



MASTER INSTRUMENT CORPORATION

THREE-PHASE BRIDGE RECTIFIER MT3508 THRU MT3516

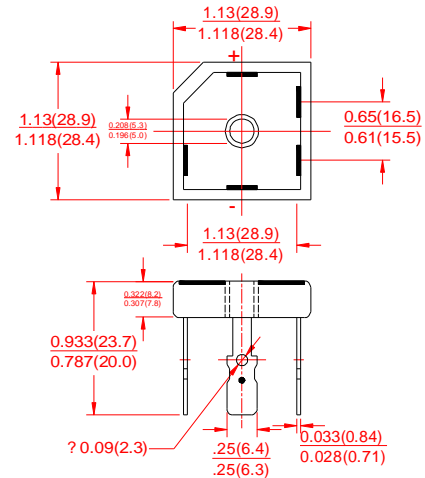
VOLTAGE RANGE 800 to 1600 Volts
CURRENT 35 Amperes

FEATURES

- 1 Integrally molding heatsinks provide very low thermal resistance for maximum heat dissipation
- 1 Surge overload rating to 400 amperes
- 1 High temperature soldering guaranteed:
260 °C /10 second, at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- 1 Case: Epoxy, molded plastic with heatsink integrally mounted in the bridge encapsulation.
- 1 Mounting Position: Bolt down on heatsink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency
- 1 Mounting Torque: 20 in. lbs max.
- 1 Weight: 0.706 ounce, 20 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	MT3508	MT3512	MT3516	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	800	1200	1600	Volts
Working Peak Reverse Voltage	V_{RWM}	800	1200	1600	Volts
Maximum DC Blocking Voltage	V_{DC}	800	1200	1600	Volts
Maximum Average Forward Rectified Output Current, at $T_C=55$ (Note 2)	$I_{(AV)}$		35		Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}		400		Amps
Rating for Fusing($t<8.3ms$)	I^2T		1030		A ² S
Maximum Instantaneous Forward Voltage drop per Bridge element at 17.5A	V_F		1.2		Volts
Maximum DC Reverse Current at rated DC blocking voltage per element $T_A=25$	I_R		5.0		μAmps
Isolation Voltage from case to leads	V_{ISO}		2500		V_{AC}
Typical Thermal Resistance per Element	$R_{\theta JC}$		2.0		/W
Operating Temperature Range	T_J		-55 to +150		
Storage Temperature Range	T_{STG}		-55 to +150		

NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on 11.8"×11.8"×0.6" thick (300×300×15mm) Copper plate.



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RATINGS AND CHARACTERISTIC CURVES MT3508 THRU MT3516

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

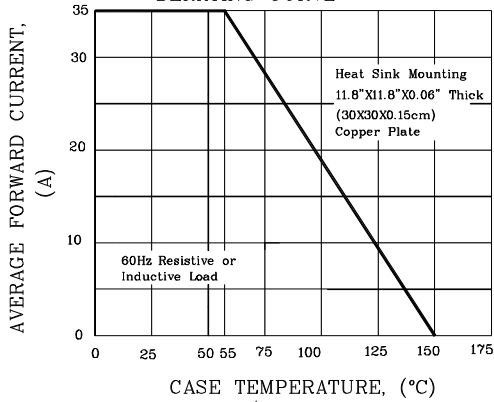


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

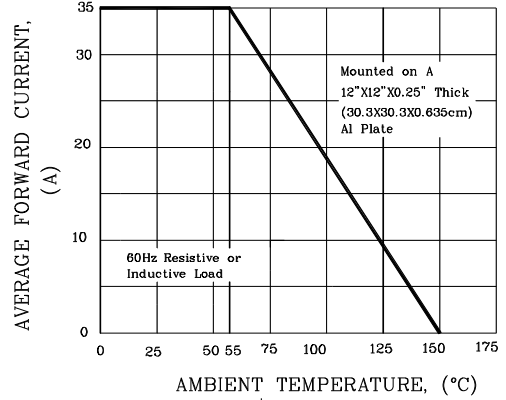


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

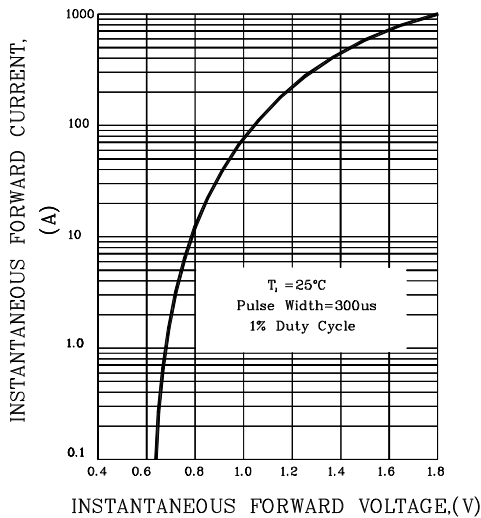


FIG.4-MAXIMUM POWER DISSIPATION

