

## MBCR10ZH

### FEATURES

- \* Halogen-free type
- \* Internal structure with GPRC (glass passivated rectifier chip) inside
- \* Compliance to RoHS product
- \* Leadless chip form, no lead damage
- \* Low power loss, High efficiency
- \* High current capability
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### APPLICATION

- \* AC/DC Power Supply
- \* Communication Equipment

### MECHANICAL DATA

Case : Packed with FRP substrate and epoxy underfilled

Terminals : Pure Tin plated (Lead-Free),  
solderable per MIL-STD-750, Method 2026.

Polarity : Laser marking symbols

Weight : 0.07 gram

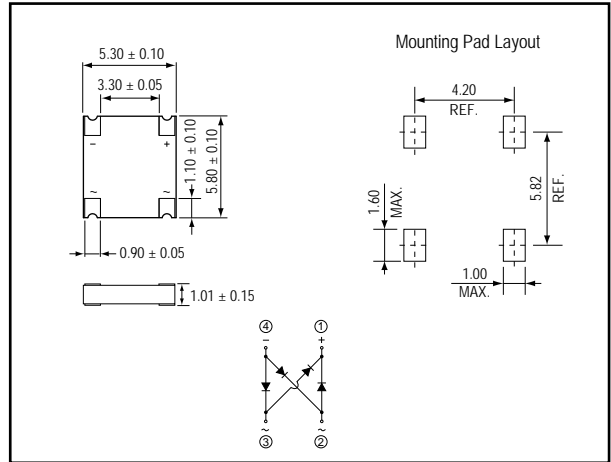
### PACKING

- \* 5,000 pieces per 13" (330mm ± 2mm) reel
- \* 2 reels per box
- \* 5 boxes per carton

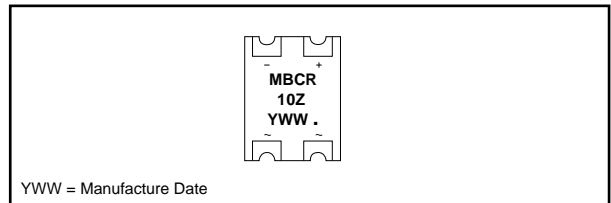
### OUTLINE DIMENSIONS

Case : MBCR

Unit : mm



### MARKING



### Absolute Maximum Ratings (Ta = 25 °C)

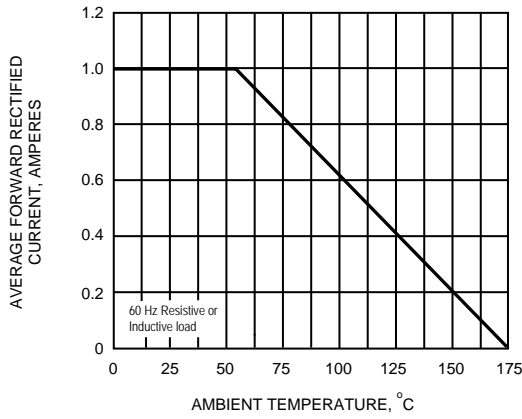
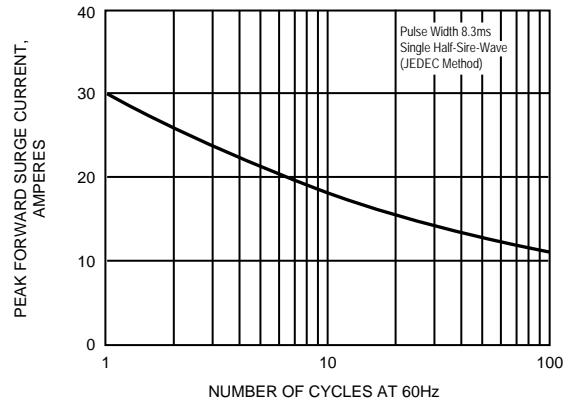
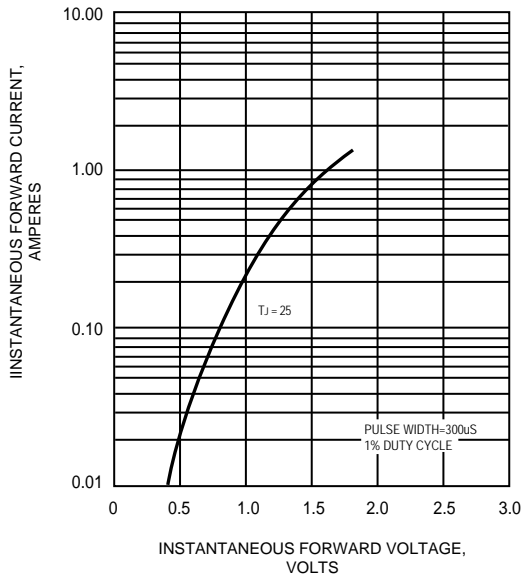
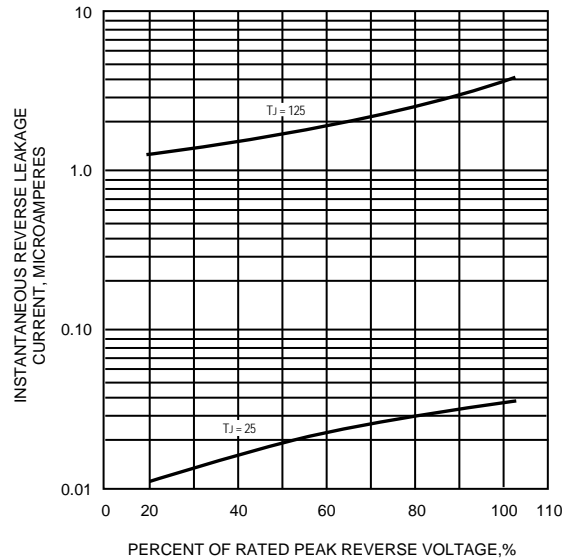
ITEM	Symbol	Rating	Unit
Repetitive peak reverse voltage	VRRM	2000	V
Average forward current	IF(AV)	1.0	A
Peak forward surge current (8.3ms single half sine-wave)	IFSM	30	A
Operating junction and storage temperature Range	Tj,TSTG	-55 to +175	°C

### Electrical characteristics (Ta = 25 °C)

ITEM	Symbol	Conditions	Value	Unit
Maximum instantaneous forward voltage	VF	IF = 1.0A	2	V
Maximum DC reverse current at rated DC blocking voltage	IRRM	VR = Max. VRRM , Ta = 25 °C	5	uA
Typical current squared time	I <sup>2</sup> t	t < 8.3ms , Ta = 25 °C	3.74	A <sup>2</sup> s
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz	25	pF
Thermal resistance	Rth(JA)	Junction to ambient (NOTE 1)	75	°C/W
	Rth(JA)	Junction to ambient (NOTE 2)	95	
	Rth(JL)	Junction to lead (NOTE 2)	20	

NOTES : (1) Thermal resistance, junction to ambient, measured on PC board with 15 x 15mm land areas.

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

**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**

**FIG.5 - TYPICAL JUNCTION CAPACITANCE**
