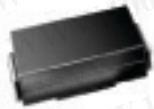




勝特力材料 886-3-5753170
 勝特力电子(上海) 86-21-54151736
 勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

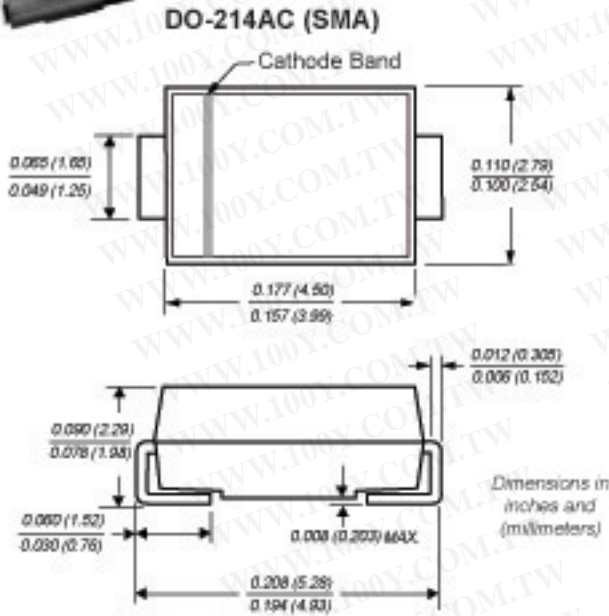
US1A thru US1M

Vishay Semiconductors
formerly General Semiconductor

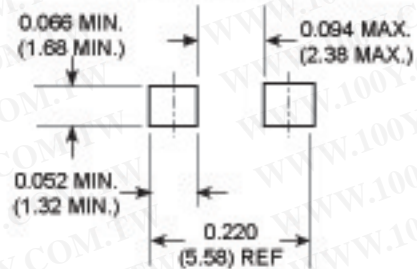


Surface Mount Ultrafast Rectifiers

Reverse Voltage 50 to 1000V
Forward Current 1.0A



Mounting Pad Layout



Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- For surface mount applications
- Glass passivated chip junctions
- Low profile package
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Low forward voltage, low power loss
- Built-in strain relief, ideal for automated placement
- High temperature soldering guaranteed: 250°C/10 seconds on terminals

Mechanical Data

Case: JEDEC DO-214AC molded plastic body over passivated chip

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.002 ounce, 0.064 gram

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | US1A | US1B | US1D | US1G | US1J | US1K | US1M | Units |
|--|--------------------------------------|------|------|------|-------------|------|------|------|-------|
| Device Marking Code | | UA | UB | UD | UG | UJ | UK | UM | |
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current at T _L = 110°C | I _{F(AV)} | | | | 1.0 | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | | | | 30 | | | | A |
| Maximum thermal resistance ⁽¹⁾ | R _{θJA} R _{θJL} | | | | 75 27 | | | | °C/W |
| Operating and storage temperature range | T _A , T _{STG} | | | | -55 to +150 | | | | °C |

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| | | | | | | |
|---|-----------------|-----|--|----------|--|----|
| Maximum instantaneous forward voltage at 1.0A | V _F | 1.0 | | 1.7 | | V |
| Maximum DC reverse current at rated DC blocking voltage T _A = 25°C T _A = 100°C | I _R | | | 10 50 | | μA |
| Maximum reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _r = 0.25A | t _{rr} | 50 | | 75 | | ns |
| Typical junction capacitance at 4.0V, 1MHz | C _J | 15 | | 10 | | pF |

