

## SURFACE MOUNT SUPER FAST GLASS PASSIVATED RECTIFIERS

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

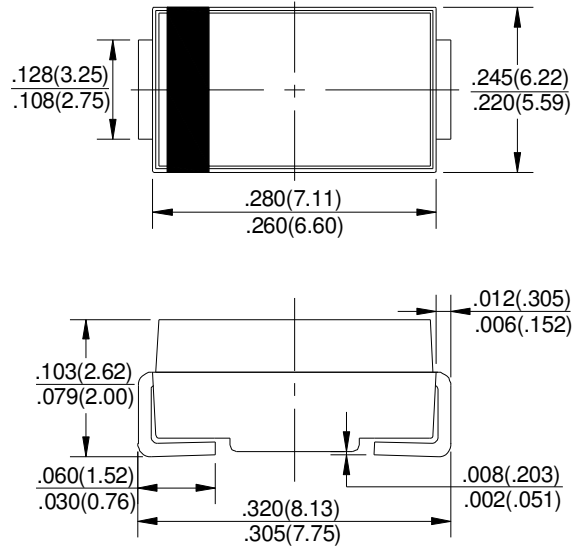
### FEATURES

- 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.

FIG. 1 – FORWARD CURRENT DERATING CURVE

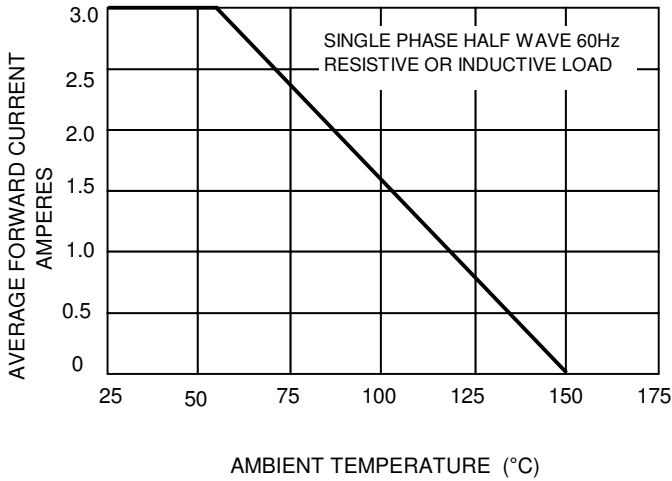


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

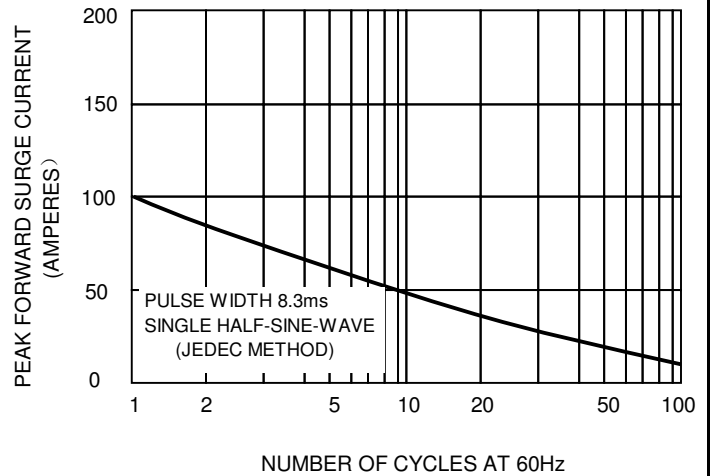


FIG.3 – TYPICAL JUNCTION CAPACITANCE

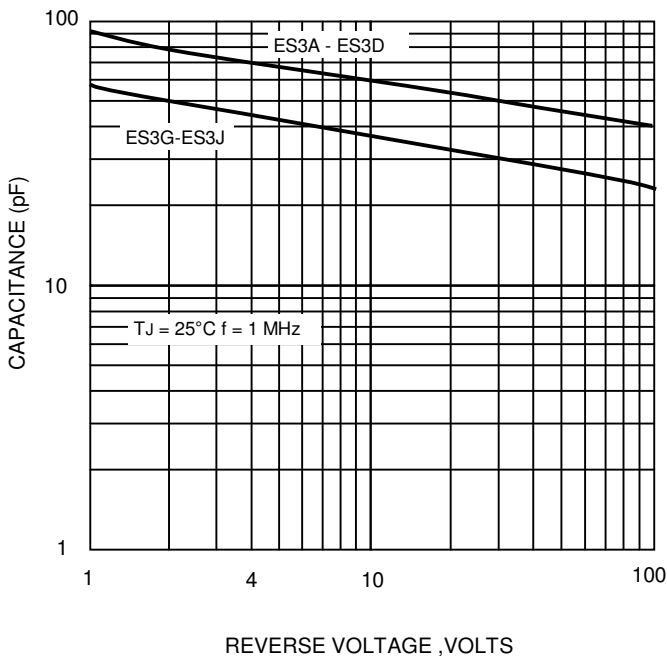


FIG.4-TYPICAL FORWARD CHARACTERISTICS

