MBCR10EKH AND MBCR10EMH

● FEATURES

* Halogen-free type
* Internal structure with GPRC (glass passivated rectifier chip) inside
* Compliance to RoHS product
* Lead less 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

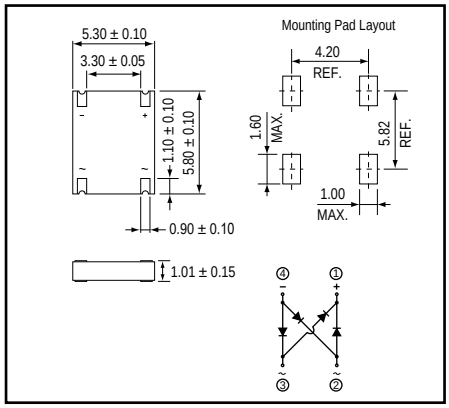
● PACKING

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

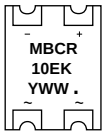
● OUTLINE DIMENSIONS

Case : MBCR

Unit : mm



● MARKING



MBCR10EK / MBCR10EM = Series code
Series code: **K** = 800V
M = 1000V
Y = Last digit of the year
WW = Mfg week
· = Halogen-free type

Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	Rating		Unit
			MBCR10EKH	*MBCR10EMH*	
Repetitive peak reverse voltage	V_{RRM}		800	1000	V
Average forward current	$I_{F(AV)}$		1.0		A
Peak forward surge current	I_{FSM}	8.3ms single half sine-wave	25		A
Reverse recovery time	T_{rr}	I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A	75		nS
Operating junction and 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 = 1.0A	-	1.50	1.70	V
Repetitive peak reverse current	I_{RRM}	V_R = Max. V_{RRM} , Ta = 25 °C	-	0.10	5	uA
Current squared time	I^2t	t < 8.3ms , Ta = 25 °C	-	2.59	-	A^2s
Junction capacitance	C_j	V_R = 4V, f = 1.0 MHz	-	9	-	pF
Thermal resistance	$R_{th(JA)}$	Junction to ambient (NOTE)	-	110	-	°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

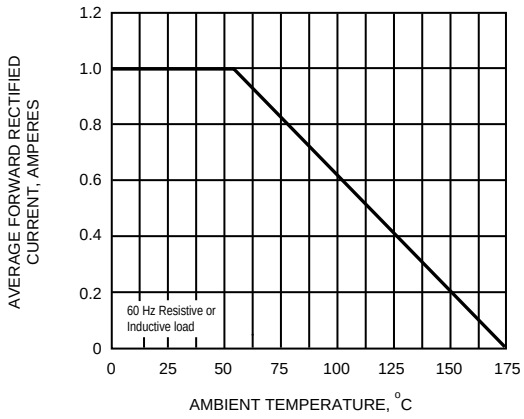


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

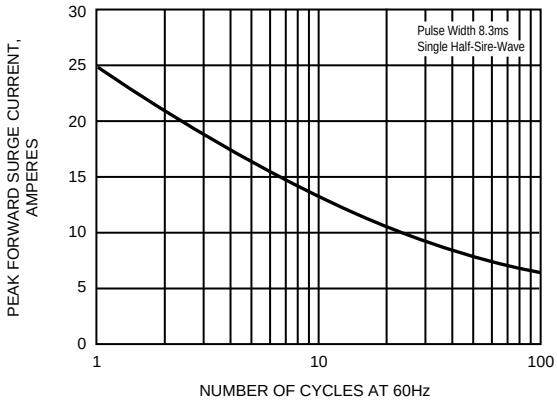


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

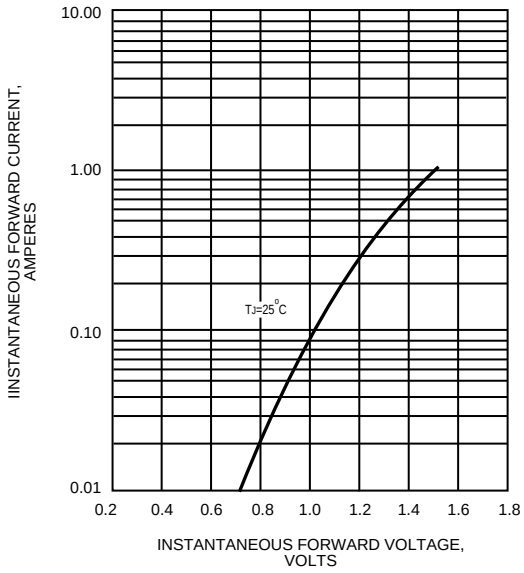


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

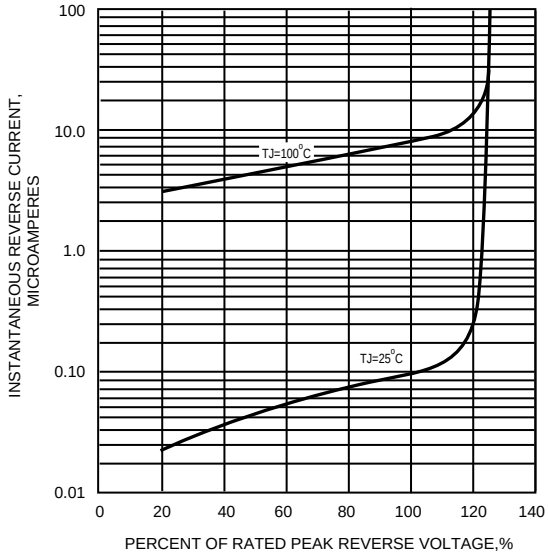


FIG.5 - TYPICAL JUNCTION CAPACITANCE