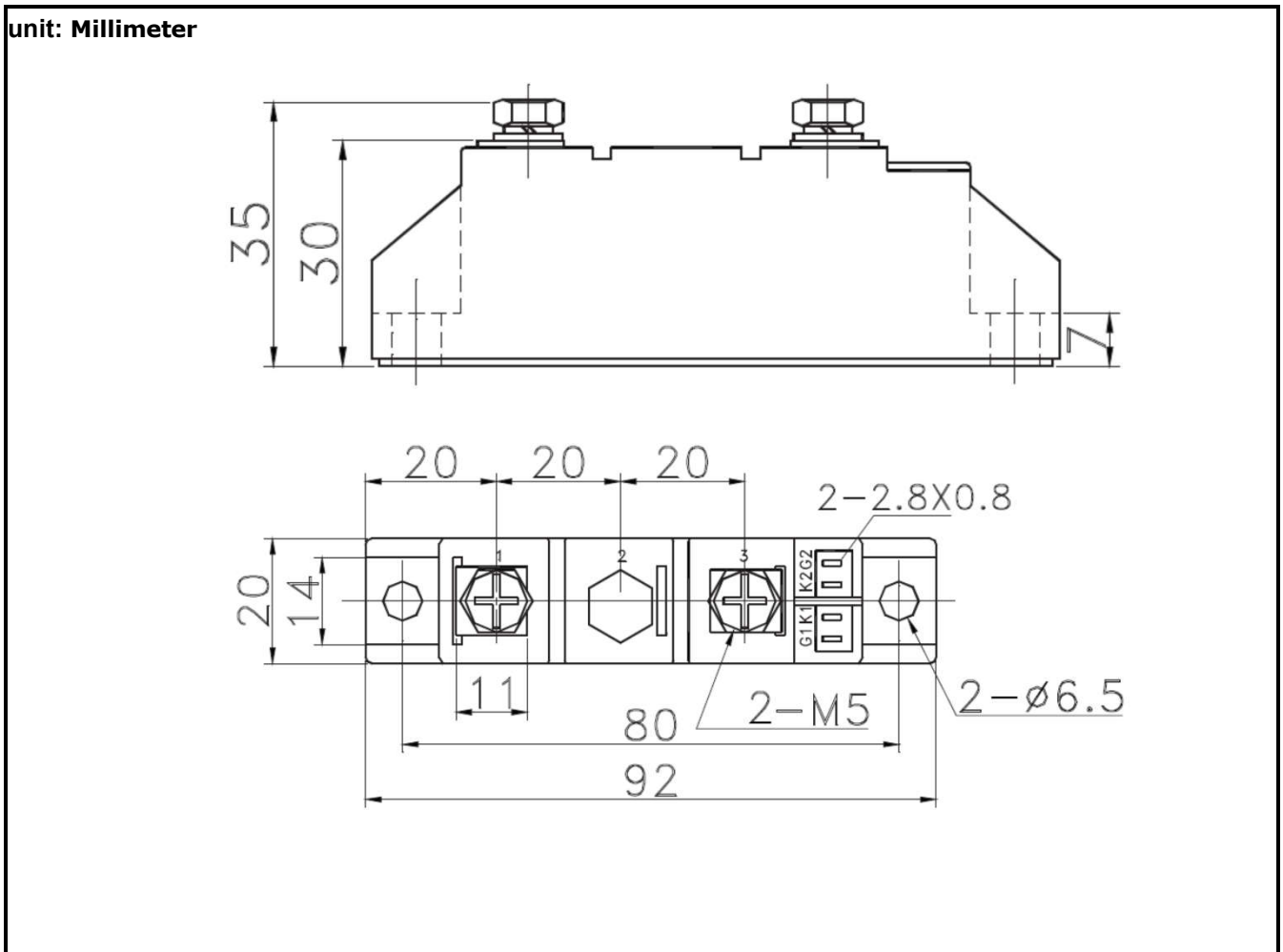


Ordering information

Model name	Package	Unit Weight	Base Quantity
MD50-XX	M58	-	10pcs/ Box

Package Dimensions

M58



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