

ESL1A-R THRU ESL1J-R

SURFACE MOUNT ULTRAFAST GLASS PASSIVATED JUNCTION RECTIFIER

VOLTAGE: 50 to 600V

CURRENT: 1.0A

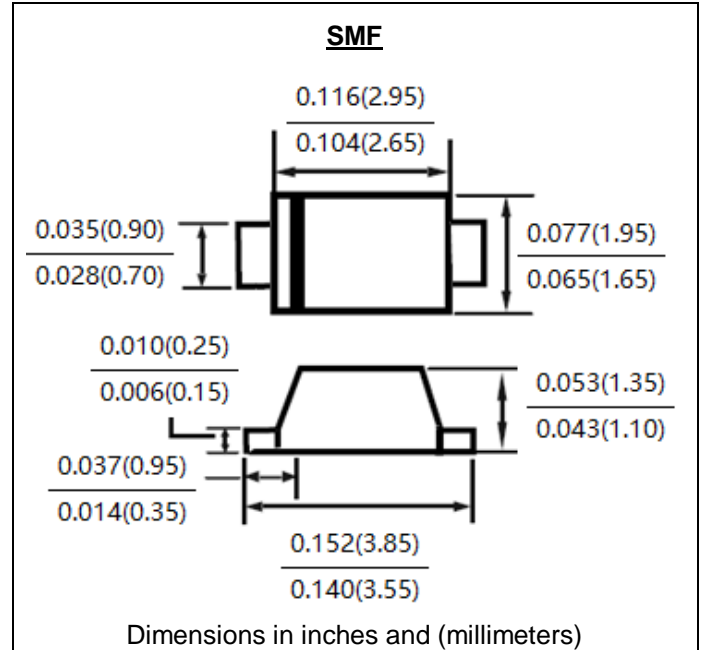


FEATURE

Ideal for surface mount pick and place application
 Low profile package
 Built-in strain relief
 High temperature soldering guaranteed
 260°C/10sec/at terminals
 Glass passivated chip
 Ultrafast recovery time for high efficiency

MECHANICAL DATA

Terminal: Solder plated, solderable per J-STD-002
 Case: Molded with UL-94 class V-0 recognized Flame Retardant Epoxy
 Polarity: color band denotes cathode
 Marking: E1A~E1J



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

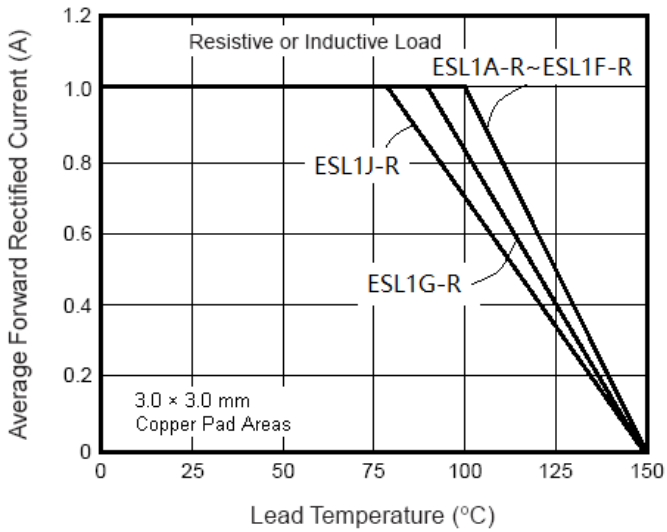
| | Symbol | ESL1 A-R | ESL1 B-R | ESL1 C-R | ESL1 D-R | ESL1 F-R | ESL1 G-R | ESL1 J-R | units |
|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{rrm} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | V _{rms} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC blocking Voltage | V _{dc} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Rectified Current 3/8" lead length 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 | I _{fsm} | 30 | | | | | | | A |
| Maximum Forward Voltage at rated forward current | V _f | 0.95 | | | 1.0 | | 1.25 | 1.7 | V |
| Maximum DC Reverse Current at rated DC blocking voltage | I _r | 5.0 | | | 300 | | | | μ A |
| Maximum Reverse Recovery Time (Note 1) | T _{rr} | 25 | | | | | | 35 | nS |
| Typical Junction Capacitance (Note 2) | C _j | 9.0 | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | R _{th(jl)} R _{th(ja)} R _{th(jc)} | | | | 21 | | | | °C/W |
| Storage and Operating Junction Temperature | T _{stg} , T _j | -50 to +150 | | | | | | | °C |

