

US1AF SERIES

SURFACE MOUNT ULTRA FAST RECTIFIER

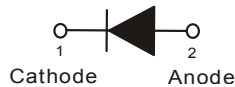
VOLTAGE 50-600 Volts **CURRENT** 1 Ampere

FEATURES

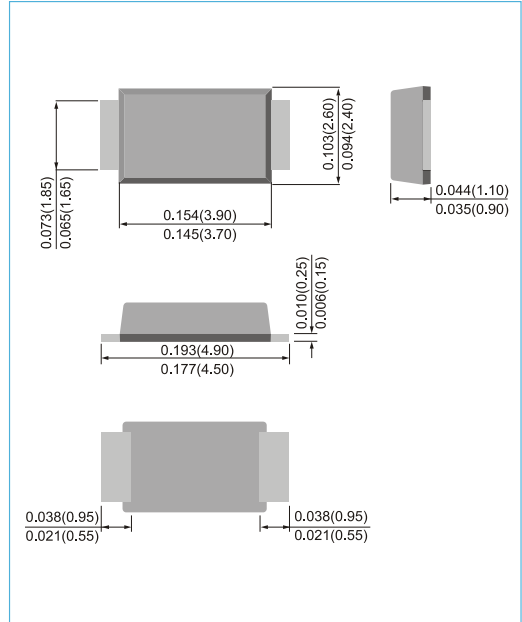
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- Lead free in comply with EU RoHS 2002/95/EC directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SMAF molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Approx. Weight: 0.0011 ounces, 0.0328 grams



SMAF Unit : inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

| PARAMETER | SYMBOL | US1AF | US1BF | US1DF | US1GF | US1JF | UNITS |
|---|--------------------------------------|-------------|-------|-------|-------|-------|--------|
| Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | V |
| RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | V |
| DC Blocking Voltage | V _R | 50 | 100 | 200 | 400 | 600 | V |
| Average Forward Current | I _{F(AV)} | 1 | | | | | A |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I _{FSM} | 30 | | | | | A |
| Forward Voltage at 1.0A | V _F | 1.0 | | 1.4 | 1.7 | V | |
| DC Reverse Current at Rated DC Blocking Voltage T _J =25°C | I _R | 1.0 | | | | | μA |
| Typical Junction capacitance V _R =4V,f=1MHz | C _J | 20 | | 15 | 10 | pF | |
| Typical Thermal Resistance ,Junction to Lead (Note 1) Junction to Ambient (Note 2) | R _{θJL} R _{θJA} | 19 150 | | | | | °C / W |
| Reverse Recovery Time (I _F =0.5A, I _R =1.0A,I _{rr} =0.25A) | T _{rr} | 50 | | | 100 | ns | |
| Operating Junction Temperature and Storage Temperature Range | T _J ,T _{STG} | -55 to +150 | | | | | °C |

NOTES : 1. Mounted on an FR4 PCB, single-sided copper, with 48cm² copper pad area
2. Mounted on an FR4 PCB, single-sided copper, mini pad.



