



## Surface Mount Super Fast Glass Passivated Rectifiers

Reverse Voltage - 50 to 600 Volts  
Forward Current - 1.0 Amperes

### Features

- Fast switching for high efficiency
- Low cost
- Low reverse leakage current
- High current capability
- Low forward voltage drop
- Meet UL flammability classification 94V-0
- AEC-Q101 qualified

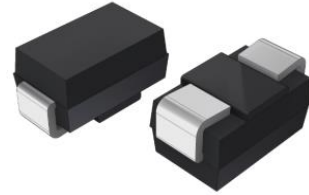
### Mechanical Data

- Case: JEDEC SMA Molded plastic
- Polarity: Color band denotes cathode
- Mounting position: Any

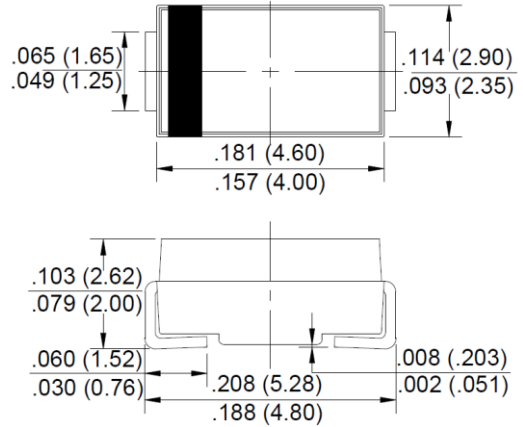
### Applications

- For use in SMPS, high frequency inverters, PWM and polarity protection applications

### SMA



RoHS  
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

### Maximum Ratings and Electrical Characteristics

Rating 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	ES1A	ES1B	ES1D	ES1G	ES1J	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	V
Maximum Average Forward Rectified Current @T <sub>A</sub> =55°C	I <sub>(AV)</sub>	1.0					A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30					A
Peak Forward Voltage at 1.0A DC (Note1)	V <sub>F</sub>	0.95		1.3		1.70	V
Maximum DC Reverse Current @T <sub>J</sub> =25°C	I <sub>R</sub>	5.0					μA
at Rated DC Blocking Voltage @T <sub>J</sub> =100°C		100					
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	35					nS
Typical Junction Capacitance (Note3)	C <sub>J</sub>	30			25		pF
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	40					°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150					°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150					°C

Notes: 1. 300uS pulse width, 2% duty cycle.

2. Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A .
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
4. The typical data above is for reference only



