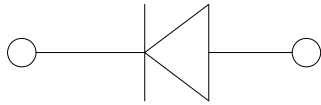
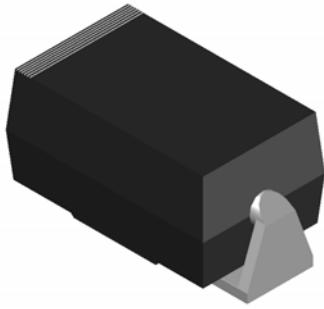


Super Fast Recovery Rectifier



Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C max. 10 s, per JESD 22-B106

Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

Mechanical Data

- **Package:** SMA-W
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | ES1AW | ES1BW | ES1CW | ES1DW | ES1FW | ES1GW | ES1HW | ES1JW |
|------------------------------------------------------------------------------------------|--------------------|------|-----------|-------|-------|-------|-------|-------|-------|-------|
| Device marking code | | | ES1AW | ES1BW | ES1CW | ES1DW | ES1FW | ES1GW | ES1HW | ES1JW |
| Repetitive Peak Reverse Voltage | VRRM | V | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 |
| Average Forward Current @60Hz sine wave, Resistance load, T _a =50°C | I _{F(AV)} | A | 1.0 | | | | | | | |
| Surge(Non-repetitive)Forward Current @ 60Hz Half-sine wave,1 cycle, T _a =25°C | I _{FSM} | A | 30 | | | | | | | |
| Storage Temperature | T _{stg} | °C | -55 ~+150 | | | | | | | |
| Junction Temperature | T _j | °C | -55~+125 | | | | | | | |

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | ES1AW | ES1BW | ES1CW | ES1DW | ES1FW | ES1GW | ES1HW | ES1JW |
|-------------------------------------------------------------------|----------------|------|-------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum instantaneous forward voltage drop per diode | V _F | V | I _{FM} =1.0A | 0.95 | | | | 1.3 | | 1.7 | |
| Maximum DC reverse current at rated DC blocking voltage per diode | I _R | μA | T _a =25°C | 5 | | | | | | | |
| | | | T _a =100°C | 150 | | | | | | | |
| Reverse Recovery time | t _r | ns | I _F =0.5A I _R =1A I _{RR} =0.25A | 35 | | | | | | | |
| Typical junction capacitance | C _j | pF | Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C. | 40 | | | | 25 | | | |



ES1AW THRU ES1JW

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | ES1AW | ES1BW | ES1CW | ES1DW | ES1FW | ES1GW | ES1HW | ES1JW |
|--------------------|----------------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Thermal Resistance | R θ J-A | $^\circ\text{C}/\text{W}$ | 55 | | | | | | | |

■ Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| ES1AW-ES1JW | F1 | Approximate 0.067 | 5000 | 10000 | 80000 | Reel |

■ Characteristics(Typical)

