



# CHENMKO ENTERPRISE CO.,LTD

## MINIATURE GLASS PASSIVATED

SINGLE-PHASE SURFACE MOUNT BRIDGE RECTIFIER  
VOLTAGE RANGE 200 - 600 Volts CURRENT 1.0 Ampere

**MB12LPT**

**THRU**

**MB16LPT**

Lead free devices

### FEATURES

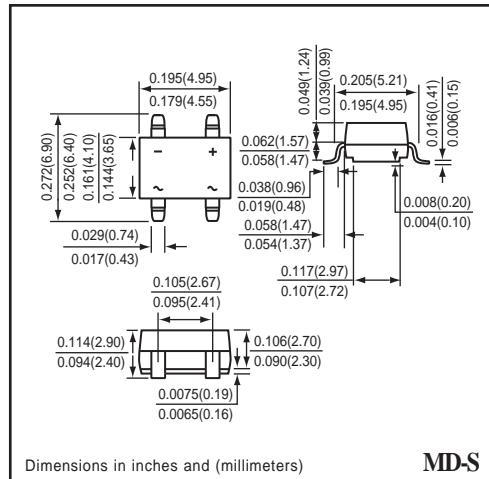
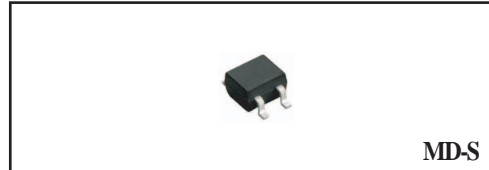
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Surge overload rating of 40 Amperes peak
- \* Glass passivated chip junction
- \* Ideal for printed circuit board
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC MD-S molded plastic  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Polarity symbols marked on body  
**Weight:** 0.008 ounces, 0.22 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



### MAXIMUM RATINGS ( At TA = 25°C unless otherwise noted )

RATINGS	SYMBOL	MB12LPT	MB14LPT	MB16LPT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	200	400	600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	140	280	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	400	600	Volts
Maximum Average Forward Rectified Current TA = 30°C On glass-epoxy P.C.B.(NOTE 1) On aluminum substrate (NOTE 2)	I <sub>O</sub>	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	40			Amps
Typical Junction Capacitance (Note 3)	C <sub>J</sub>	13			pF
Typical thermal resistance per leg	R <sub>θJA</sub>	60			°C / W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150			°C

### ELECTRICAL CHARACTERISTICS ( At TA = 25°C unless otherwise noted )

CHARACTERISTICS	SYMBOL	MB12LPT	MB14LPT	MB16LPT	UNITS
Maximum Instantaneous Forward Voltage at 0.5 A DC	V <sub>F</sub>	1.0			Volts
Maximum DC reverse current at rated	I <sub>R</sub>	5.0			uAmps
DC blocking voltage per leg					500

- NOTES : 1. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.27 X 1.27 mm) pads  
2. On aluminum substrate P.C.B. with an area of 0.8 x 0.8 x 0.25" (20 x 20 x 6.4mm) mounted on 0.05 x 0.05" (1.27 x 1.27mm) solder pad  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts

# RATING CHARACTERISTIC CURVES ( MB12LPT THRU MB16LPT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

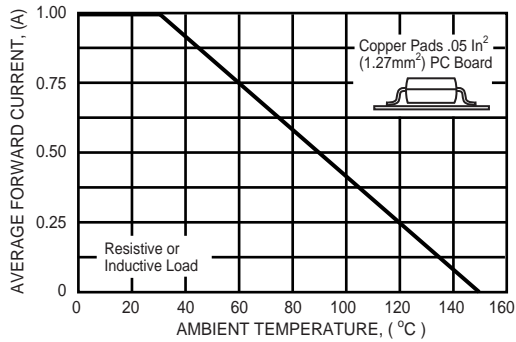


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER BRIDGE ELEMENT

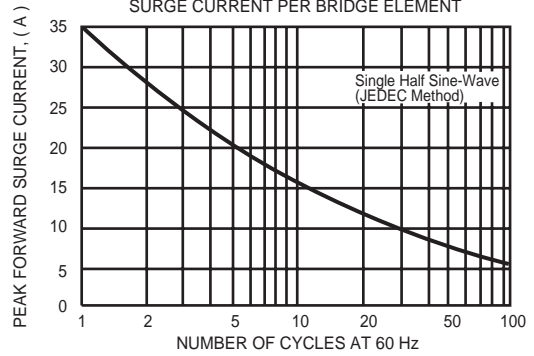


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

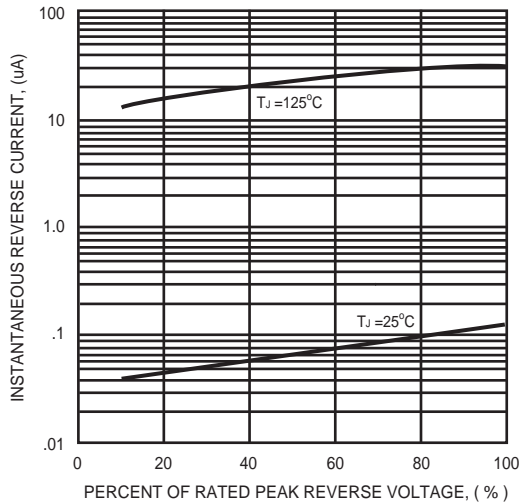


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

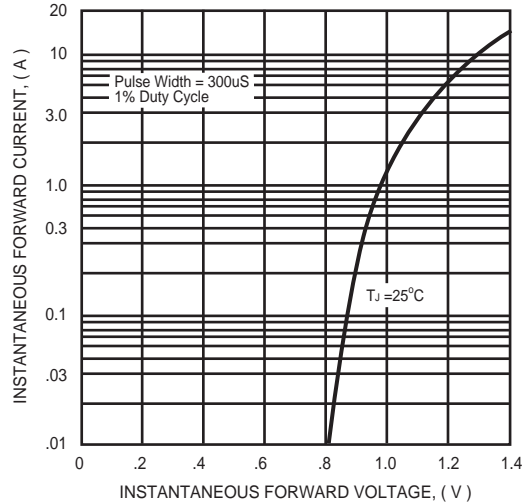


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