Note:

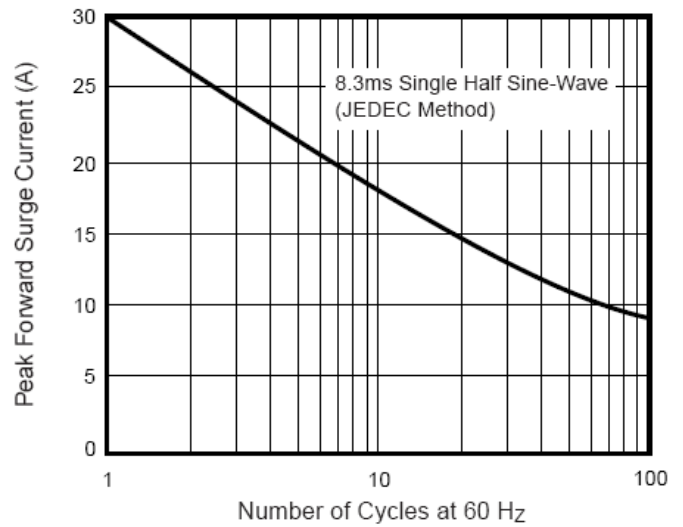
- Reverse Recovery Condition I_f = 0.5A, I_r = 1.0A, I_{rr} = 0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0V_{dc}
- Thermal Resistance from Junction to terminal mounted on 3×3mm copper pad area

RATINGS AND CHARACTERISTIC CURVES ESL1A-R THRU ESL1J-R

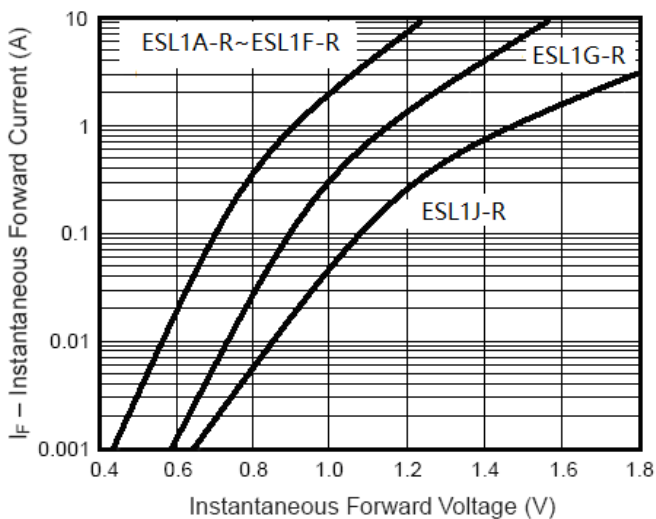
Forward Current Derating Curve



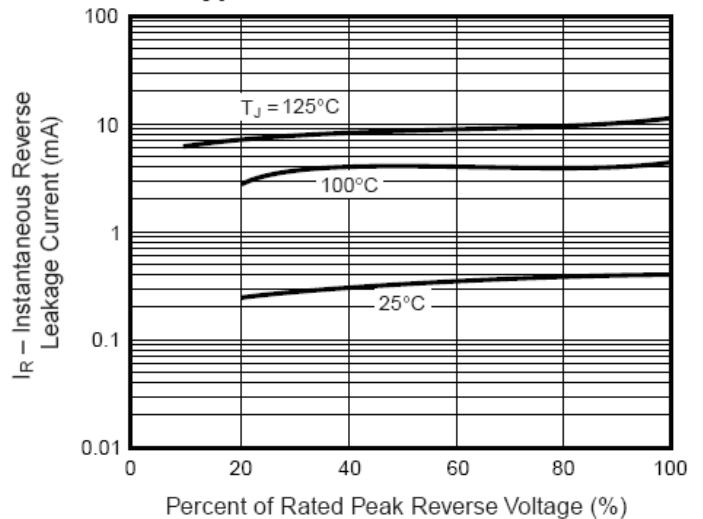
Maximum Non-Repetitive Peak Forward Surge Current



Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance

