

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

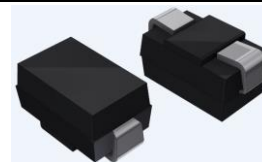
Mechanical Data

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

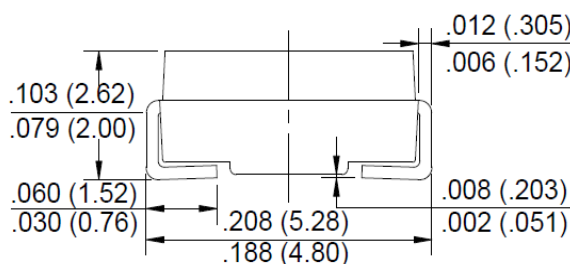
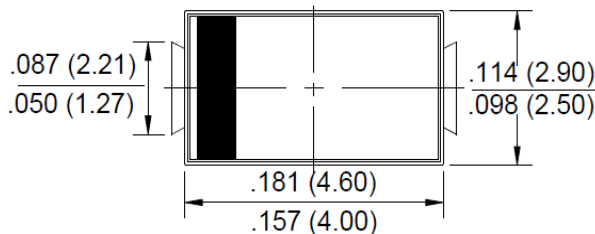
Applications

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

A-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	ES1AA	ES1BA	ES1DA	ES1GA	ES1JA	Unit
Maximum Repetitive Peak Reverse Voltage	VRRM	50	100	200	400	600	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	V
Maximum Average Forward Rectified Current @TA=55℃	I(AV)	1.0					A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	IFSM	30					A
Peak Forward Voltage at 1.0A DC (Note1)	VF	0.95			1.25	1.70	V
Maximum DC Reverse Current @TJ=25℃	IR	5.0					μA
at Rated DC Blocking Voltage @TJ=100℃		100					
Maximum Reverse Recovery Time (Note 2)	TRR	35					nS
Typical Junction Capacitance (Note3)	CJ	30			25		pF
Typical Thermal Resistance Junction to Ambient	RθJA	40					℃/W
Operating Junction Temperature Range	TJ	-55 to +150					℃
Storage Temperature Range	TSTG	-55 to +150					℃

