

SURFACE MOUNT ULTRA FAST RECTIFIERS

REVERSE VOLTAGE - **50 to 1000** Volts
FORWARD CURRENT - **1.0** Ampere

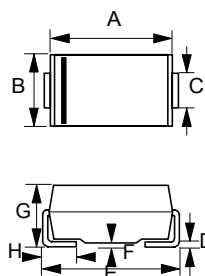
FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.002 ounces, 0.064 grams

SMA



| SMA | | |
|------|------|------|
| DIM. | MIN. | MAX. |
| A | 4.06 | 4.57 |
| B | 2.29 | 2.92 |
| C | 1.27 | 1.63 |
| D | 0.15 | 0.31 |
| E | 4.83 | 5.59 |
| F | 0.05 | 0.20 |
| G | 2.01 | 2.62 |
| H | 0.76 | 1.52 |

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | US1A | US1B | US1D | US1G | US1J | US1K | US1M | UNIT |
|--|-------------------|-------------|------|------|------|------|------|------|------|
| Maximum Recurrent 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 @T _L = 75°C | I _(AV) | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD) | I _{FSM} | 30 | | | | | | | A |
| Maximum forward Voltage at 1.0A DC | V _F | 1.0 | | 1.3 | | 1.7 | | V | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J = 25°C @T _J = 100°C | I _R | 5.0 | | | | 100 | | | uA |
| Maximum Reverse Recovery Time (Note 1) | T _{RR} | 50 | | | | 75 | | | ns |
| Typical Junction Capacitance (Note 2) | C _J | 20 | | | | 10 | | | pF |
| Typical Thermal Resistance (Note 3) | R _{θJL} | 30 | | | | | | | °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | | | °C |

NOTES : 1.Reverse Recovery Test Conditions : I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

2.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3.Thermal Resistance junction to Lead.

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RATING AND CHARACTERISTIC CURVES

US1A thru US1M

