

**USCD052H THRU USCD054H**

● **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

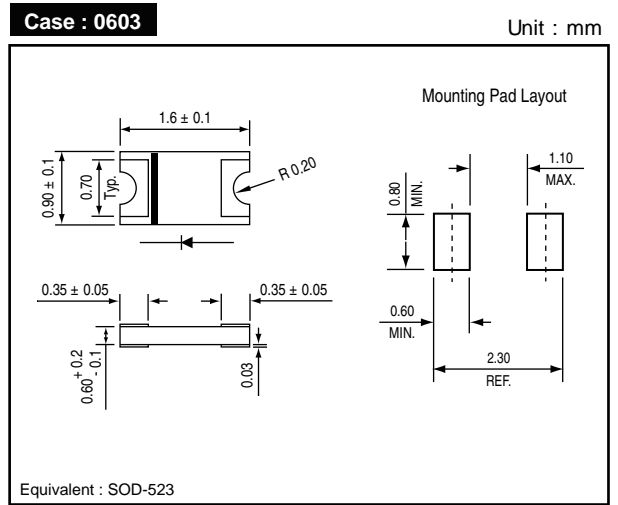
● **MECHANICAL DATA**

**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 :** 0.003 gram

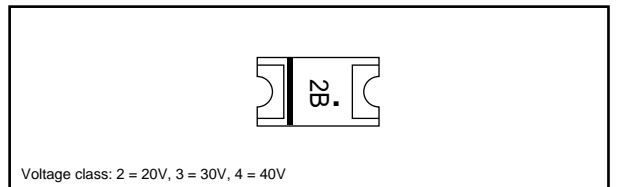
● **PACKING**

- \* 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
			USCD052H	USCD053H	USCD054H	
Repetitive peak reverse voltage	VRRM		20	30	40	V
Average forward current	IF(AV)		500			mA
Peak forward surge current	IFSM	8.3ms single half sine-wave	5.0			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	Min.	Typ.	Max.	Unit
Forward voltage	VF	IF = 500mA	-	0.47	0.50	V
Repetitive peak reverse current	IRRM	VR = @ 20V , Ta = 25 °C	-	-	50	uA
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz	-	35	-	pF
Thermal resistance	Rth(JA)	Junction to ambient	-	160	-	°C/W
	Rth(JL)	Junction to lead	-	110	-	°C/W

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

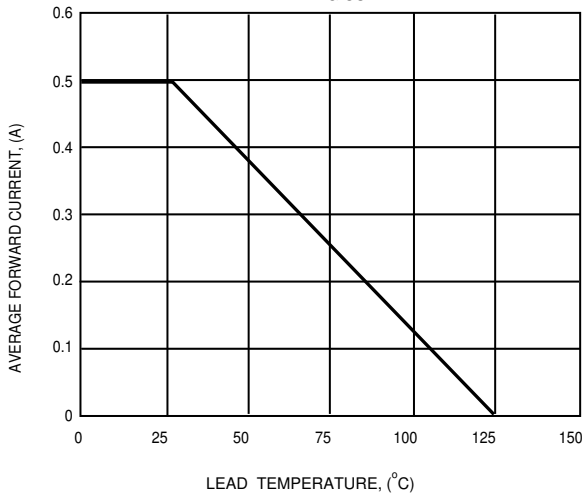


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

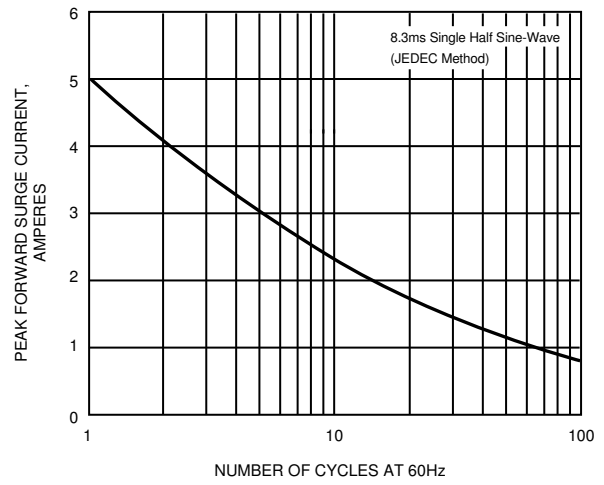


FIG. 3 - FORWARD CHARACTERISTICS

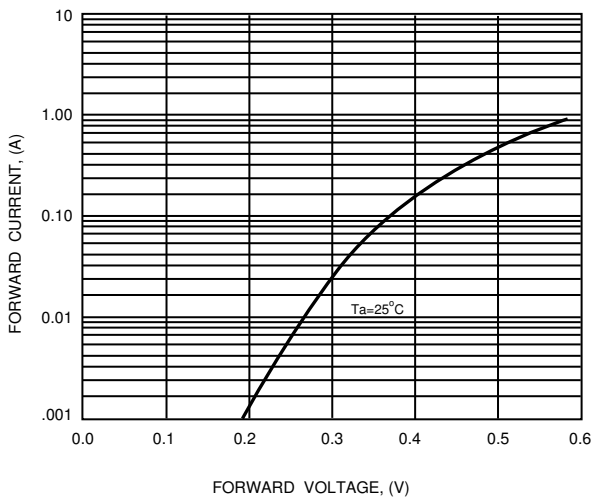


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

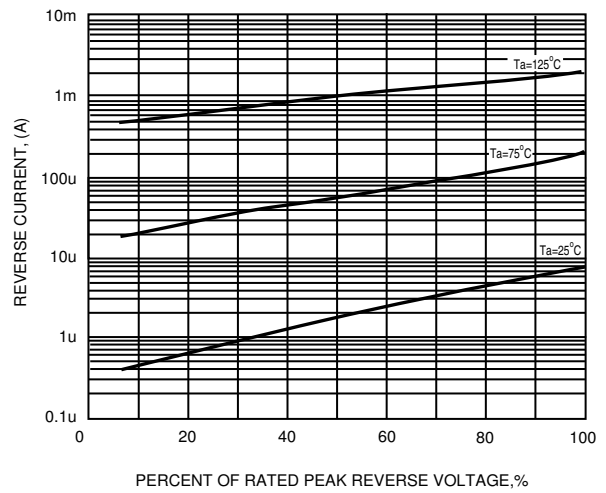


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

