SCD5817H THRU SCD5819H

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, 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

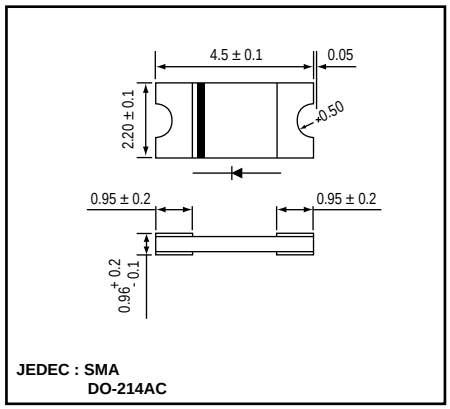
Case : Packed with FRP substrate and epoxy underfilled
Terminals : Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.
Polarity : Laser Cathode band marking
Weight : 0.02 gram

PACKING

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

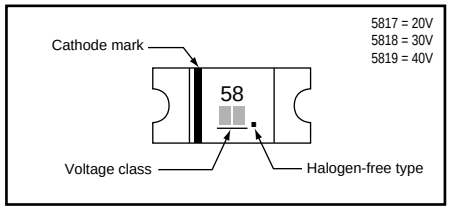
OUTLINE DIMENSIONS

Case : 2010 Unit : mm



JEDEC : SMA
DO-214AC

MARKING



Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	Rating			Unit
			SCD5817H	*SCD5818H*	*SCD5819H*	
Repetitive peak reverse voltage	V_{RRM}		20	30	40	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 temperature Range	T_j		-55 to +125			°C
Storage temperature Range	T_{STG}		-55 to +150			°C

Electrical characteristics (Ta = 25 °C)

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit
Forward voltage (NOTE 1)	V_F	I_F = 1.0A	*SCD5817H*	-	0.43	0.45	V
		I_F = 3.0A		-	0.58	0.75	
		I_F = 1.0A	*SCD5818H*	-	0.48	0.55	V
		I_F = 3.0A		-	0.70	0.875	
		I_F = 1.0A	*SCD5819H*	-	0.48	0.60	V
		I_F = 3.0A		-	0.70	0.90	
Repetitive peak reverse current	I_{RRM}	V_R = Max. V_{RRM} , Ta = 25 °C		-	0.008	0.50	mA
Junction capacitance	C_j	V_R = 4V, f = 1.0 MHz		-	110	-	pF
Thermal resistance	$R_{th(JA)}$	Junction to ambient (NOTE 2)		-	80	-	°C/W
	$R_{th(JL)}$	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

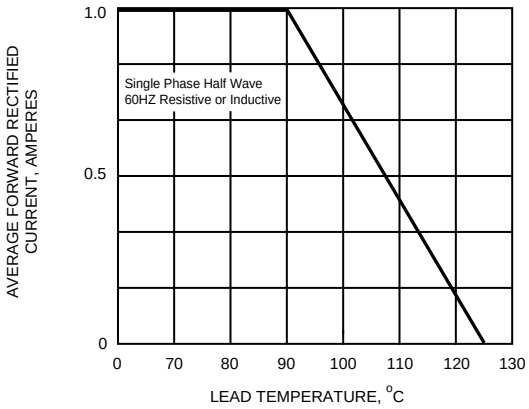


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

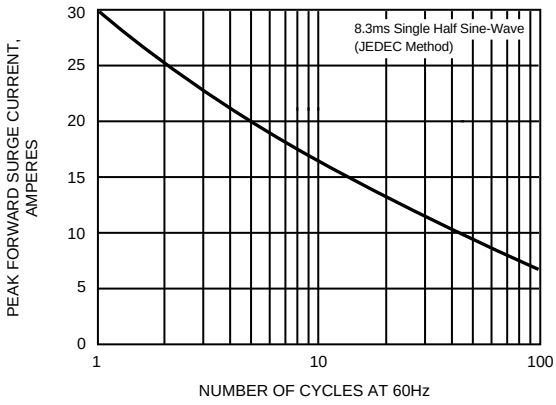


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

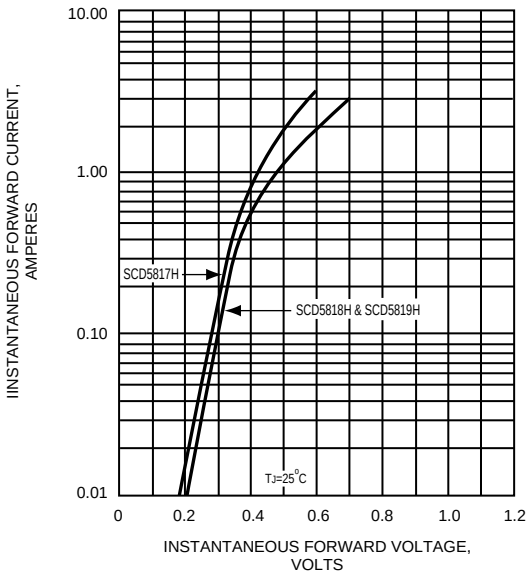


FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

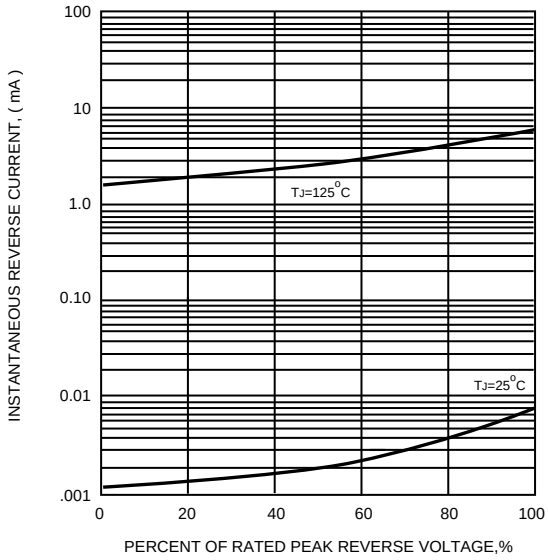


FIG.5 - TYPICAL JUNCTION CAPACITANCE