ES3A THRU ES3J

3.0 Amps. Surface Mount Glass Passivated Super Fast Rectifiers

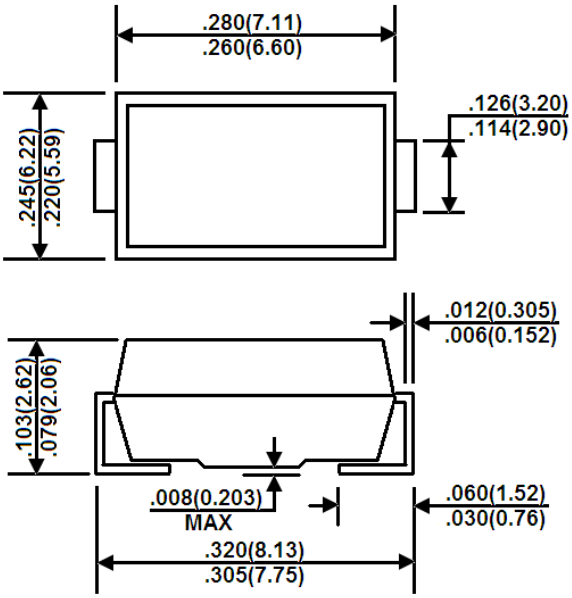
Features

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

RoHS COMPLIANT

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 ℃ 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	ES3A	ES3B	ES3C	ES3D	ES3G	ES3J	Unit
Maximum Recurrent 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_J=75℃	$I_{F(AV)}$	3.0						A
Peak Forward Surge Current, 8.3ms single half sine-wave	I_{FSM}	100						A
Maximum Instantaneous Forward Voltage at 3.0A(Note1)	V_F	0.95				1.30	1.7	V
Maximum D.C Reverse Current @ T_A=25℃ at Rated D.C Blocking Voltage @ T_A=100℃	I_R	10 500						μA
Maximum Reverse Recovery Time(Note2)	Trr	35						nS
Typical Junction Capacitance(Note3)	C_J	45				30		pF
Typical Thermal Resistance	$R_{\theta jA}$ $R_{\theta jL}$	47 12						℃/W
Operating and Storage Temperature Range	T_J/T_{STG}	-55 to +150						℃

NOTE: 1、Pulse test: tp=300μS, 1% duty cycle 2、Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

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

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Ratings and Characteristic Curves