Notes: (1) PCB mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad area

US1A thru US1M

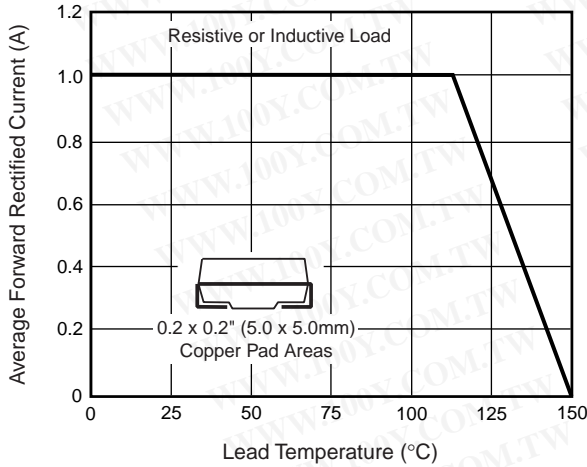
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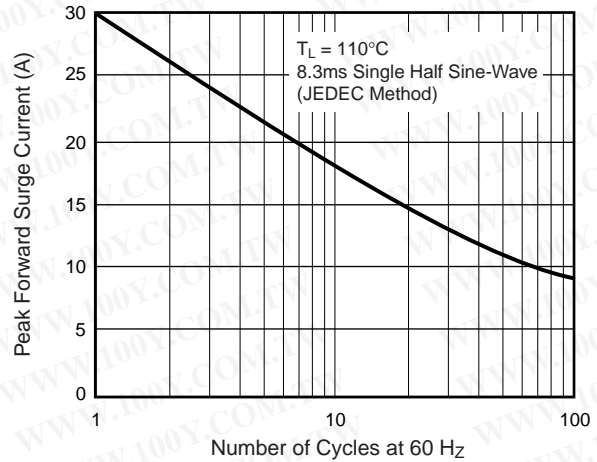


Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

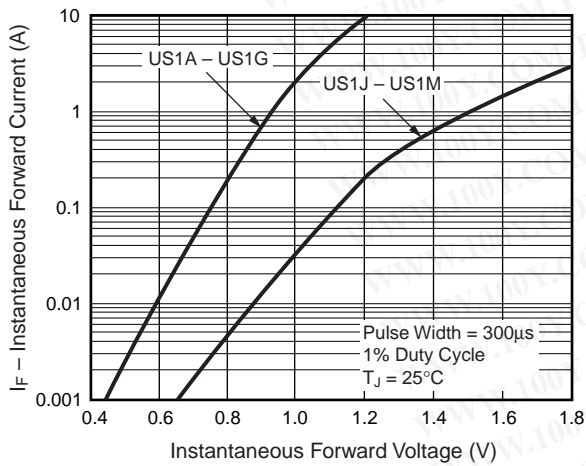
Forward Current Derating Curve



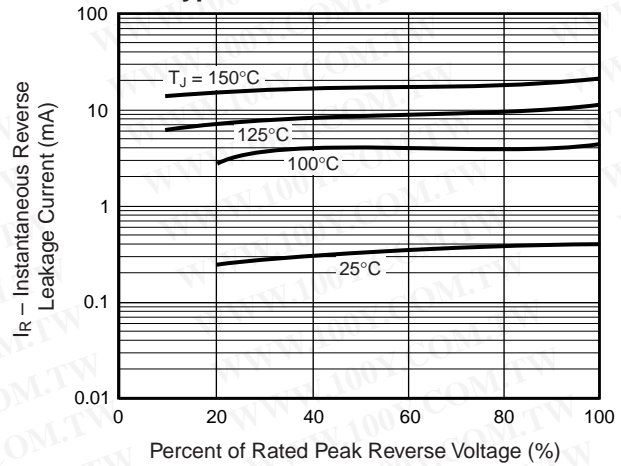
Maximum Non-Repetitive Peak Forward Surge Current



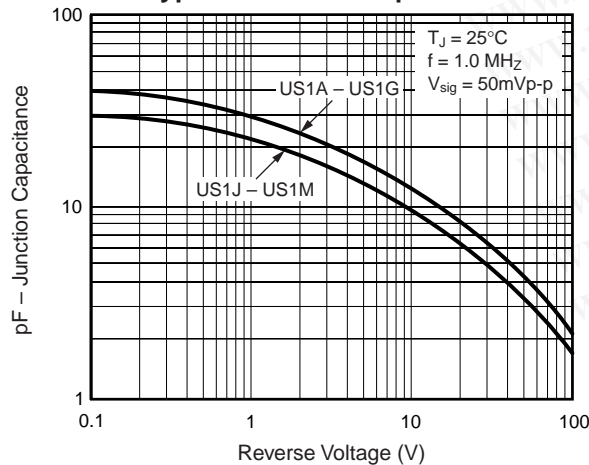
Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



Typical Transient Thermal Impedance

