



MASTER INSTRUMENT CORPORATION

THREE-PHASE BRIDGE RECTIFIER MT3508 THRU MT3516

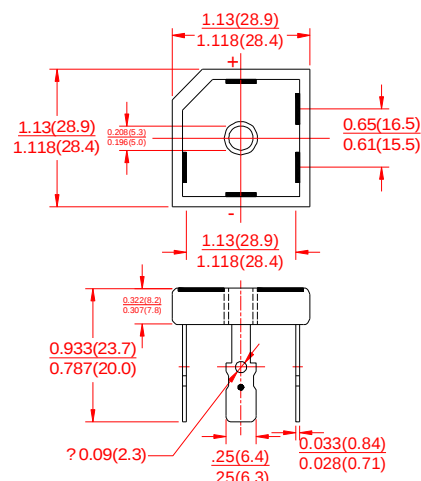
VOLTAGE RANGE 800 to 1600 Volts
CURRENT 35 Amperes

FEATURES

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

MECHANICAL DATA

- Case: Epoxy, molded plastic with heatsink integrally mounted in the bridge encapsulation.
- Mounting Position: Bolt down on heatsink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency
- Mounting Torque: 20 in. lbs max.
- 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 $T_C=55^{\circ}\text{C}$ (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 ($t < 8.3\text{ms}$)	I^2t	1030			A^2S
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 $T_A=25^{\circ}\text{C}$	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			$^{\circ}\text{C}/\text{W}$
Operating Temperature Range	T_J	-55 to +150			$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150			$^{\circ}\text{C}$

NOTES:

- Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
- 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

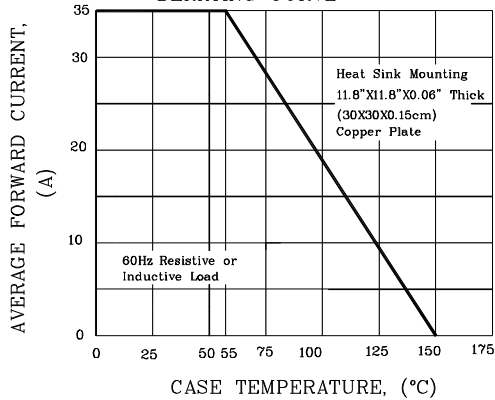


FIG.2-TYPICAL FORWARD CURRENT
DERATING CURVE

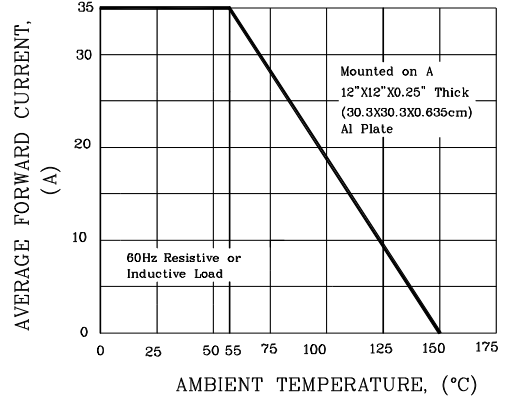


FIG.3-TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

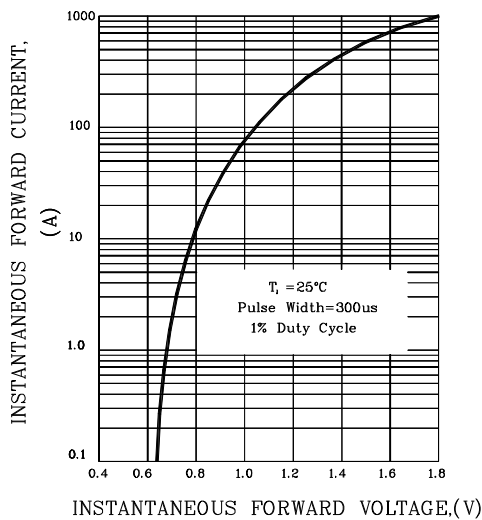


FIG.4-MAXIMUM POWER DISSIPATION

