

**SCD5817H THRU SCD5819H**

● **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 , 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

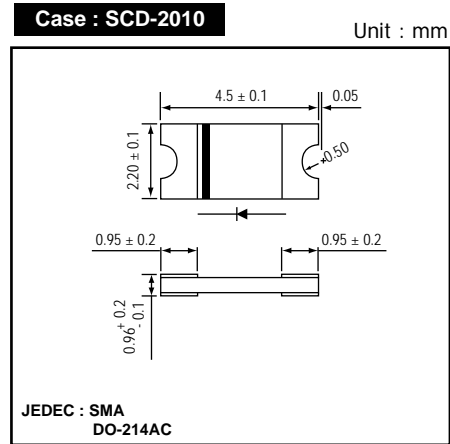
● **MECHANICAL DATA**

**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 :** 0.02 gram

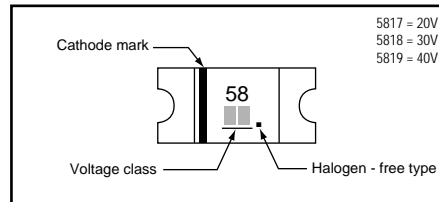
● **PACKING**

- \* 3,000 pieces per 7" (178mm ± 2mm) reel
- \* 4 reels per box
- \* 6 boxes per carton

● **OUTLINE DIMENSIONS**



● **MARKING**



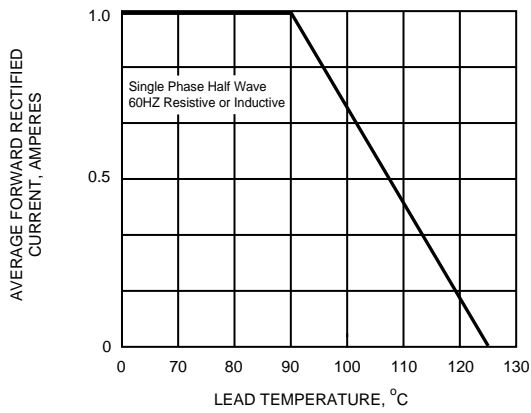
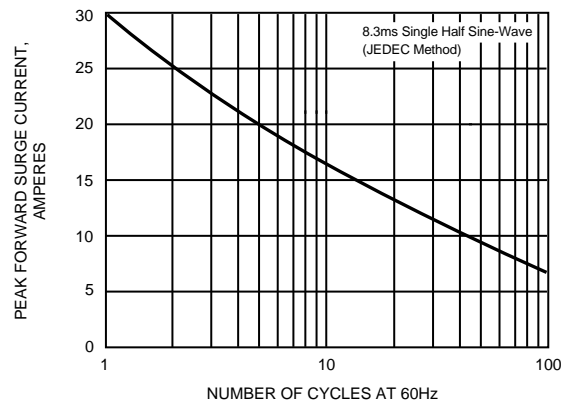
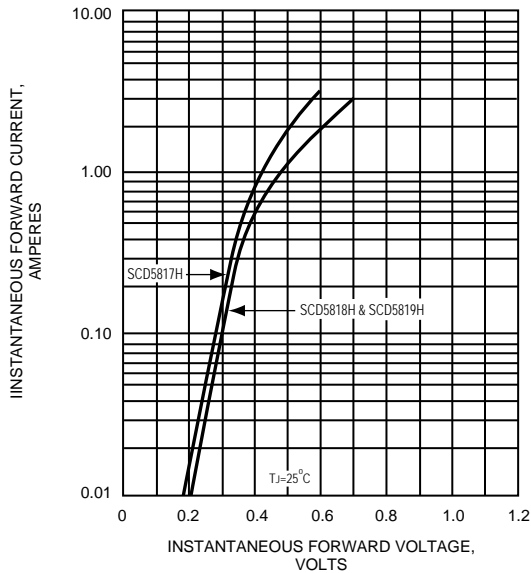
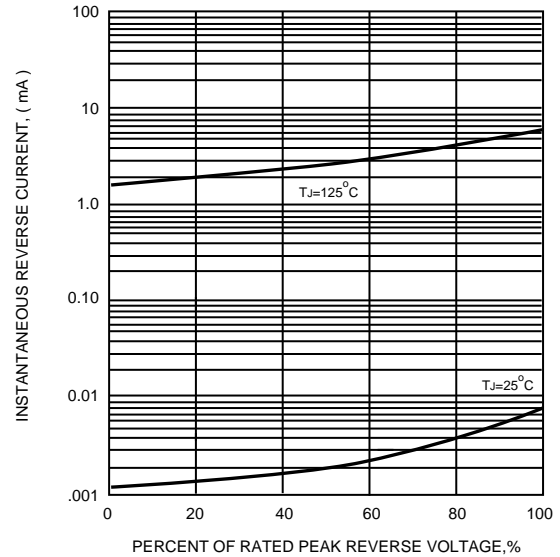
**Absolute Maximum Ratings (Ta = 25 °C)**

ITEM	Symbol	Conditions	Rating			Unit
			SCD5817H	SCD5818H	SCD5819H	
Repetitive peak reverse voltage	VRRM		20	30	40	V
Average forward current	IF(AV)		1.0			A
Peak forward surge current	IFSM	8.3ms single half sine-wave	30			A
Operating junction temperature Range	Tj		-55 to +125			°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	SCD5817H	-	0.43	0.45	V	
		IF = 3.0A		-	0.58	0.75		
			IF = 1.0A	SCD5818H	-	0.48	0.55	V
			IF = 3.0A		-	0.70	0.875	
		IF = 1.0A	SCD5819H	-	0.48	0.60	V	
		IF = 3.0A		-	0.70	0.90		
Repetitive peak reverse current	IRRM	VR = Max. VRRM , Ta = 25 °C		-	0.008	0.50	mA	
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz		-	110	-	pF	
Thermal resistance	Rth(JA)	Junction to ambient (NOTE 2)		-	80	-	°C/W	
	Rth(JL)	Junction to lead (NOTE 2)		-	28	-	°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.

**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**
