

Thin flat package
MSCD052SH THRU MSCD054SH

● **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

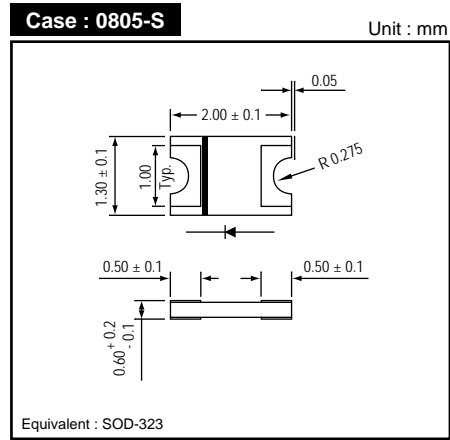
● **MECHANICAL DATA**

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 : 0.004 gram

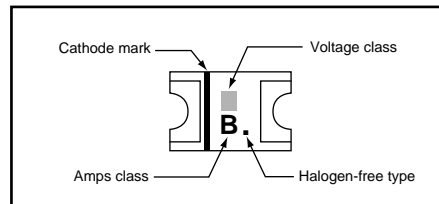
● **PACKING**

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

● **OUTLINE DIMENSIONS**



● **MARKING**

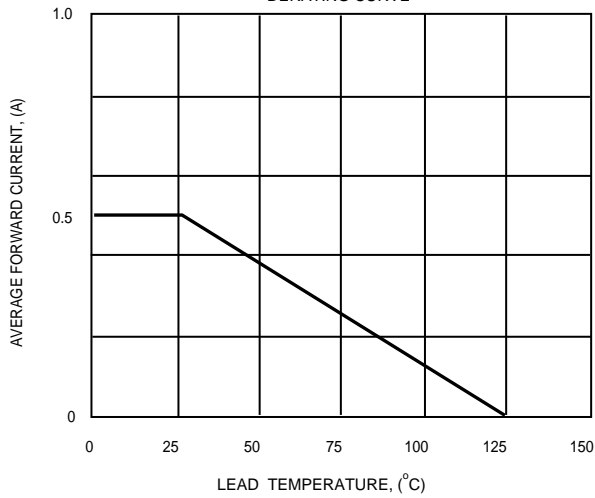
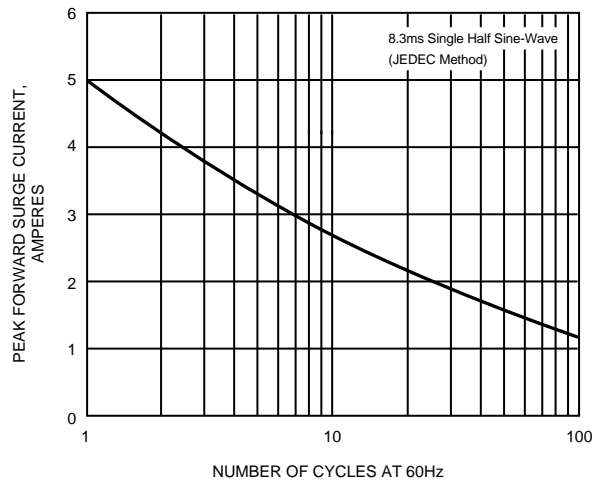
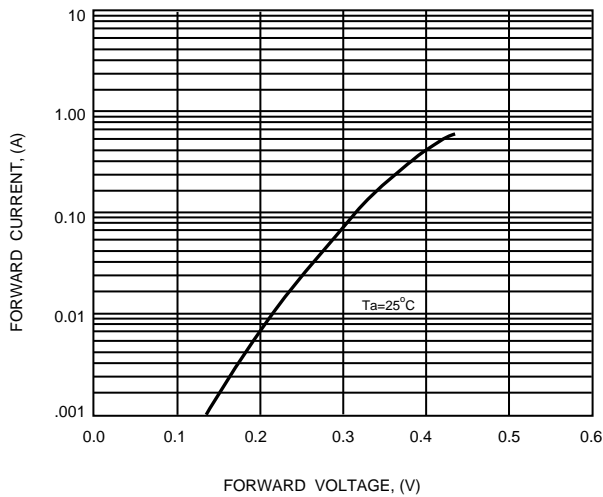
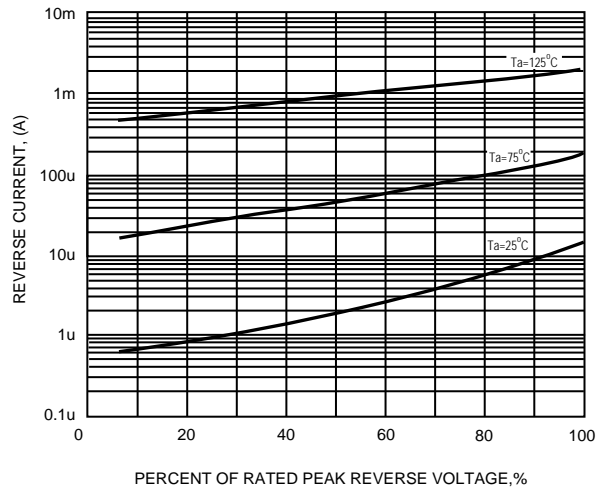


Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	Rating			Unit
			MSCD052SH	MSCD053SH	MSCD054SH	
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	MSCD052SH	-	0.32	-	V
		IF = 0.5A	MSCD052SH	-	0.40	0.44	V
		IF = 0.1A	MSCD053SH	-	0.32	-	V
		IF = 0.5A	MSCD053SH	-	0.40	0.46	V
		IF = 0.1A	MSCD054SH	-	0.32	-	V
		IF = 0.5A	MSCD054SH	-	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
