

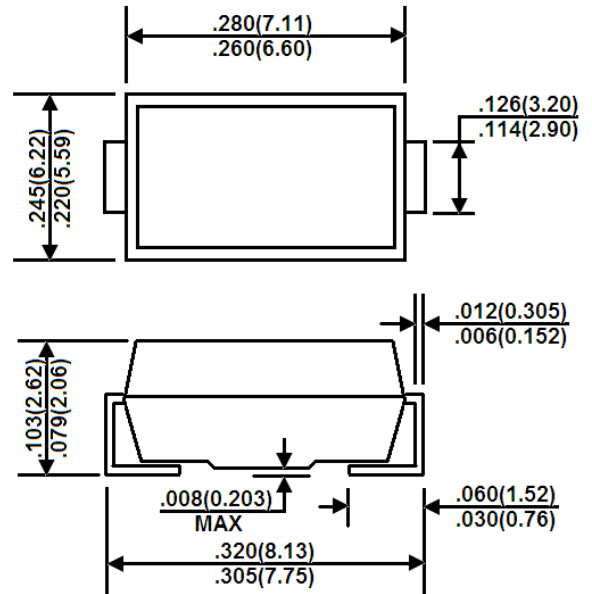
### Features

- \* For surface mounted application
- \* Extremely Low Thermal Resistance
- \* Easy Pick and Place
- \* High Temp Soldering: 260°C For 10seconds at Terminals
- \* Superfast Recovery Times For High Efficiency



### Package Outline Dimensions in inches (millimeters)

SMC:



### Mechanical Data

- \* Case: Molded plastic
- \* Terminals: Solder plated
- \* Polarity: Indicated by cathode band
- \* Standard packaging:  
12mm tape(ELA STD RS-481)

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbols	ES5A	ES5B	ES5C	ES5D	ES5G	ES5J	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	280	420	V
Maximum D.C Blocking Voltage	$V_{DC}$	50	100	150	200	400	600	V
Maximum Average Forward Rectified Current $T_L=75^\circ\text{C}$	$I_{F(AV)}$	5.0						A
Peak Forward Surge Current, 8.3ms single half sine-wave	$I_{FSM}$	150						A
Maximum Instantaneous Forward Voltage at 5.0A(Note1)	$V_F$	0.95				1.30	1.7	V
Maximum D.C Reverse Current @ $T_A=25^\circ\text{C}$ at Rated D.C Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	10 500						$\mu\text{A}$
Maximum Reverse Recovery Time(Note2)	$T_{rr}$	35						nS
Typical Junction Capacitance(Note3)	$C_J$	45				30		pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	47 12						$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J/T_{STG}$	-55 to +150						$^\circ\text{C}$

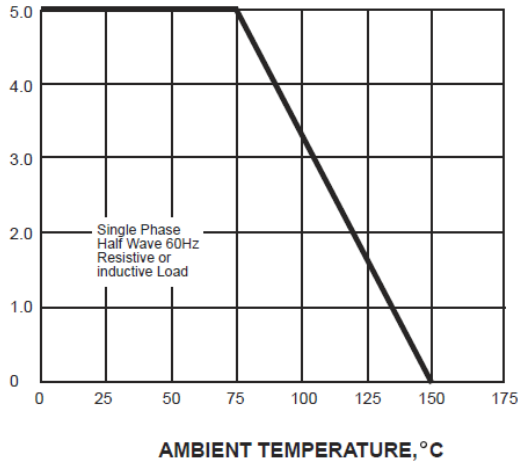
NOTE: 1、 Pulse test:  $t_p=300\mu\text{s}$ , 1% duty cycle    2、 Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$ .

3、 Measured at 1MHz and applied reverse voltage of 4.0V D.C.

