

**MSCD052H THRU MSCD054H**

● **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

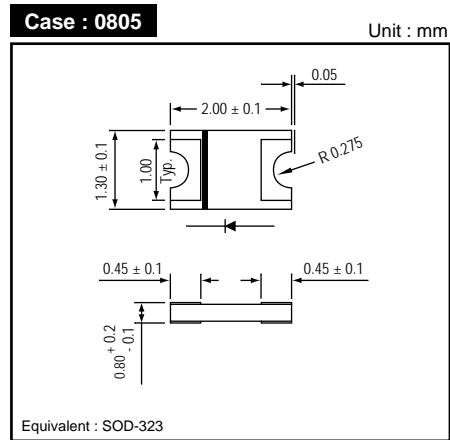
● **MECHANICAL DATA**

**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

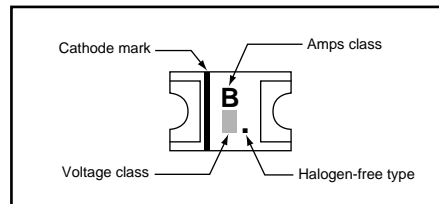
● **PACKING**

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

● **OUTLINE DIMENSIONS**



● **MARKING**

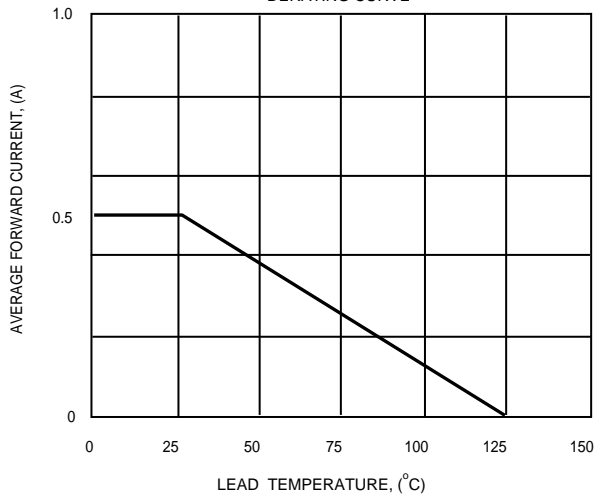
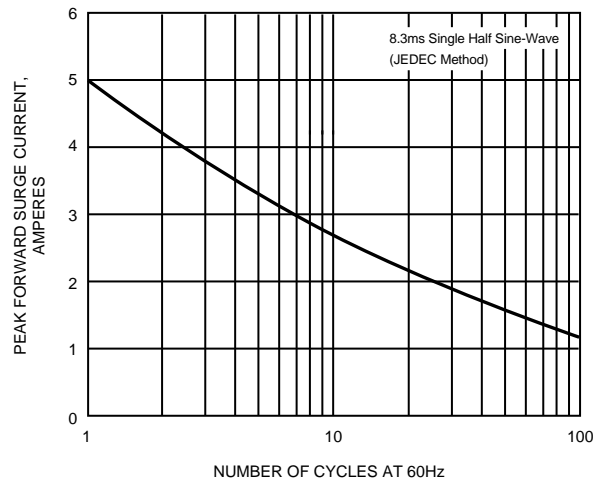
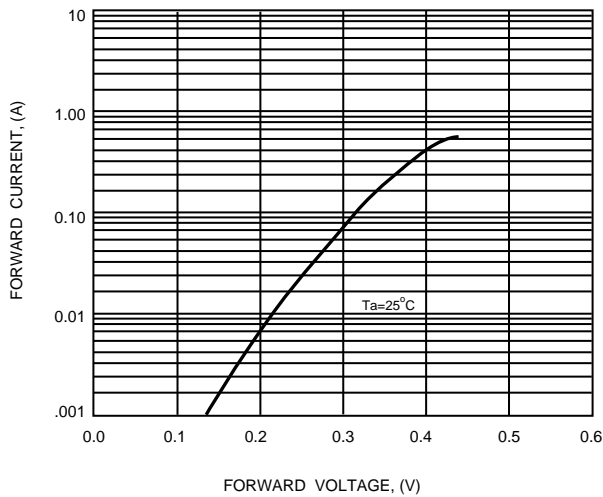
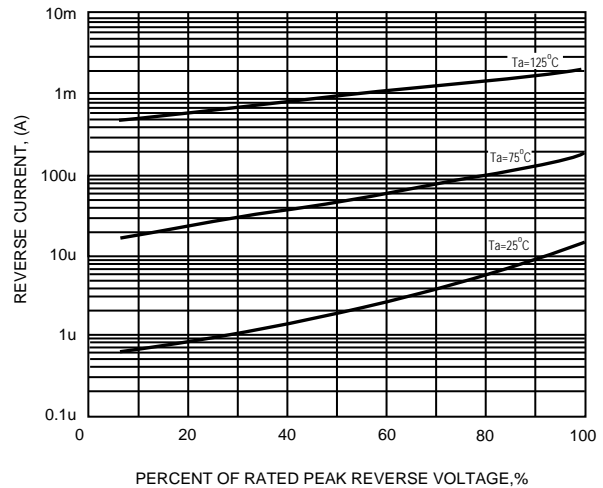


**Absolute Maximum Ratings (Ta = 25 °C)**

ITEM	Symbol	Conditions	Rating			Unit
			MSCD052H	MSCD053H	MSCD054H	
Repetitive peak reverse voltage	VRRM		20	30	40	V
Average forward current	IF(AV)		0.5			A
Peak forward surge current	IFSM	8.3ms single half sine-wave	5			A
Junction temperature	Tj		125			°C
Operating temperature range	Topr		- 40 to +125			
Storage temperature range	TSTG		- 40 to +125			

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

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit
Forward voltage	VF	IF = 0.1A IF = 0.5A	MSCD052H	- -	0.32 0.40	- 0.44	V
		IF = 0.1A IF = 0.5A	MSCD053H	- -	0.32 0.40	- 0.46	V
		IF = 0.1A IF = 0.5A	MSCD054H	- -	0.32 0.40	- 0.48	V
Repetitive peak reverse current	IRRM	VR = Max. VRRM , Ta = 25 °C		-	15	100	uA
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz		-	28	-	pF
Thermal resistance	Rth(JA)	Junction to ambient		-	120	-	°C/W
	Rth(JL)	Junction to lead		-	28	-	°C/W

**FIG. 1 - TYPICAL 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**