US1AF SERIES

RATING AND CHARACTERISTIC CURVES

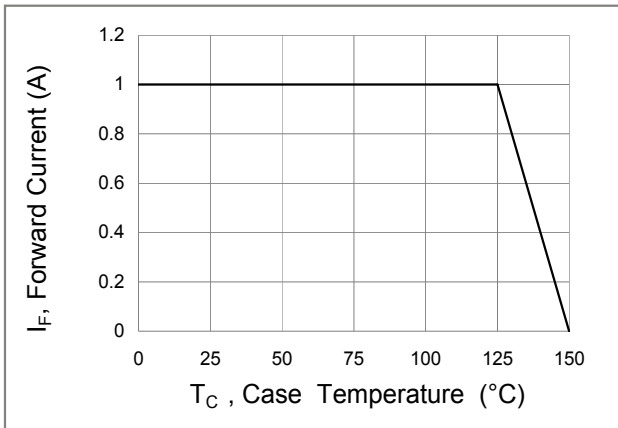


Fig.1 Forward Current Derating Curve

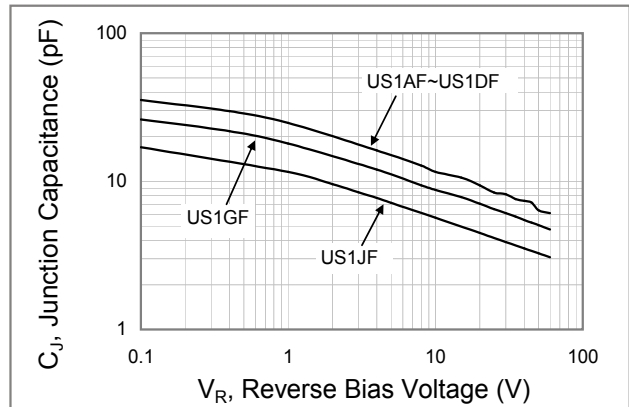


Fig.2 Typical Junction Capacitance

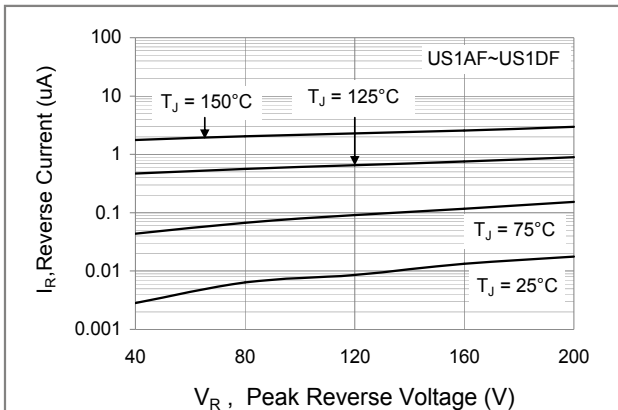


Fig.3 Typical Reverse Characteristics

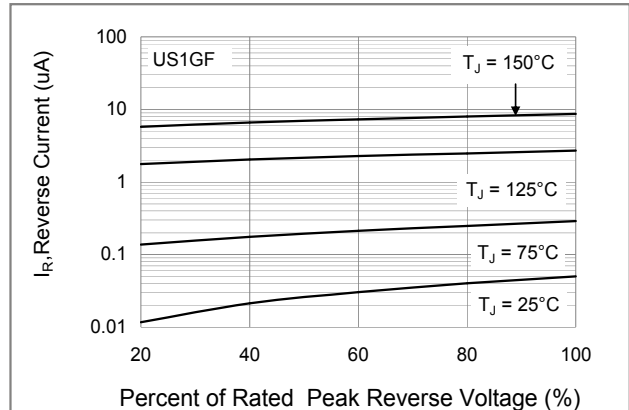


Fig.4 Typical Reverse Characteristics

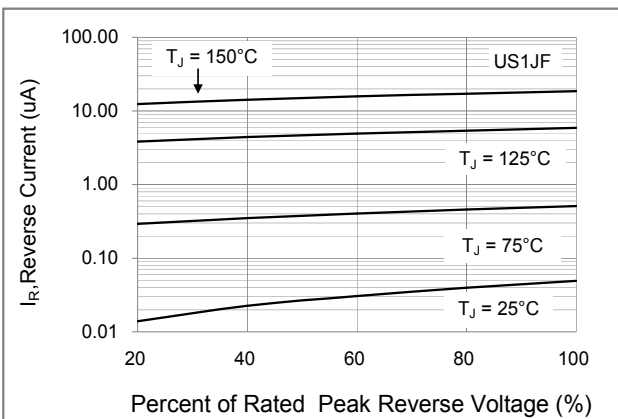


Fig.5 Typical Reverse Characteristics

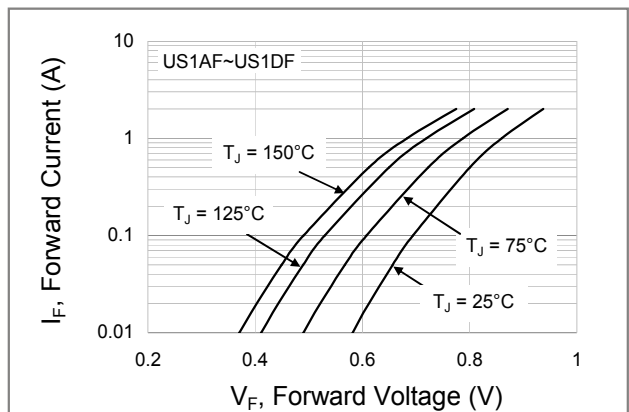


Fig.6 Typical Forward Characteristics



US1AF SERIES

RATING AND CHARACTERISTIC CURVES

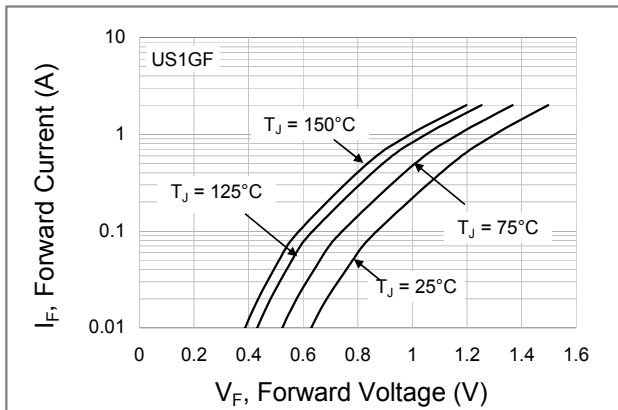


Fig.7 Typical Forward Characteristics

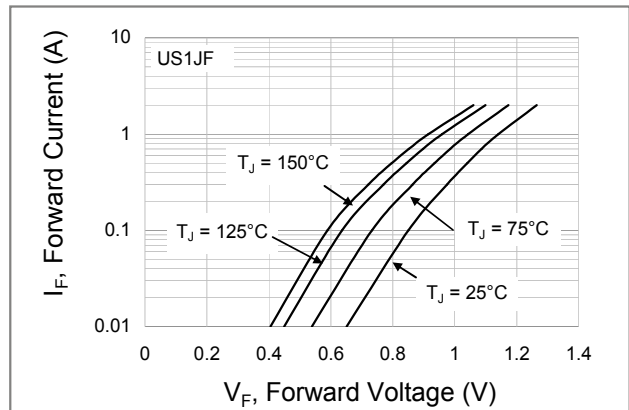
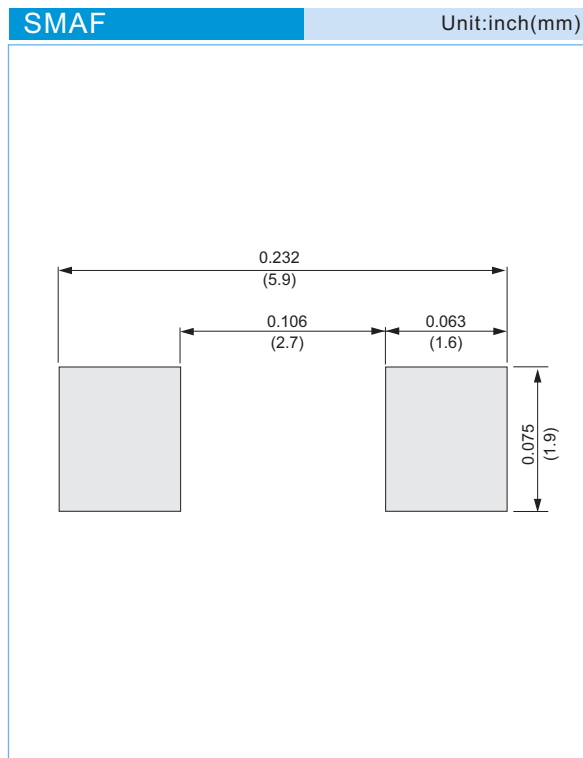


Fig.8 Typical Forward Characteristics



US1AF SERIES

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 10K per 13" plastic Reel
 - T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

Copyright PanJit International, Inc 2012

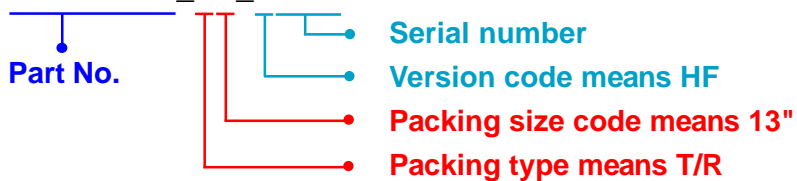
The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.



US1AF SERIES

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXXX | | |
|------------------------|----------------------|-------------------|----------------------|----------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| T/B | A | N/A | 0 | HF | 0 | serial number |
| T/R | R | 7" | 1 | RoHS | 1 | serial number |
| B/P | B | 13" | 2 | | | |
| T/P | T | 26mm | X | | | |
| TRR | S | 52mm | Y | | | |
| TRL | L | PBCU | U | | | |
| FORMING | F | PBCD | D | | | |

Part No_packing code_Version

US1AF_R1_00001

US1AF_R2_00001