

**BSCD52H THRU BSCD510H**

● **FEATURES**

- \* Halogen-free type
- \* Compliance to RoHS product
- \* Lead less chip form, no lead damage
- \* Low power loss, High efficiency
- \* High current capability, low VF
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

● **APPLICATION**

- \* Switching mode power supply applications
- \* Portable equipment battery applications
- \* High frequency rectification
- \* DC / DC Converter
- \* Telecommunication

● **MECHANICAL DATA**

**Case :** Packed with FRP substrate and epoxy underfilled

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

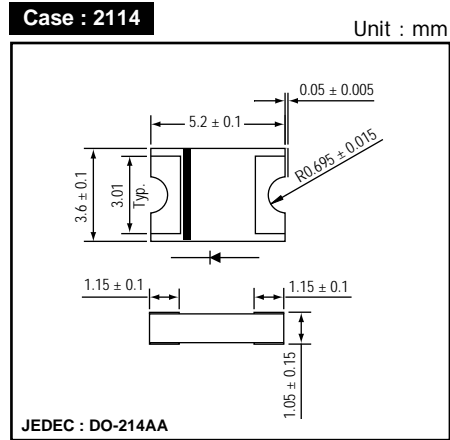
**Polarity :** Laser Cathode band marking

**Weight :** 0.042 gram

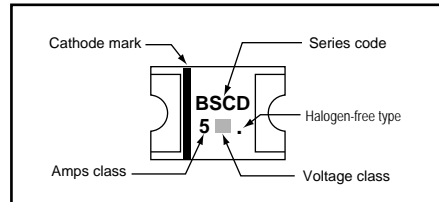
● **PACKING**

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

● **OUTLINE DIMENSIONS**



● **MARKING**



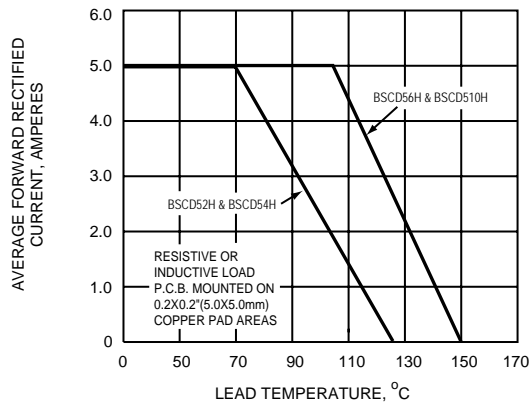
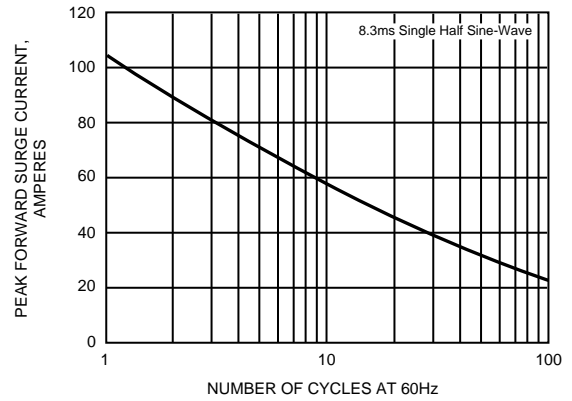
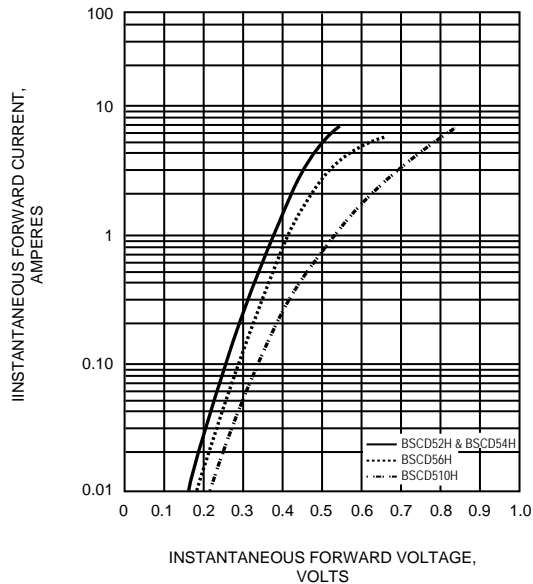
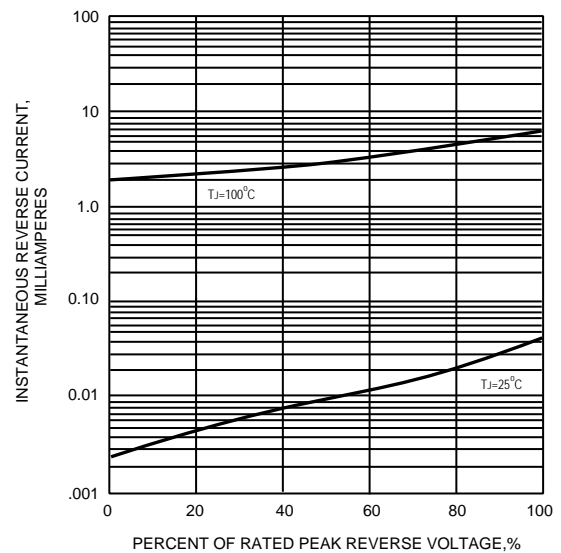
**Absolute Maximum Ratings (Ta = 25 °C)**

ITEM	Symbol	Conditions	Rating				Unit
			BSCD52H	BSCD54H	BSCD56H	BSCD510H	
Repetitive peak reverse voltage	VRRM		20	40	60	100	V
Average forward current (SEE FIG.1)	IF(AV)		5.0				A
Peak forward surge current	IFSM	8.3ms single half sine-wave	105				A
Operating junction temperature Range	Tj		-55 to +125		-55 to +150		°C
Storage temperature Range	TSTG		-55 to +150				°C

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

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit
Forward voltage (NOTE 1)	VF	IF = 1.0A	BSCD52H	-	0.38	-	V
		IF = 3.0A	/	-	0.45	-	
		IF = 5.0A	BSCD54H	-	0.50	0.55	
		IF = 1.0A	BSCD56H	-	0.42	-	V
IF = 3.0A		-	0.52	-			
IF = 5.0A		-	0.65	0.70			
		IF = 1.0A	BSCD510H	-	0.53	-	V
		IF = 3.0A		-	0.69	-	
		IF = 5.0A		-	0.79	0.85	
Repetitive peak reverse current	IRRM	VR = Max. VRRM , Ta = 25 °C		-	0.045	0.50	mA
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz		-	250	-	pF
Thermal resistance	Rth(JA)	Junction to ambient (NOTE 2)		-	55	-	°C/W
	Rth(JL)	Junction to lead (NOTE 2)		-	17	-	°C/W

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.  
 (2) Mounted on P.C. board with 0.2 x 0.2"(5.0 x5.0mm) copper pad areas.  
 (3) Preliminary draft.

**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**
