

MSCD102H THRU MSCD106H

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 : 0.005 gram

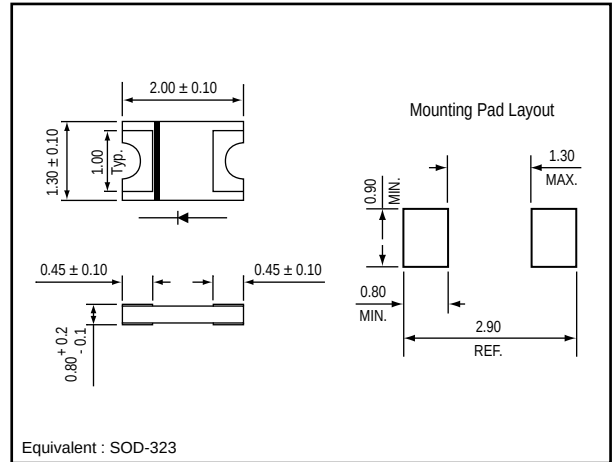
PACKING

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

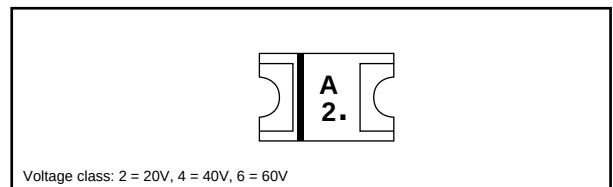
OUTLINE DIMENSIONS

Case : 0805

Unit : mm



MARKING



Absolute Maximum Ratings (Ta = 25 °C)

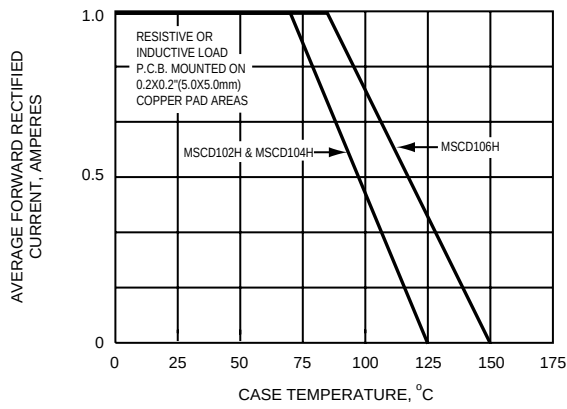
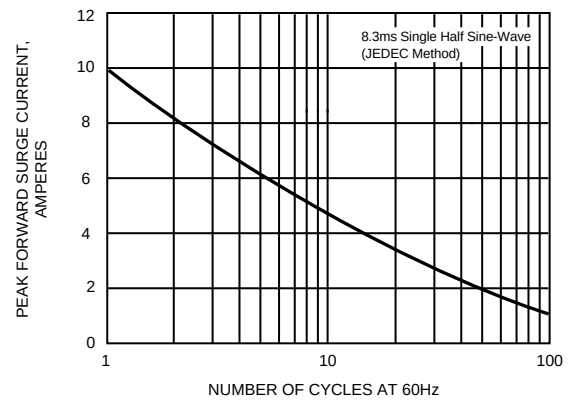
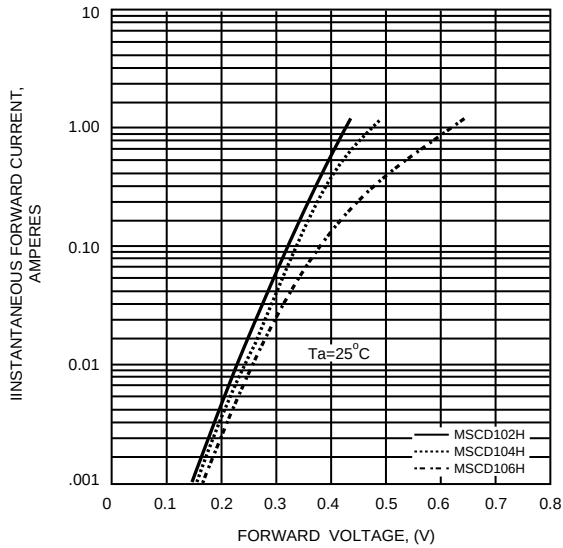
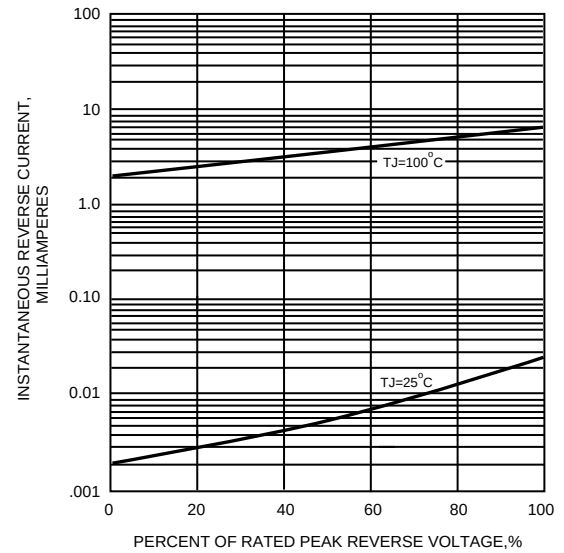
ITEM	Symbol	Conditions	Rating			Unit
			MSCD102H	MSCD104H	MSCD106H	
Repetitive peak reverse voltage	VRRM		20	40	60	V
Average forward current	IF(AV)		1.0			A
Peak forward surge current	IFSM	8.3ms single half sine-wave	10			A
Operating junction temperature Range	Tj		-55 to +125		-55 to +150	°C
Storage 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 (NOTE 2)	Rth(JA)	Junction to ambient		-	210	-	°C/W
	Rth(JC)	Junction to case		-	90	-	°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