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

2. Measured with I_F=0.5A, I_R=1A, I_{RR}=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

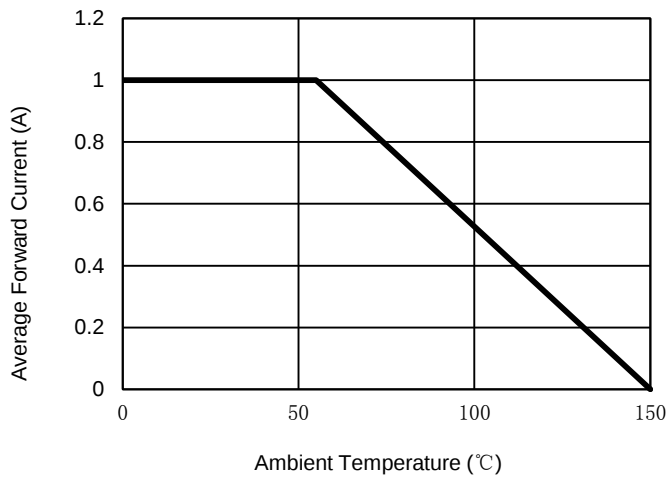


Fig. 2 - Maximum Non-Repetitive Surge Current

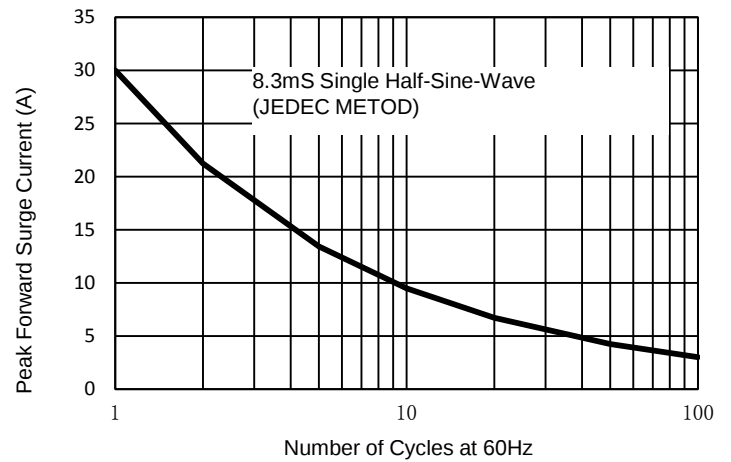


Fig. 3 - Typical Junction Capacitance

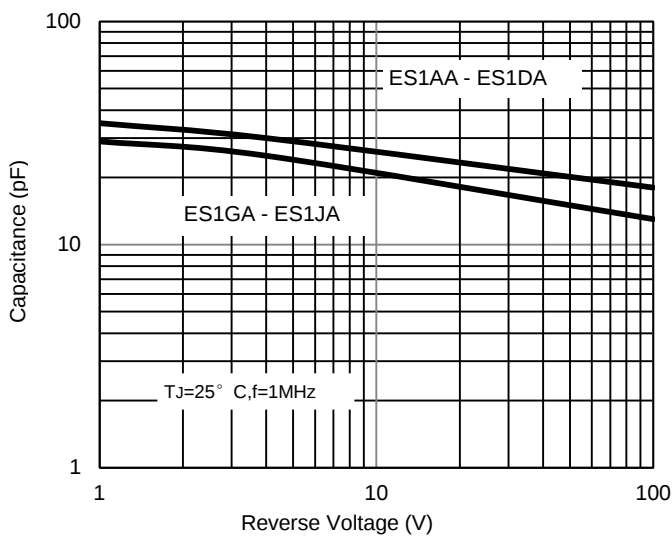


Fig. 4 - Typical Forward Characteristics

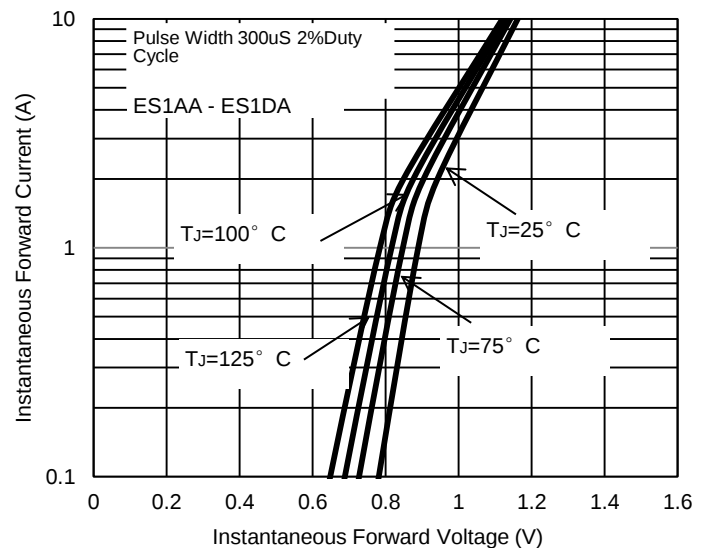


Fig. 5 - Typical Forward Characteristics

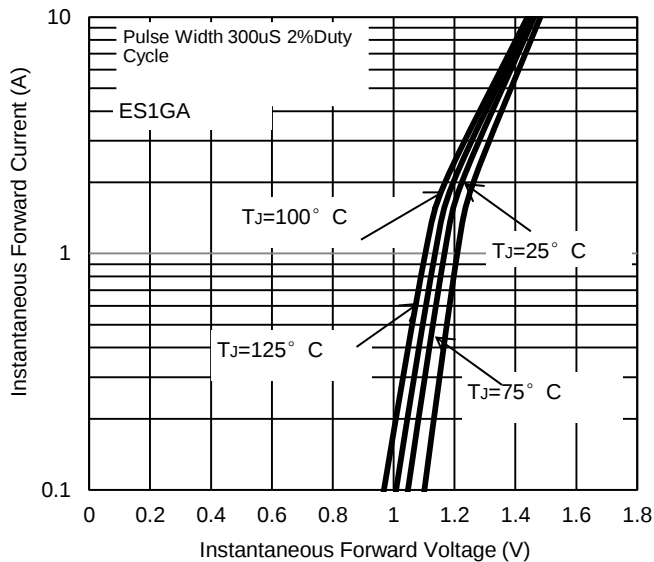
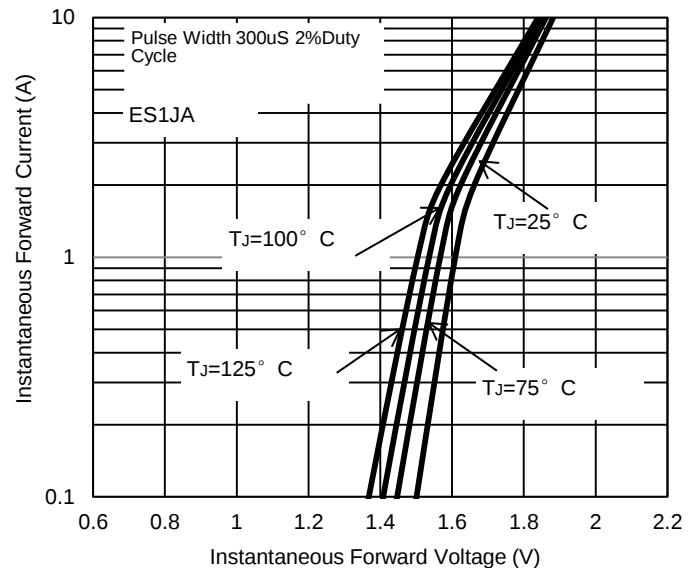


Fig. 6 - Typical Forward Characteristics



The curve above is for reference only.

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