



MBCR10D THRU MBCR10M

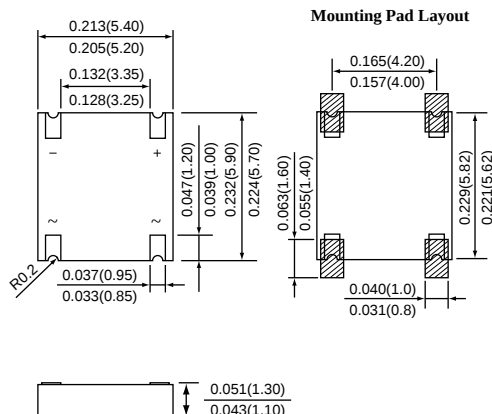
MINIATURE SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Reverse Voltage - 200 to 1000 Volts

Forward Current - 1.0 Ampere

PATENTED

MBCR



*Dimensions in inches and (millimeters)

SuperBridge with GPRC inside

SuperChipTM
SUPEREX IITM



FEATURES

- * Internal Constructure with GPRC (Glass Passivated Rectifier Chip) inside
- * Lead free product
- * Leadless chip form , no lead damage
- * Solder Joint , No Wire bond & Lead Frame
- * Low profile package
- * For surface mounted applications
- * Built-in strain relief
- * Low power loss , High efficiency
- * High current capability
- * High surge capacity
- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0

MECHANICAL DATA

Case : Packed with FRP substrate and epoxy underfilled

Terminals : Tin plated , solderable per MIL-STD-750, Method 2026

Polarity : Laser marking

Weight : 0.07 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	SYMBOLS	MBCR10D	MBCR10G	MBCR10J	MBCR10K	MBCR10M	UNITS
Maximum repetitive peak reverse voltage	VRRM	200	400	600	800	1000	Volts
Maximum RMS voltage	VRMS	140	280	420	560	700	Volts
Maximum DC blocking voltage	VDC	200	400	600	800	1000	Volts
Maximum average forward rectified current @ TA=55°C	I (AV)	1.0					Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	30					Amps
Maximum instantaneous forward voltage @ IF=0.4 A @ IF=1.0 A	VF	0.9 1.0					Volts
Maximum DC reverse current @ Tc=25°C at rated DC blocking voltage @ Tc=150°C	IR	5 200					uA
I ² t rating for fusing (t < 8.3ms)	I ² t	3.74					A ² s
Typical junction capacitance per element (NOTE 1)	CJ	25					pF
Typical thermal resistance, junction to ambient (NOTE 2)	R θJA	110					°C / W
Operating junction and storage temperature range	TJ,TSTG	-55 to +175					°C

NOTES : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.

(2) Thermal resistance, junction to ambient, measured on PC board with 5.0mm² (0.03mm thick) land areas.

RATINGS AND CHARACTERISTIC CURVES MBCR10D THRU MBCR10M

FIG.1 - FORWARD CURRENT DERATING CURVE

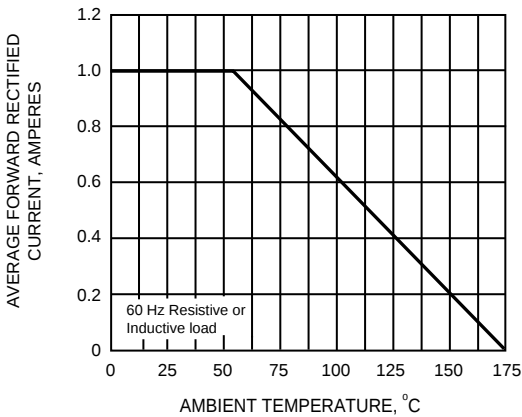


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

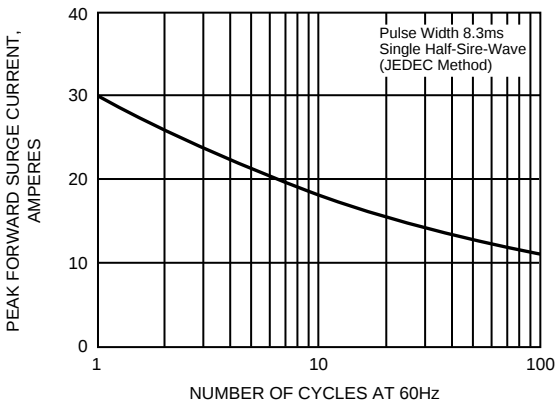


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

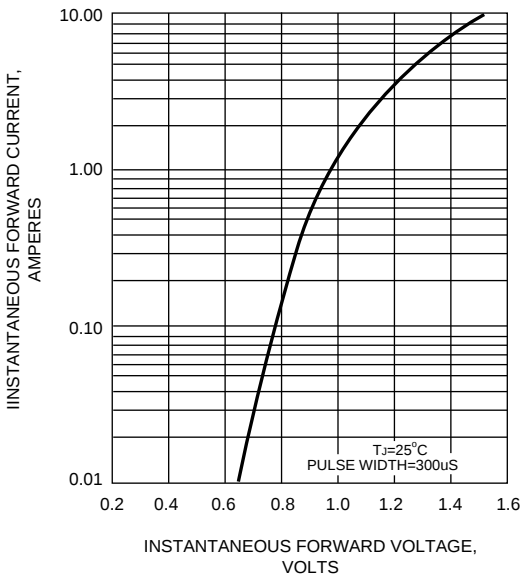


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

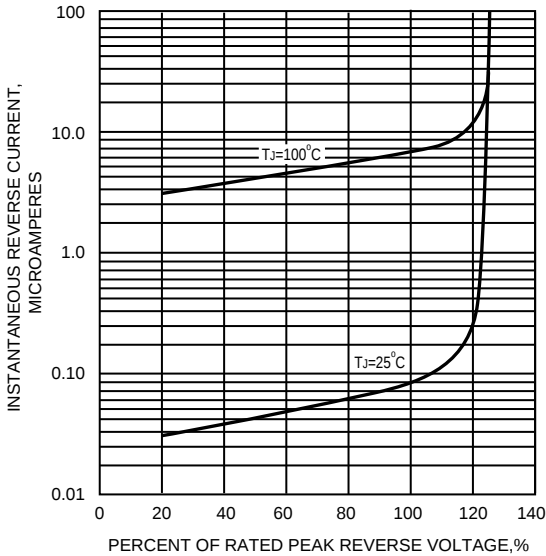


FIG.5 - TYPICAL JUNCTION CAPACITANCE