Fig. 1 - Forward Current Derating Curve

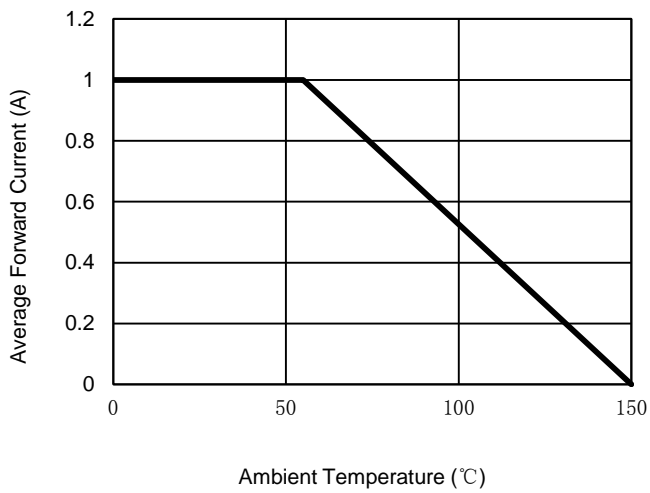


Fig. 2 - Maximum Non-Repetitive Surge Current

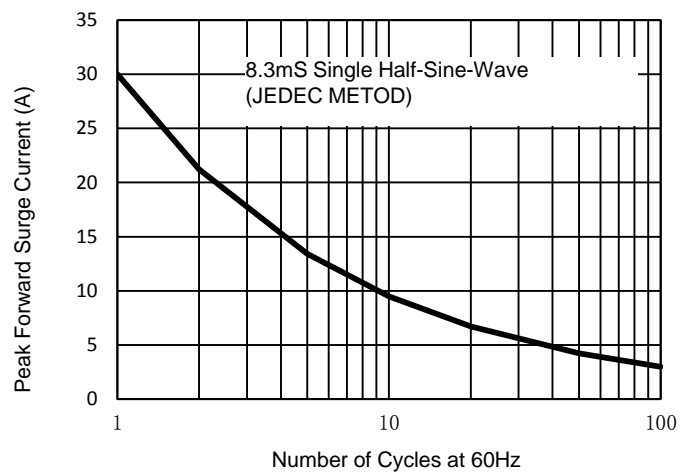


Fig. 3 - Typical Junction Capacitance

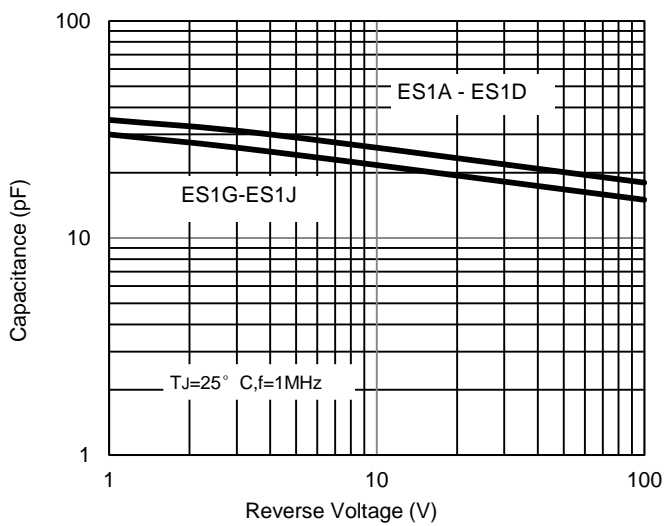


Fig. 4 - Typical Forward Characteristics

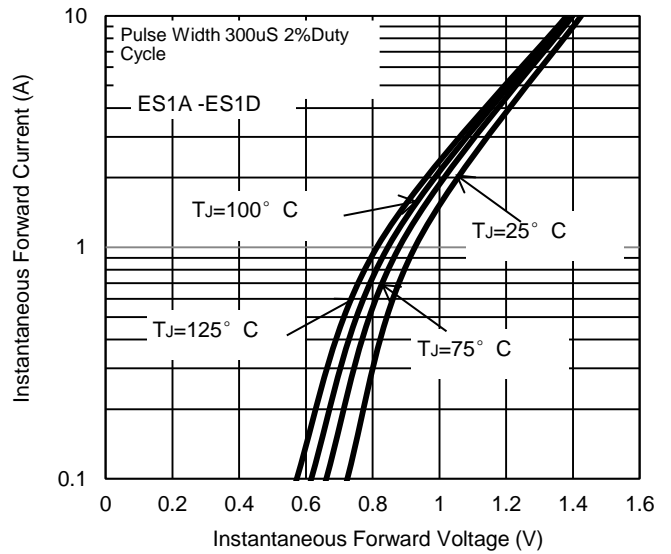


Fig. 5 - Typical Forward Characteristics

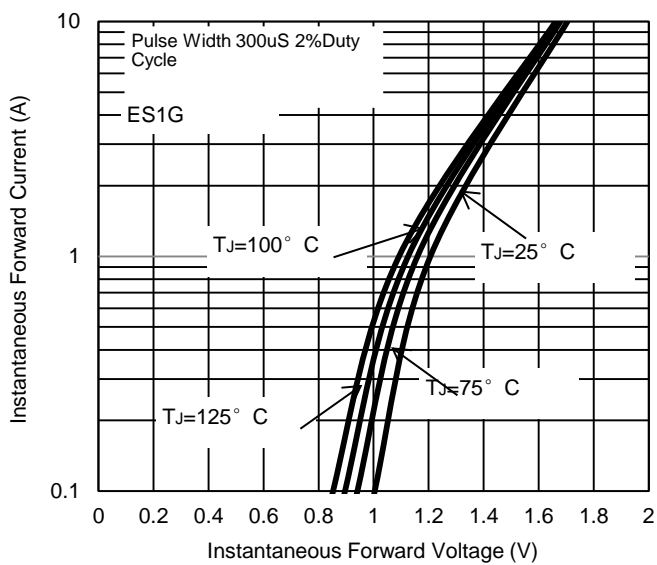
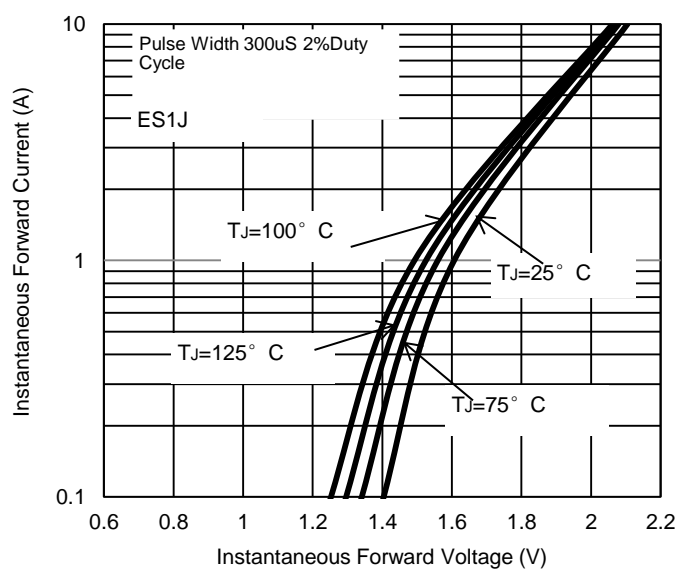


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.



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