SMBC104H THRU SMBC110H

FEATURES

* Halogen-free type
* Compliance to RoHS product
* 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

* Suitable for battery - powered circuits
* 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

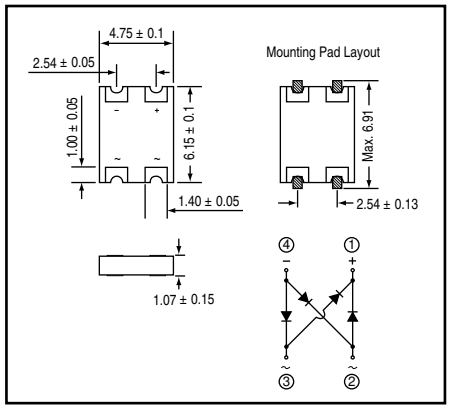
PACKING

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

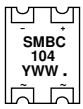
OUTLINE DIMENSIONS

Case : MBC

Unit : mm



MARKING



SMBC = Series code
10 = Amps class (1.0A)
4 = Voltage class (40V)
6 = 60V
10 = 100V
Y = Last digit of the year
9 = 2009
0 = 2010
1 = 2011

WW = Mfg week
01 = First week
02 = Second week
03 = Third week
• = Halogen-free type

Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	Rating			Unit
			SMBC104H	*SMBC106H*	*SMBC110H*	
Repetitive peak reverse voltage	V_{RRM}		40	60	100	V
Average forward current	$I_{F(AV)}$		1.0			A
Peak forward surge current	I_{FSM}	8.3ms single half sine-wave	30			A
Operating junction and storage temperature Range	T_j,T_{STG}		-55 to +125			°C

Electrical characteristics (Ta = 25 °C)

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F = 1.0A	***SMBC104H***	-	0.49	0.50	V
			SMBC106H	-	0.60	0.70	V
			SMBC110H	-	0.75	0.85	V
Repetitive peak reverse current	I_{RRM}	V_R = Max. V_{RRM} , Ta = 25 °C		-	0.025	0.20	mA
Junction capacitance	C_j	V_R = 4V, f = 1.0 MHz		-	-	250	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 5.0mm^2 (0.03mm thick) land areas.

FIG.1 - FORWARD CURRENT DERATING CURVE

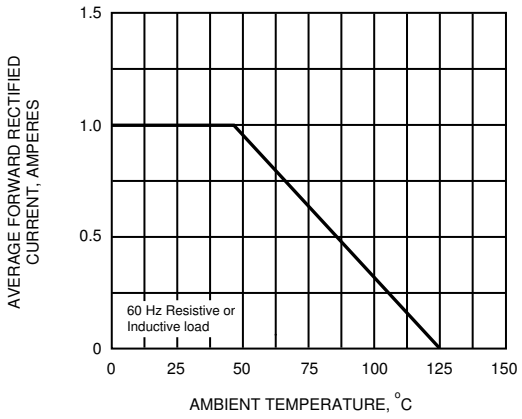


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

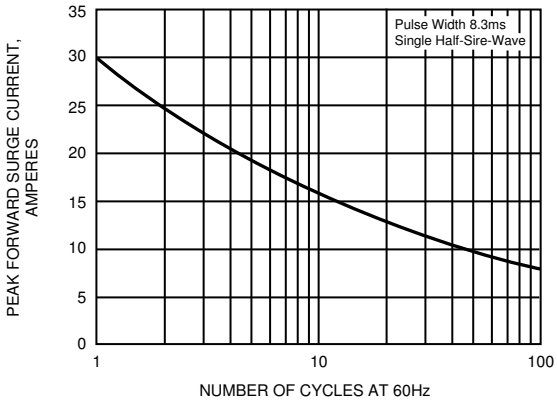


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

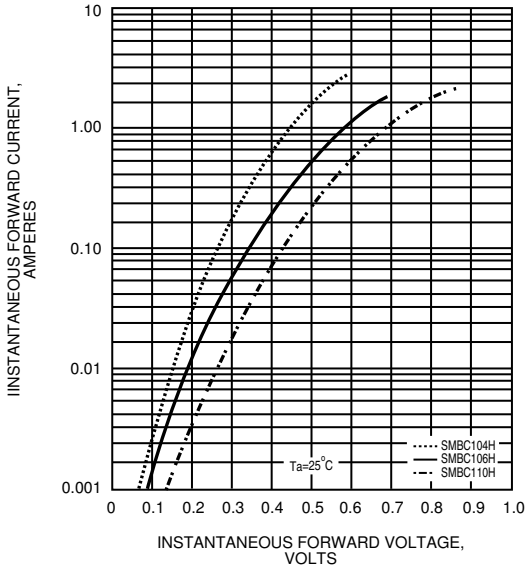


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

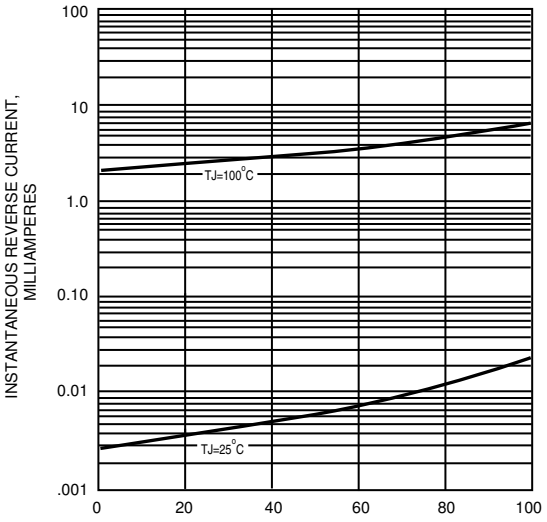
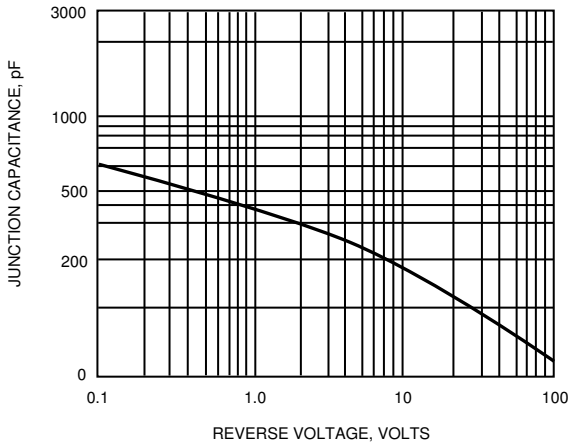



FIG.5 - TYPICAL JUNCTION CAPACITANCE