

## SURFACE MOUNT SUPER FAST GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE - **50** to **600** Volts  
FORWARD CURRENT - **3.0** Amperes

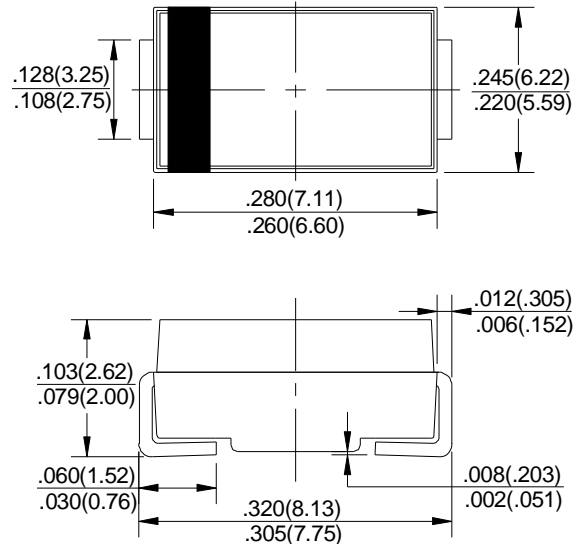
### FEATURES

- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

### MECHANICAL DATA

- Case: Molded Plastic
- Polarity: Color band denotes cathode
- Weight: 0.007 ounces, 0.21 grams
- Mounting position: Any

**SMC**



Dimensions in inches and (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	ES3A	ES3B	ES3D	ES3G	ES3J	UNIT
Maximum Recurrent 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>	3.0					A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	I <sub>FSM</sub>	100					A
Peak Forward Voltage at 3.0A DC	V <sub>F</sub>	0.95		1.3		1.70	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C	I <sub>R</sub>	5.0					μA
Maximum Reverse Recovery Time(Note 1)	T <sub>RR</sub>	35					nS
Typical Junction Capacitance (Note2)	C <sub>J</sub>	70			45		pF
Typical Thermal Resistance (Note3)	R <sub>θJA</sub>	20					°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150					°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150					°C

NOTES: 1.Measured with I<sub>F</sub>=0.5A, I<sub>R</sub>=1A, I<sub>RR</sub>=0.25A

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3.Thermal resistance junction to ambient.

REV. 1, 30-Dec-2011

FIG. 1 – FORWARD CURRENT DERATING CURVE

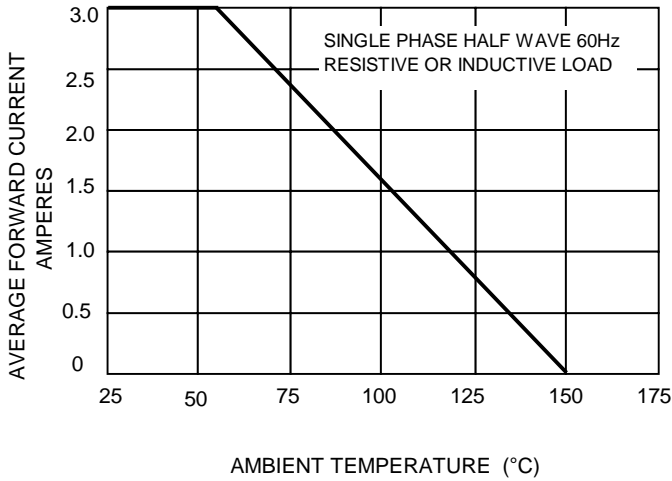


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

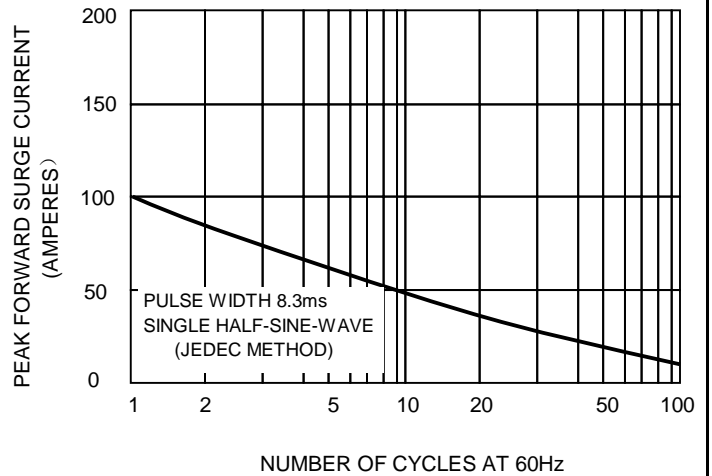


FIG.3 – TYPICAL JUNCTION CAPACITANCE

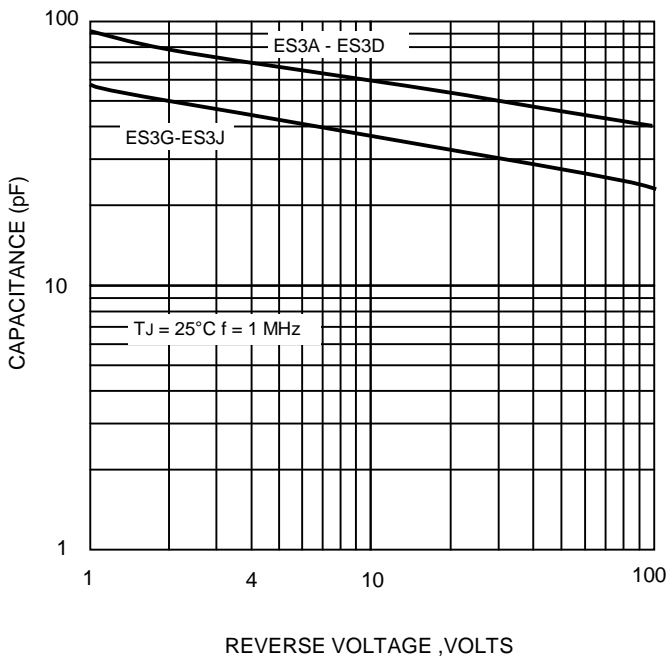


FIG.4-TYPICAL FORWARD CHARACTERISTICS

