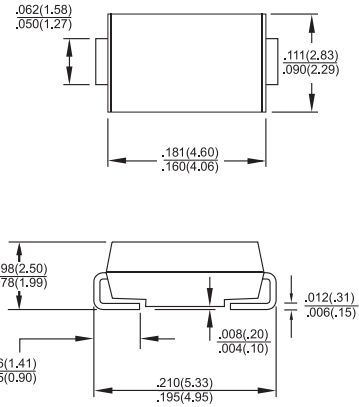




Features

- ✧ Glass passivated junction chip
- ✧ For surface mounted application
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Ideal for automated placement
- ✧ Easy pick and place
- ✧ Super fast recovery time for high efficiency
- ✧ Glass passivated chip junction
- ✧ High temperature soldering:
260°C/10 seconds at terminals
- ✧ Plastic material used carries Underwriters
Laboratory Classification 94V-0



Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Pure tin plated, lead free.
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.064 gram

Dimensions in inches and (millimeters)

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	Symbol	ES 1A	ES 1B	ES 1C	ES 1D	ES 1F	ES 1G	ES 1H	ES 1J	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current See Fig. 1	I _(AV)	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30								A
Maximum Instantaneous Forward Voltage @ 1.0A	V _F	0.95				1.3		1.7		V
Maximum DC Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =100 °C	I _R					5.0 100				uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}					35				nS
Typical Junction Capacitance (Note 2)	C _j	10				8				pF
Maximum Thermal Resistance (Note 3)	R _{θJA} R _{θJL}					85 35				°C /W
Operating Temperature Range	T _J					-55 to +150				°C
Storage Temperature Range	T _{STG}					-55 to +150				°C

- Notes:
1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
 2. Measured at 1 MHz and Applied $V_R=4.0\text{ Volts}$
 3. P.C.B. Mounted on 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Area.

RATINGS AND CHARACTERISTIC CURVES (ES1A THRU ES1J)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

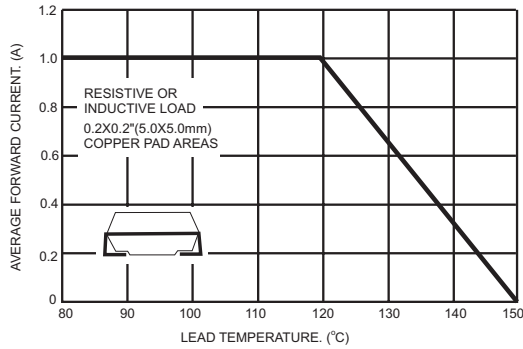


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

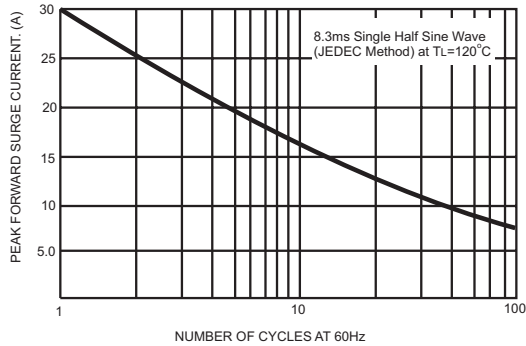


FIG.4- TYPICAL JUNCTION CAPACITANCE

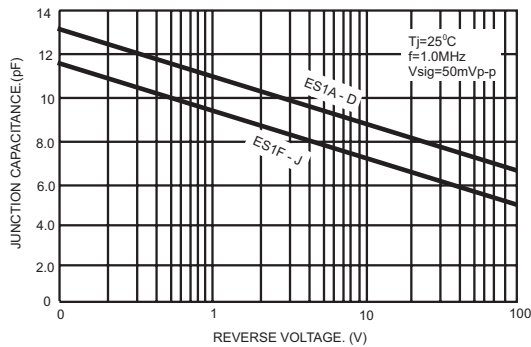


FIG.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

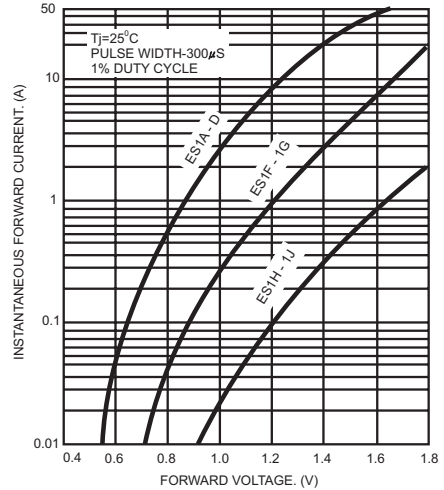


FIG.5- TYPICAL REVERSE CHARACTERISTICS

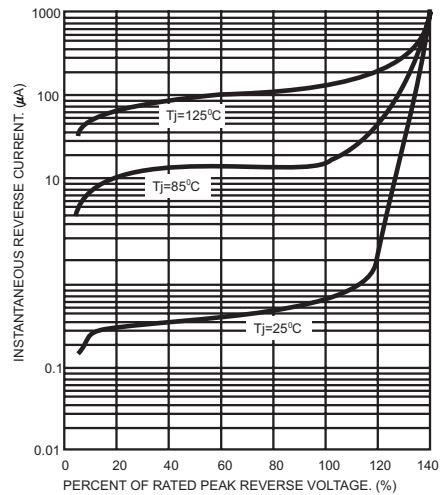


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

