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

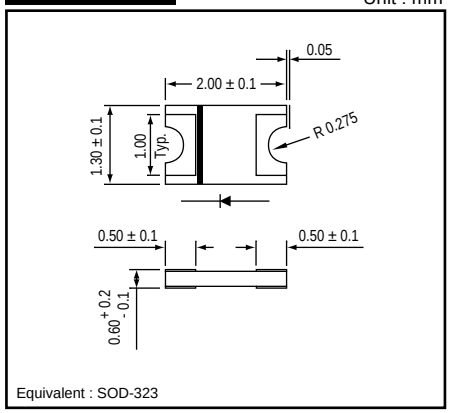
Case : Packed with FRP substrate and epoxy underfilled
Terminals : Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.
Polarity : Laser Cathode band marking
Weight : 0.004 gram

PACKING

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

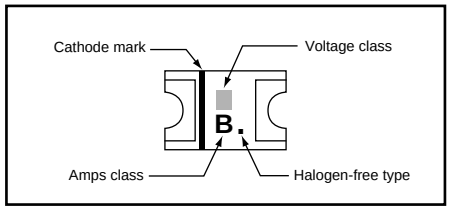
OUTLINE DIMENSIONS

Case : 0805-S Unit : mm



Equivalent : SOD-323

MARKING



Absolute Maximum Ratings (Ta = 25 °C)

ITEM	Symbol	Conditions	Rating			Unit
			MSCD052SH	*MSCD053SH*	*MSCD054SH*	
Repetitive peak reverse voltage	V_{RRM}		20	30	40	V
Average forward current	$I_{F(AV)}$		0.5			A
Peak forward surge current	I_{FSM}	8.3ms single half sine-wave	5			A
Junction temperature	T_j		125			°C
Operating temperature range	Topr		- 40 to +125			
Storage temperature range	T_{STG}		- 40 to +125			

Electrical characteristics (Ta = 25 °C)

ITEM	Symbol	Conditions	Type	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F = 0.1A I_F = 0.5A	*MSCD052SH*	- -	0.32 0.40	- 0.44	V
		I_F = 0.1A I_F = 0.5A	*MSCD053SH*	- -	0.32 0.40	- 0.46	V
		I_F = 0.1A I_F = 0.5A	*MSCD054SH*	- -	0.32 0.40	- 0.48	V
Repetitive peak reverse current	I_{RRM}	V_R = Max. V_{RRM} , Ta = 25 °C		-	15	100	uA
Junction capacitance	C_j	V_R = 4V, f = 1.0 MHz		-	28	-	pF
Thermal resistance	$R_{th(JA)}$	Junction to ambient		-	120	-	°C/W
	$R_{th(JL)}$	Junction to lead		-	28	-	°C/W

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

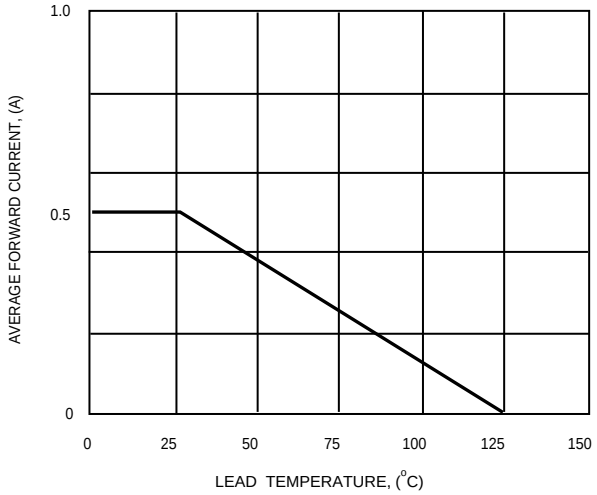


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

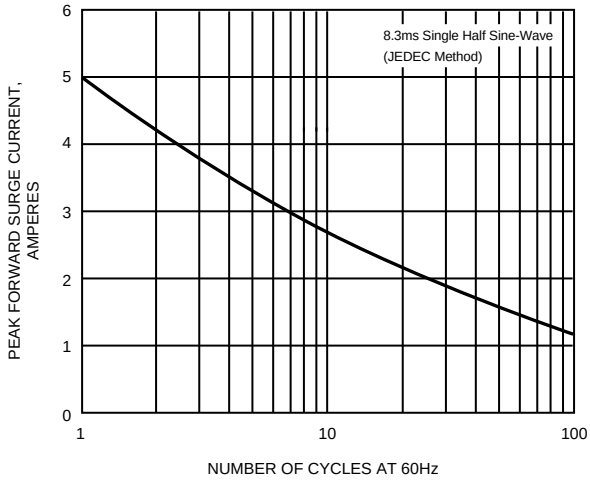


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

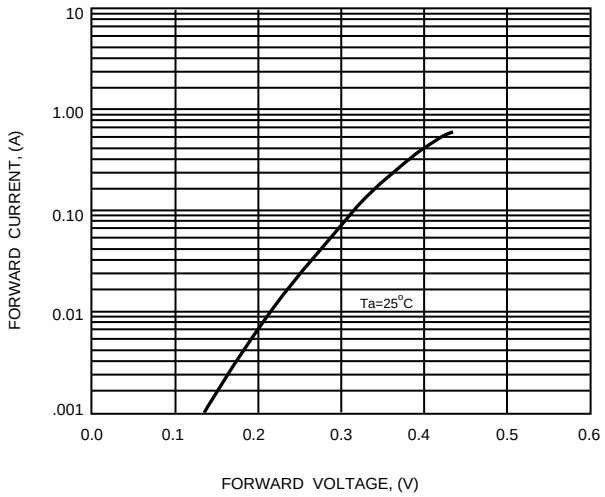


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

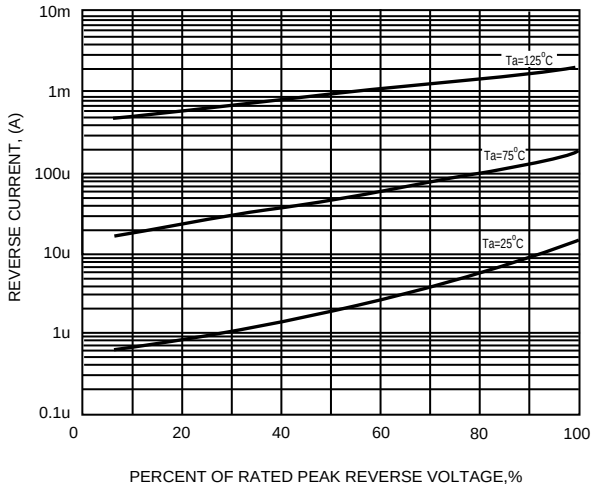


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