FIG.1: I_o - T_a Curve

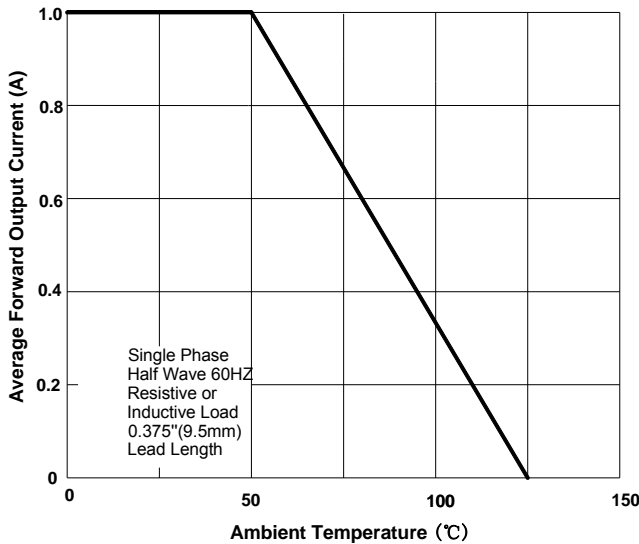


FIG.2: Surge Forward Current Capability

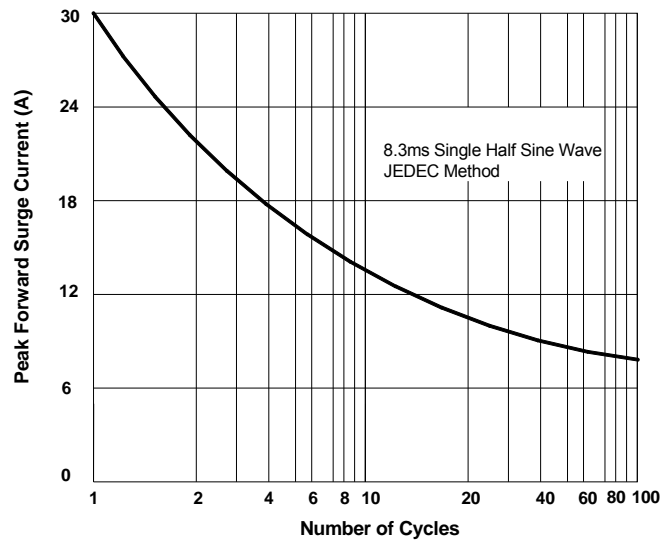


FIG.3: Forward Voltage

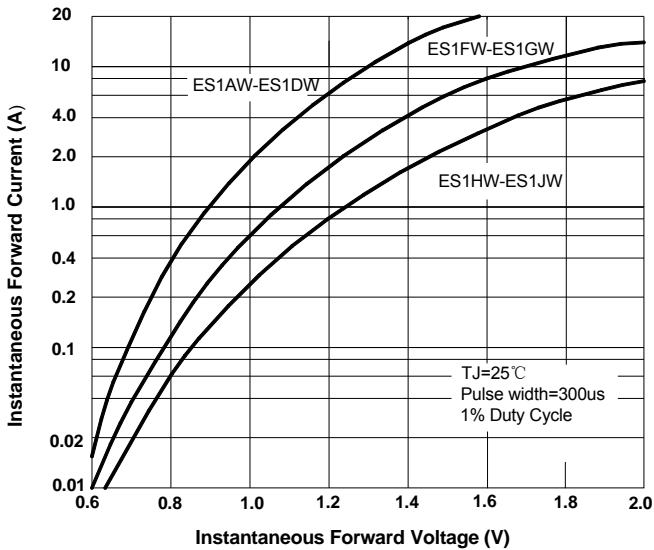


FIG.4: Typical Reverse Characteristics

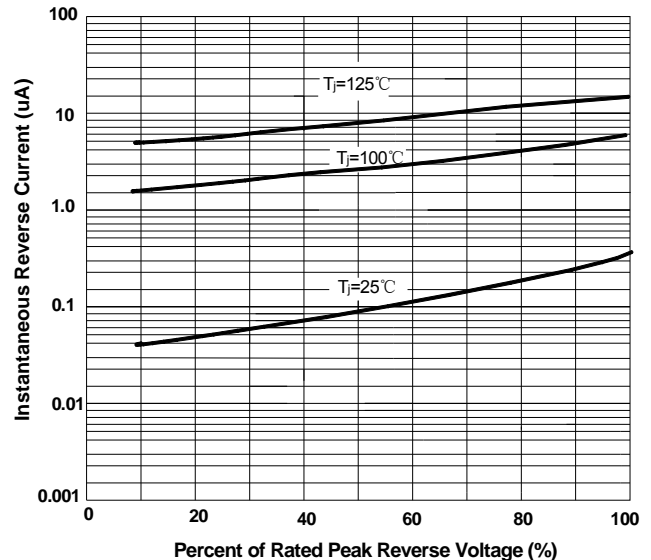
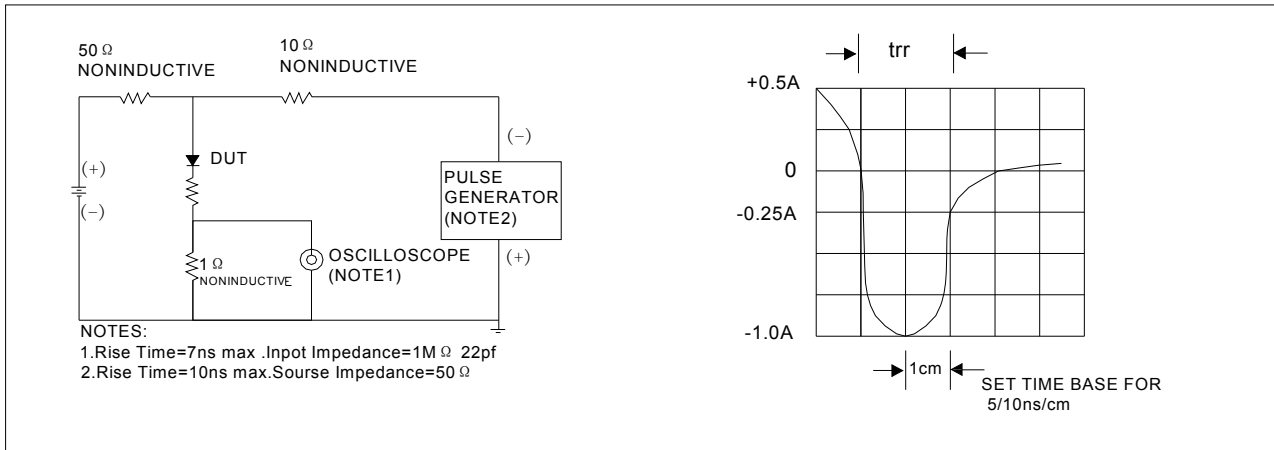
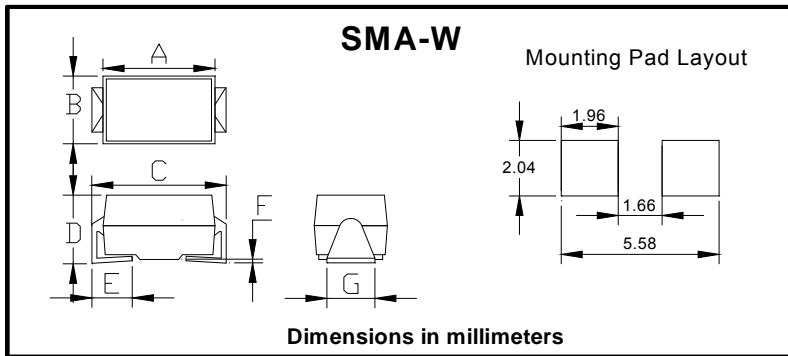


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



| SMA-W | | |
|-------|------|------|
| Dim | Min | Max |
| A | 4.00 | 4.60 |
| B | 2.40 | 2.65 |
| C | 4.80 | 5.31 |
| D | 2.05 | 2.45 |
| E | 0.80 | 1.50 |
| F | 0.10 | 0.20 |
| G | 1.15 | 1.80 |



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