### Ratings and Characteristic Curves

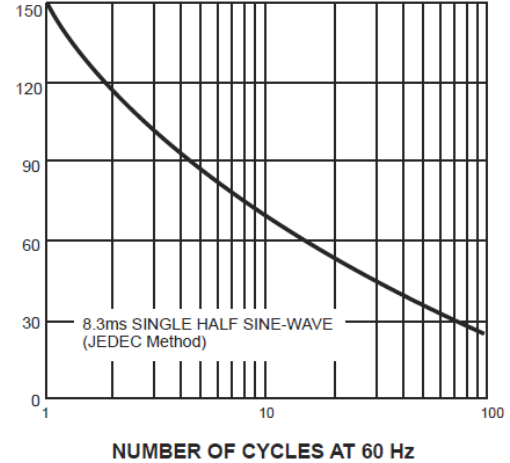
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

**FIG. 1- FORWARD CURRENT DERATING CURVE**



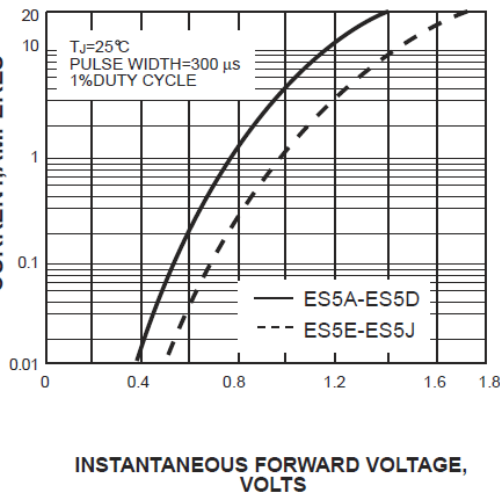
PEAK FORWARD SURGE CURRENT, AMPERES

**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



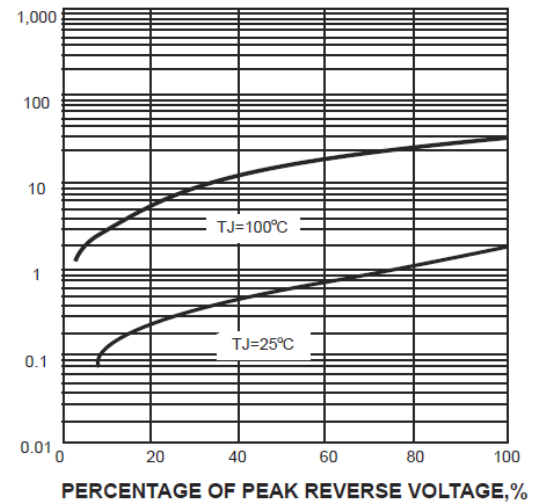
INSTANTANEOUS FORWARD CURRENT, AMPERES

**FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



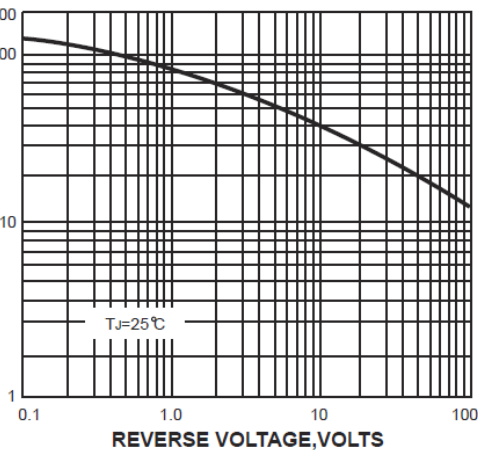
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



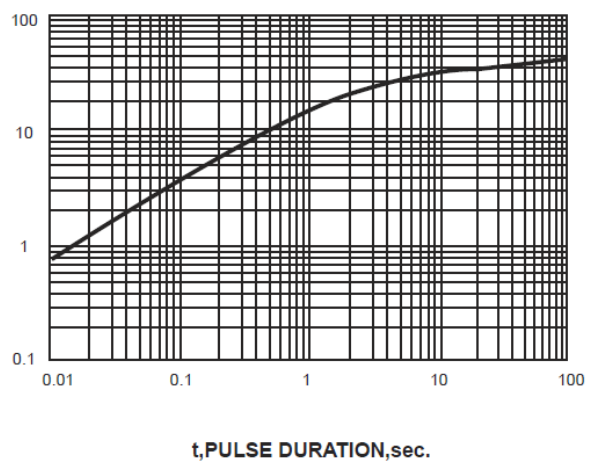
JUNCTION CAPACITANCE, pF

**FIG. 5-TYPICAL JUNCTION CAPACITANCE**



TRANSIENT THERMAL IMPEDANCE, °C/W

**FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE**





**ES5A THRU ES5J**  
**5.0 Amps. Surface Mount Glass Passivated Super Fast Rectifiers**

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**Ordering Information**

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Part No.	Package	Packing
ES5A~ES5J	SMC	3K/Reel