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

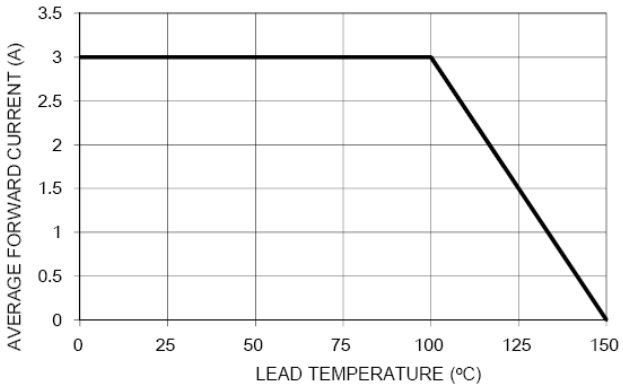


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

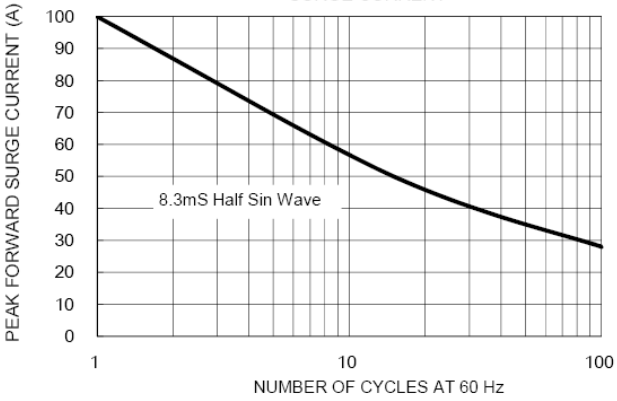


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

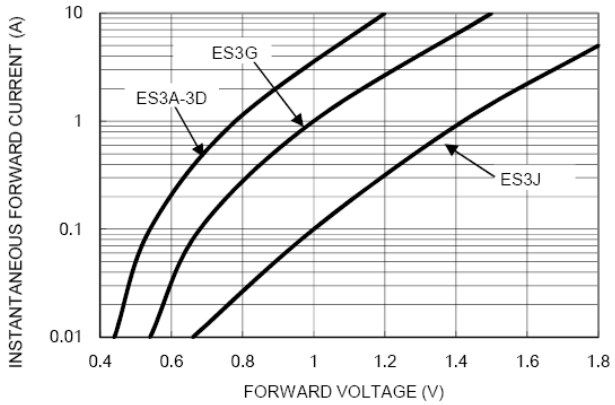


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

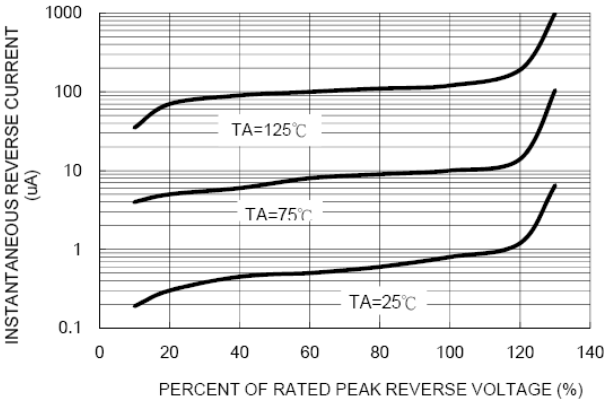


FIG. 5 TYPICAL JUNCTION CAPACITANCE

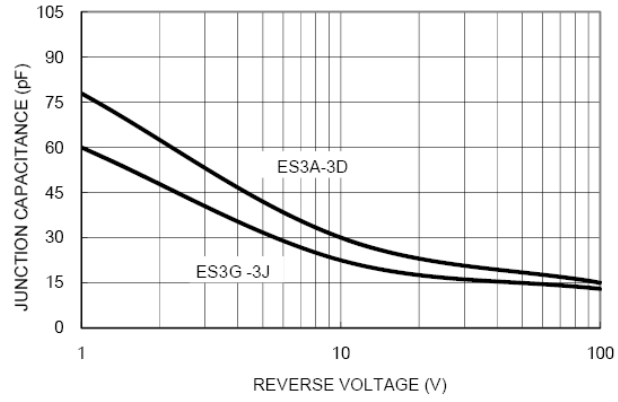


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

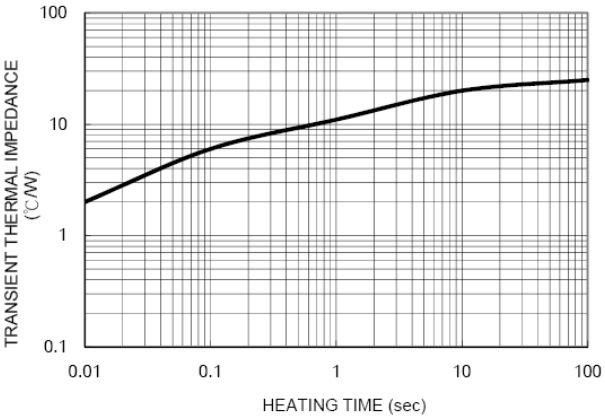
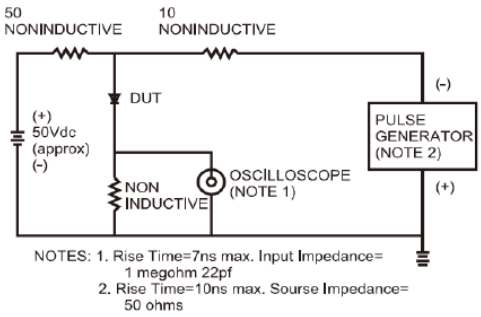
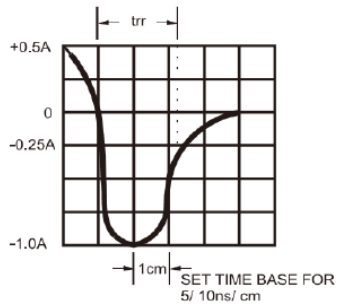


FIG.7- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





Ordering Information

Part No.	Package	Packing
ES3A~ES3J	SMC	3K/Reel