

**Preliminary**

**SMBC204H THRU SMBC210H**

● **FEATURES**

- \* Halogen-free type
- \* 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**

- \* Suitable for battery - powered circuits
- \* Communication Equipment

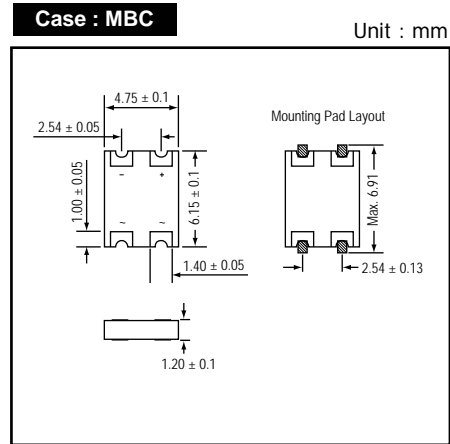
● **MECHANICAL DATA**

**Case :** Packed with FRP substrate and epoxy underfilled  
**Terminals :** Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.  
**Polarity :** Laser Cathode band marking  
**Weight :** 0.07 gram

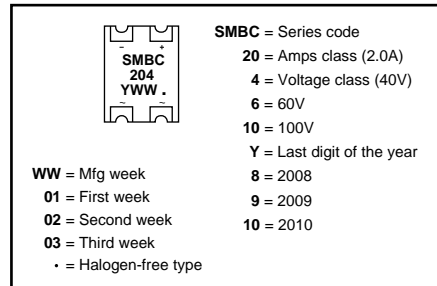
● **PACKING**

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

● **OUTLINE DIMENSIONS**



● **MARKING**



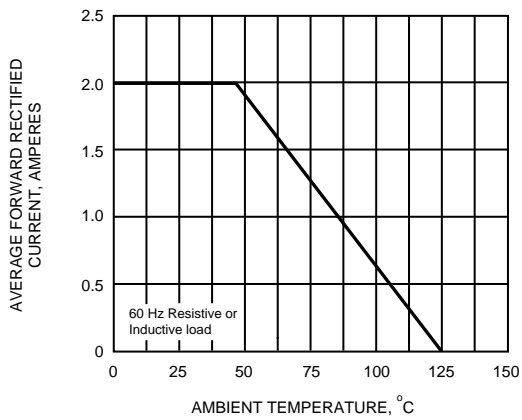
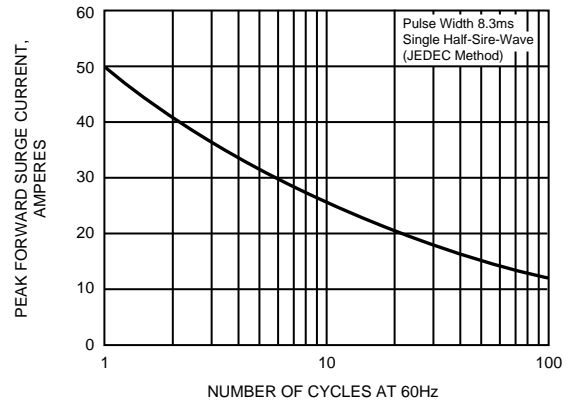
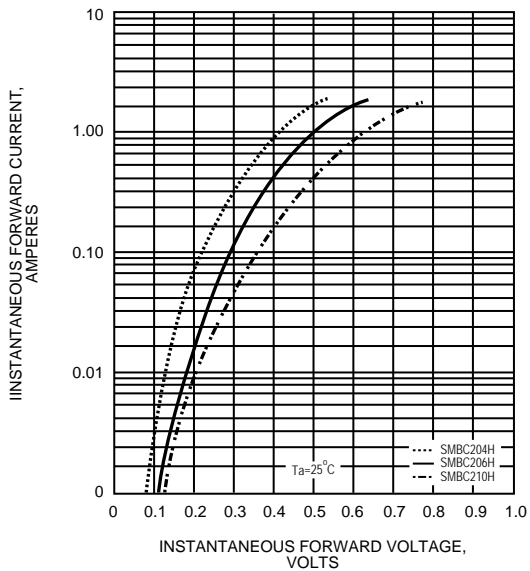
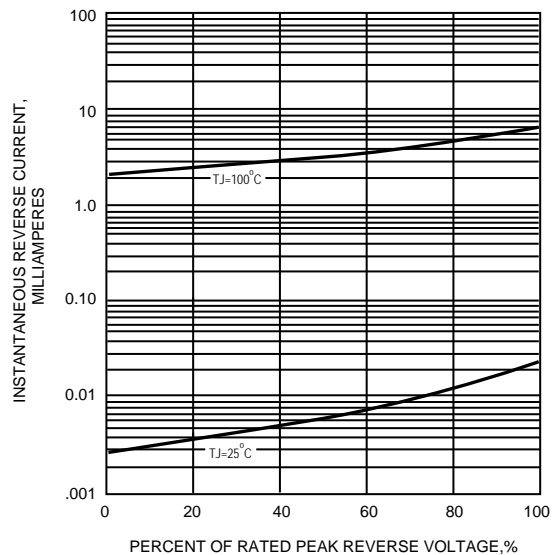
**Absolute Maximum Ratings (Ta = 25 °C)**

ITEM	Symbol	Conditions	Rating			Unit
			SMBC204H	SMBC206H	SMBC210H	
Repetitive peak reverse voltage	VRRM		40	60	100	V
Average forward current	IF(AV)		2.0			A
Peak forward surge current	IFSM	8.3ms single half sine-wave	50			A
Operating storage temperature Range	Tj,TSTG		-55 to +125			°C

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

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit
Forward voltage	VF	IF = 1.0A	SMBC204H	-	0.41	-	V
		IF = 2.0A	SMBC204H	-	0.49	0.50	V
		IF = 1.0A	SMBC206H	-	0.50	-	V
		IF = 2.0A	SMBC206H	-	0.60	0.70	V
		IF = 1.0A	SMBC210H	-	0.62	-	V
		IF = 2.0A	SMBC210H	-	0.75	0.85	V
Repetitive peak reverse current	IRRM	VR = Max. VRRM , Ta = 25 °C		-	0.025	0.20	mA
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz		-	-	250	pF
Thermal resistance	Rth(JA)	Junction to ambient (NOTE)		-	110	-	°C/W
	Rth(JL)	Junction to lead (NOTE)		-	15	-	

NOTES : Thermal resistance, junction to ambient, measured on PC board with 5.0mm<sup>2</sup> (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**
