

1.0A Surface Mount Super Fast Rectifier

Features

- Low profile surface mounted package
- Glass passivated junction
- Ultra fast recovery time for high efficiency
- Plastic package has underwriters laboratory flammability classification 94V-0
- High temperature soldering: 250 °C /10 seconds at terminals
- RoHS compliant



SMA

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted)

| Symbol | Description | ES1A | ES1B | ES1D | ES1F | ES1G | ES1J | ES1K | Unit | Conditions |
|--------------------------------------|--|------------|------|------|------|------|------|------|------|---|
| VRRM | Maximum Repetitive Peak Reverse Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | V | |
| VRMS | Maximum RMS Voltage | 35 | 70 | 140 | 210 | 280 | 420 | 560 | V | |
| VDC | Maximum DC Blocking Voltage | 50 | 100 | 200 | 300 | 400 | 600 | 800 | V | |
| I_{AV} | Maximum Average Forward Rectified Current | 1.0 | | | | | | | A | TL=110°C |
| I_{FSM} | Peak Forward Surge Current | 30 | | | | | | 25 | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) |
| T_J,T_{STG} | Operating Junction and Storage Temperature Range | -55 to 150 | | | | | | | °C | |

Note: Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted)

| Symbol | Description | ES1A | ES1B | ES1D | ES1F | ES1G | ES1J | ES1K | Unit | Conditions | |
|-----------------|---|------|------|------|------|------|------|------|------|---------------|--|
| V_F | Maximum Instantaneous Forward Voltage | 0.95 | | | 1.25 | | 1.7 | 2.2 | V | $I_F=1.0$ A | |
| I_R | Maximum DC Reverse Current at Rated DC Blocking Voltage | 5 | | | | | | | | μA | $T_A=25^{\circ}C$ |
| | | 50 | | | | | | | | | $T_A=125^{\circ}C$ |
| T_{rr} | Typical Reverse Recovery Time | 35 | | | | | | | | nS | $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$ |
| C_J | Typical Junction Capacitance | 10 | | | | | | | | pF | Measured at 1.0 MHz and Applied $V_r = 4.0$ volts. |
| $R_{\theta-JA}$ | Maximum Thermal Resistance | 34 | | | | | | | | $^{\circ}C/W$ | Mounted on 0.2" x 0.2" (5mmx5mm) copper pad area |

Note: Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Typical Characteristics Curves

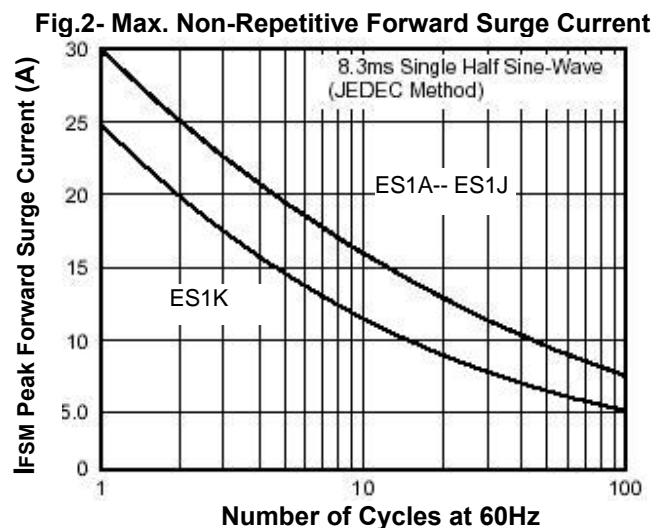
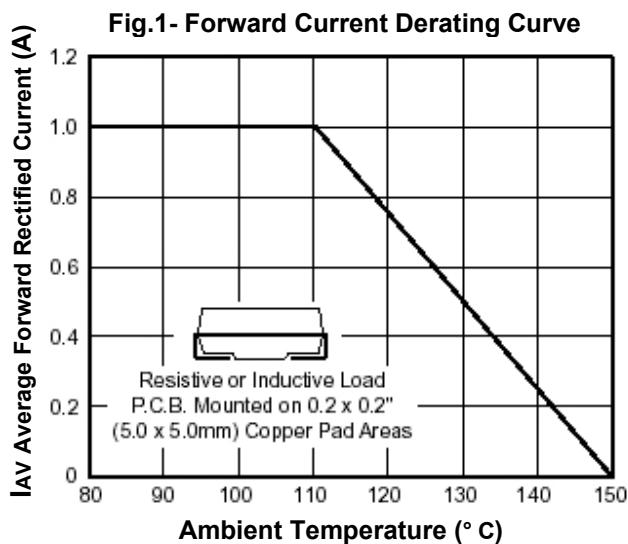


Fig.3- Typical Reverse Characteristics

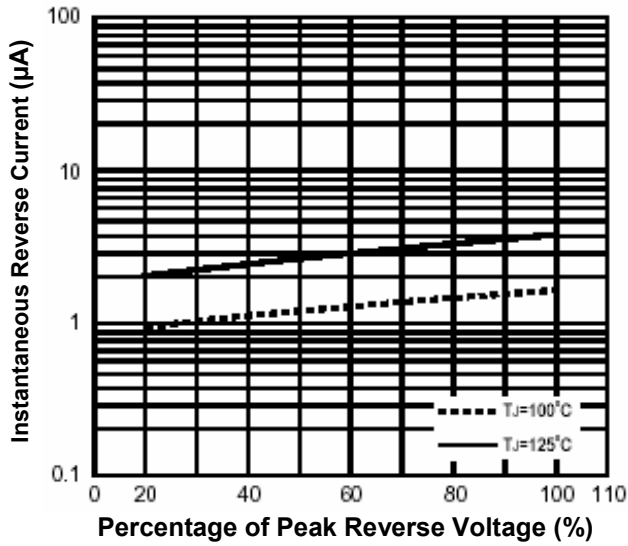
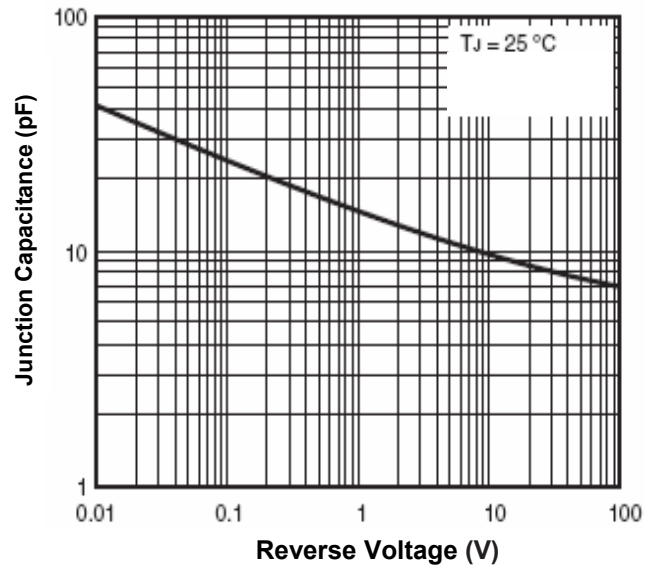
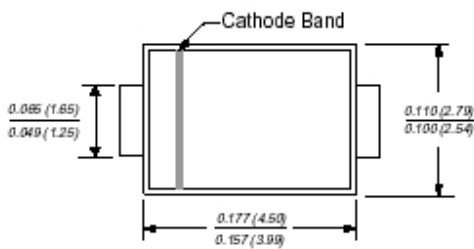


Fig.4- Junction Capacitance



Dimensions in inch (mm)



DO-214AC (SMA)

