

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

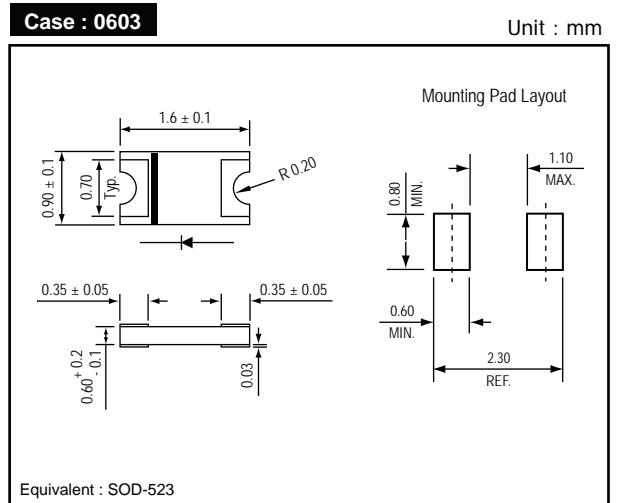
● **MECHANICAL DATA**

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

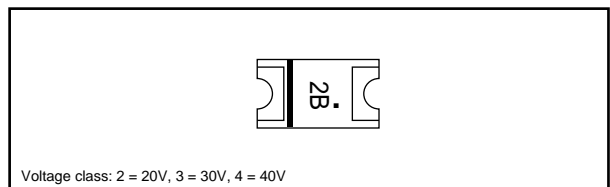
● **PACKING**

- * 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

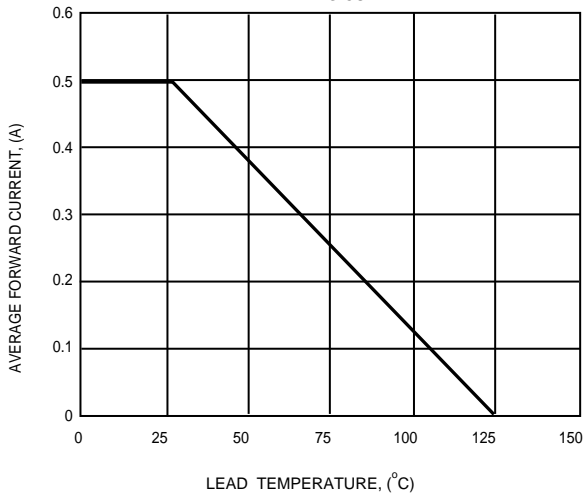


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

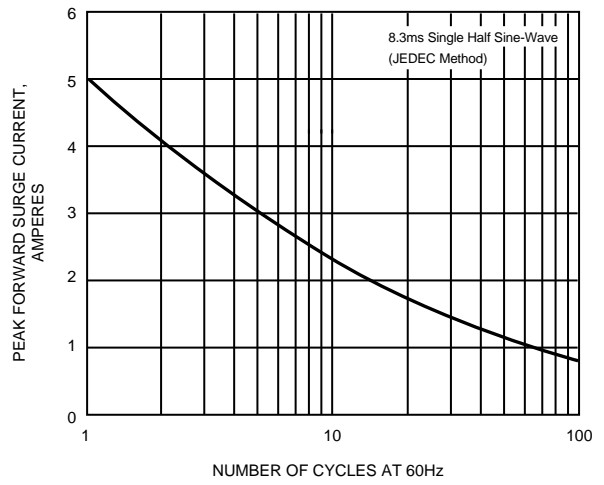


FIG. 3 - FORWARD CHARACTERISTICS

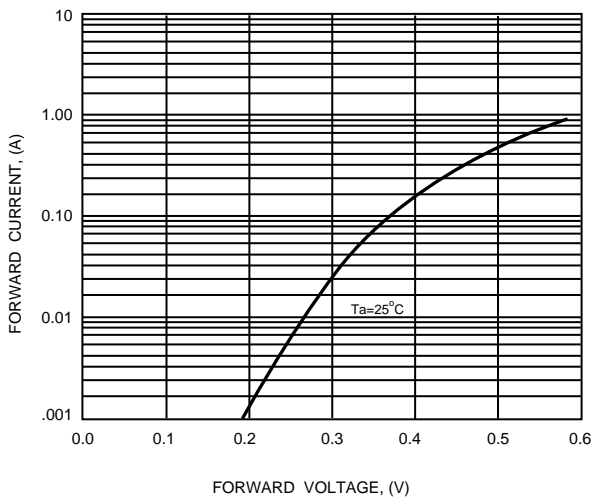


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

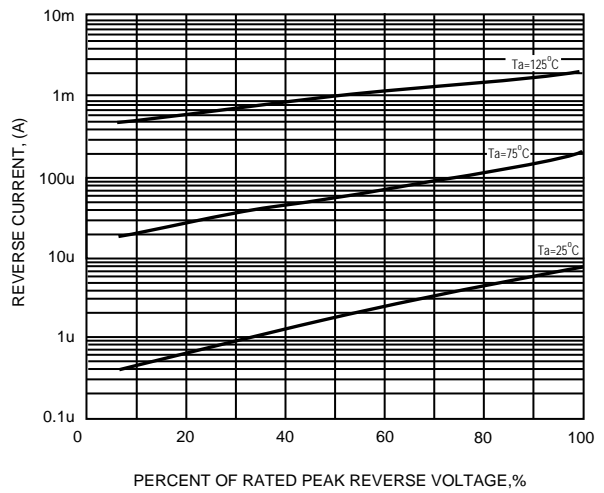


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

