

**USCD012H THRU USCD014H**
**● 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

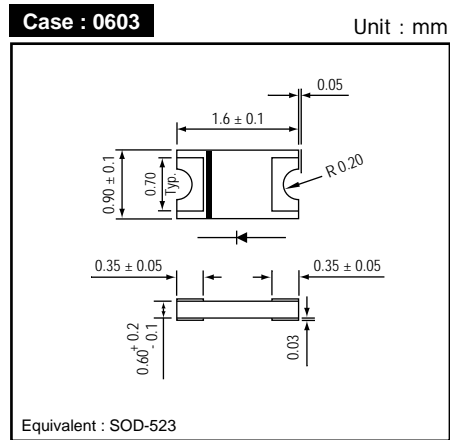
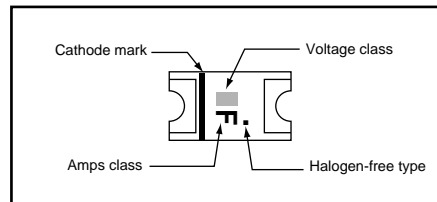
**Terminals :** Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.

**Polarity :** Laser Cathode band marking

**Weight :** 0.003 gram

**● PACKING**

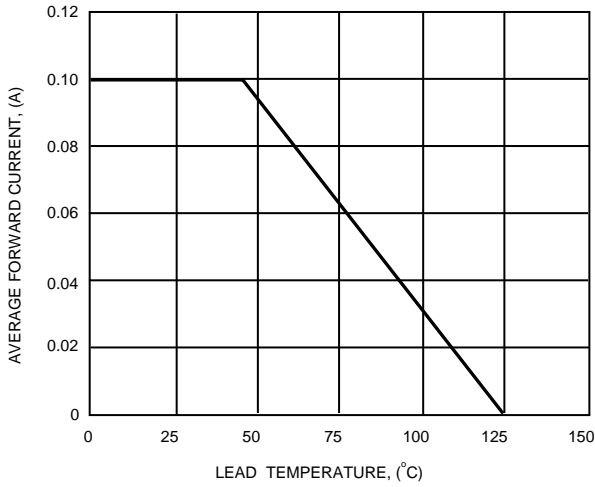
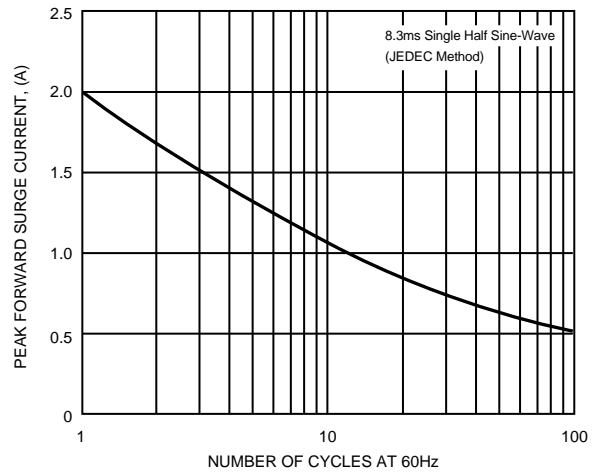
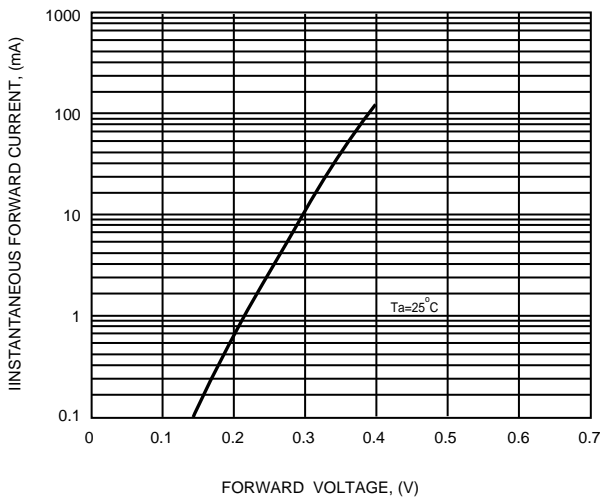
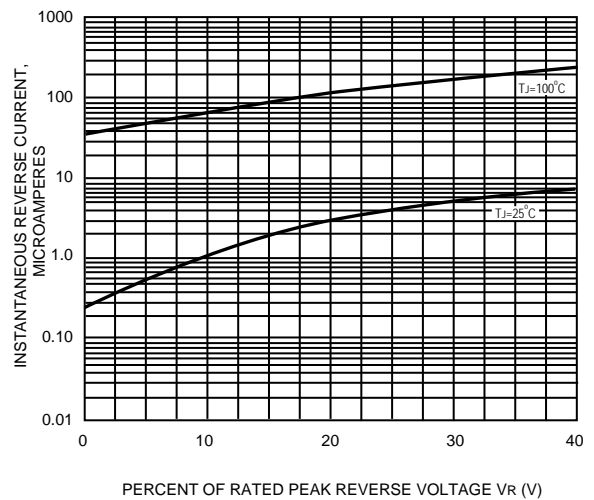
- \* 3,000 pieces per 7" (178mm ± 2mm) reel
- \* 5 reels per box
- \* 6 boxes per carton

**● OUTLINE DIMENSIONS**

**● MARKING**

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

ITEM	Symbol	Conditions	Rating		Unit
			USCD012H	USCD014H	
Repetitive peak reverse voltage	VRRM		20	40	V
Average forward current	IF(AV)		100		mA
Peak forward surge current	IFSM	8.3ms single half sine-wave	2.0		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 = 10mA	-	0.30	-	V
		IF = 50mA	-	0.35	-	
		IF = 100mA	-	0.38	0.40	
Repetitive peak reverse current	IRRM	VR = @ 10V, Ta = 25 °C	-	1	20	uA
		VR = Max. VRRM, Ta = 25 °C	-	8	50	
Junction capacitance	Cj	VR = 4V, f = 1.0 MHz	-	30	-	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 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**

**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**
