

**MSCD102H THRU MSCD106H**

● **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

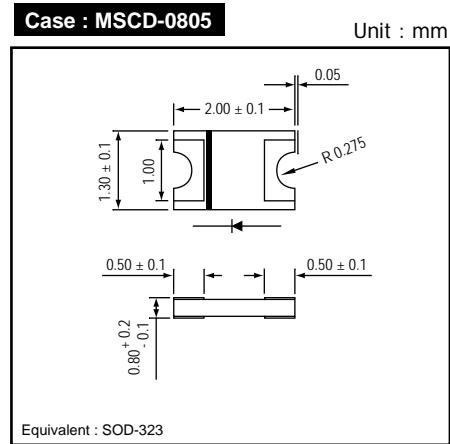
● **MECHANICAL DATA**

**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 :** 0.005 gram

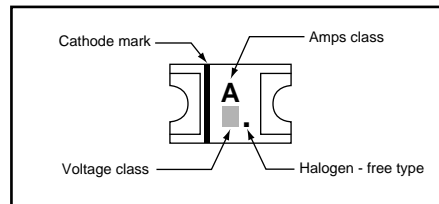
● **PACKING**

- \* 3,000 pieces per 7" (178mm ± 2mm) reel
- \* 5 reels per box
- \* 6 boxes per carton

● **OUTLINE DIMENSIONS**



● **MARKING**



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

ITEM	Symbol	Conditions	Rating			Unit
			MSCD102H	MSCD104H	MSCD106H	
Repetitive peak reverse voltage	VRRM		20	40	60	V
Average forward current	IF(AV)		1.0			A
Peak forward surge current	IFSM	8.3ms single half sine-wave	10			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 = 0.1 A	MSCD102H	-	0.32	-	V
		IF = 0.5 A		-	0.39	-	
		IF = 1.0 A		-	0.42	0.45	
	IF = 0.1 A	MSCD104H	-	0.33	-		
			IF = 0.5 A	-	0.40	-	
			IF = 1.0 A	-	0.47	0.50	
IF = 0.1 A	MSCD106H	-	0.38	-			
		IF = 0.5 A	-	0.50	-		
		IF = 1.0 A	-	0.62	0.65		
Repetitive peak reverse current (NOTE 1)	IRRM	VR = Max. VRRM , Ta = 25 °C		-	0.028	0.20	mA
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz		-	115	-	pF
Thermal resistance	Rth(JA)	Junction to ambient		-	120	-	°C/W
	Rth(JL)	Junction to lead		-	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

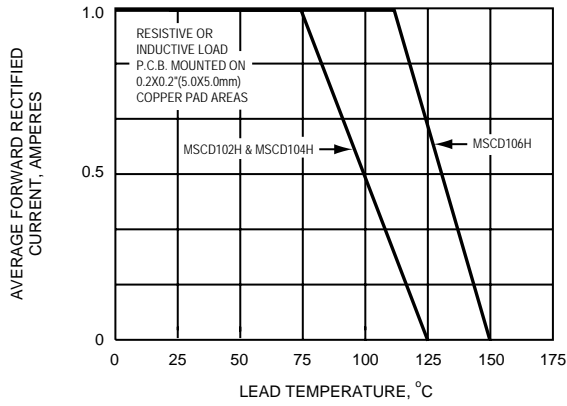


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

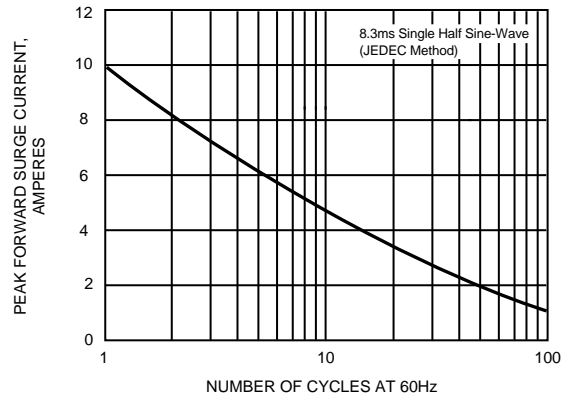


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

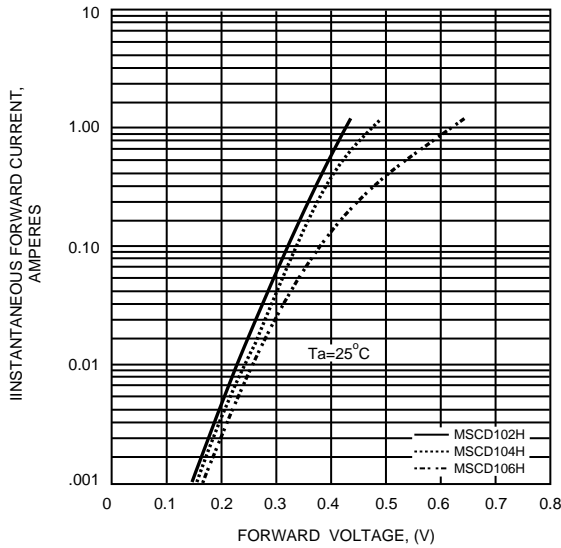


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

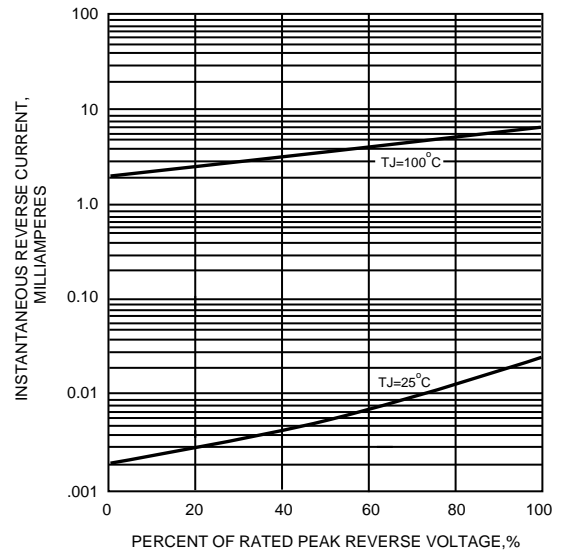


FIG.5 - TYPICAL JUNCTION CAPACITANCE

