MBCR20JH THRU MBCR20MH

FEATURES

* Halogen-free type
* Internal structure with GPRC (glass passivated rectifier chip) inside
* Lead free product, compliance to RoHS
* Lead less chip form, no lead damage
* Lead-free solder joint, no wire bond & lead frame
* 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

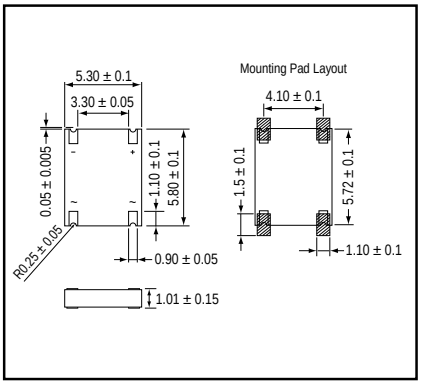
PACKING

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

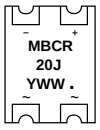
OUTLINE DIMENSIONS

Case : MBCR

Unit : mm



MARKING



MBCR = Series code
20 = Amps class (2.0A)
J = Voltage class
J = 600V
K = 800V
M = 1000V
• = Halogen-free type

Y = Last digit of the year
8 = 2008
9 = 2009
0 = 2010

WW = Mfg week
01 = First week
02 = Second week
03 = Third week

Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	Rating			Unit
			MBCR20JH	*MBCR20KH*	*MBCR20MH*	
Repetitive peak reverse voltage	V_{RRM}		600	800	1000	V
Average forward current	$I_{F(AV)}$		2.0			A
Peak forward surge current	I_{FSM}	8.3ms single half sine-wave	50			A
Operating storage temperature Range	T_j,T_{STG}		-55 to +175			°C

Electrical characteristics (Ta = 25 °C)

ITEM	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F = 2.0A	-	0.95	1.00	V
Repetitive peak reverse current	I_{RRM}	V_R = Max. V_{RRM} , Ta = 25 °C	-	0.08	5	uA
Current squared time	I^2t	t < 8.3ms , Ta = 25 °C	-	10.4	-	A^2s
Junction capacitance	C_j	V_R = 4V, f = 1.0 MHz	-	25	-	pF
Thermal resistance	$R_{th(JA)}$	Junction to ambient (NOTE)	-	95	-	°C/W
	$R_{th(JL)}$	Junction to lead (NOTE)	-	15	-	

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

FIG.1 - FORWARD CURRENT DERATING CURVE

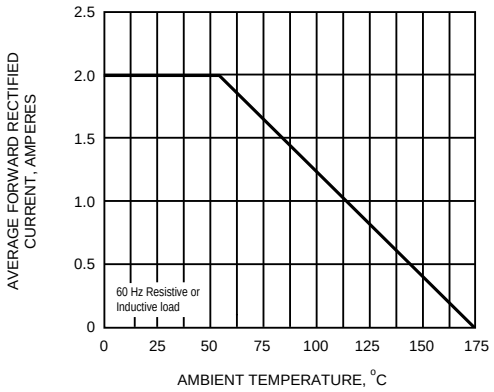


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

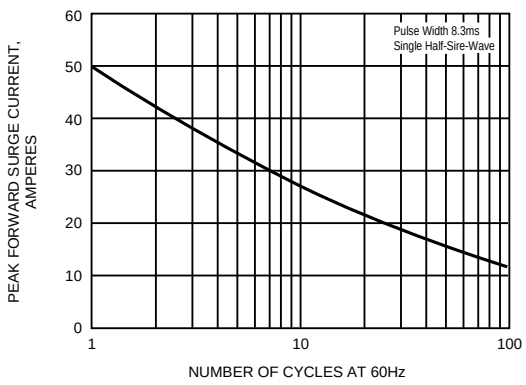


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

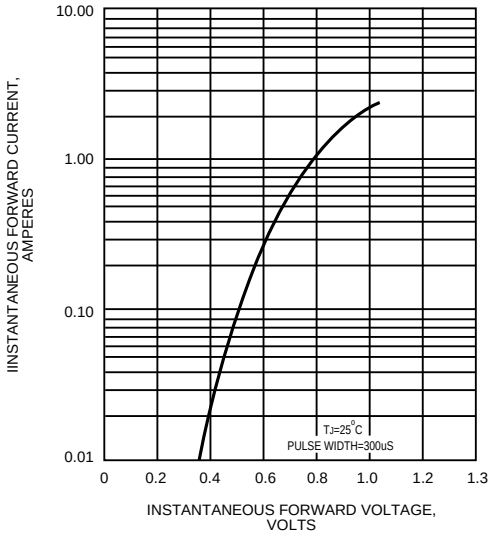


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

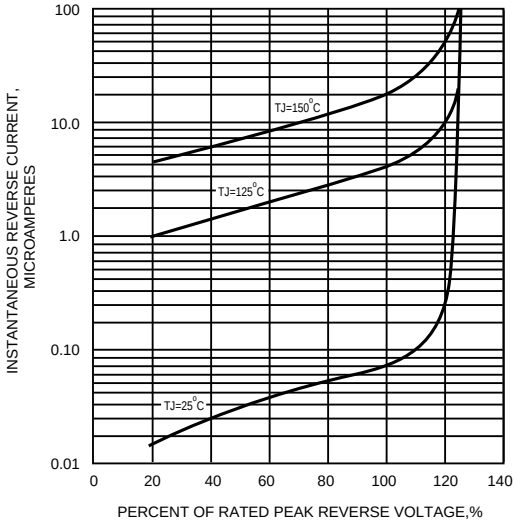


FIG.5 - TYPICAL JUNCTION CAPACITANCE