



ES1A THRU ES1J

1.0 AMP. Super Fast Surface Mount Rectifiers



Voltage Range
50 to 600 Volts
Current
1.0 Ampere

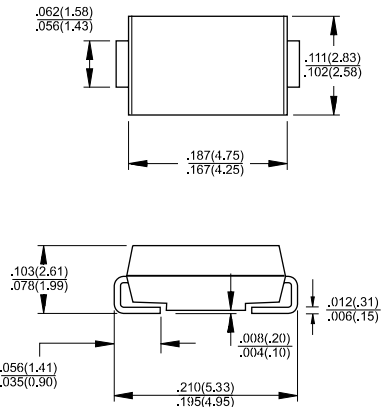
SMA/DO-214AC

Features

- ✧ Glass passivated junction chip
- ✧ For surface mounted application
- ✧ Low profile package
- ✧ Built-in strain relief,
- ✧ Ideal for automated placement
- ✧ Easy pick and place
- ✧ Superfast recovery time for high efficiency
- ✧ Glass passivated chip junction
- ✧ High temperature soldering:
250°C/10 seconds at terminals
- ✧ Plastic material used carries Underwriters
Laboratory Classification 94V-O

Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Solder plated
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per E1A 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	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1H	ES1J	Units	
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	500	600	V	
Maximum RMS Voltage	35	70	105	140	210	280	350	420	V	
Maximum DC Blocking Voltage	50	100	150	200	300	400	500	600	V	
Maximum Average Forward Rectified Current See Fig. 1	1.0								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	0.95			1.3		1.7			V	
Maximum DC Reverse Current @ T _A =25°C at Rated DC Blocking Voltage @ T _A =100°C	5.0				100					uA uA
Maximum Reverse Recovery Time (Note 1)	35				8					nS
Typical Junction Capacitance (Note 2)	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=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied V_R=4.0 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

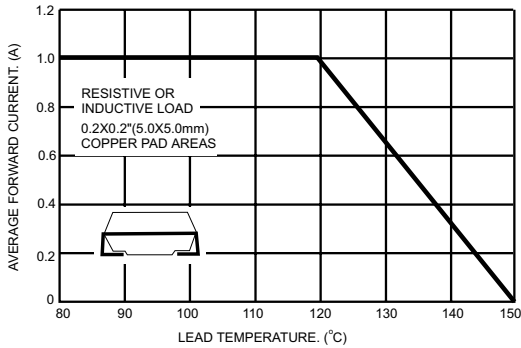


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

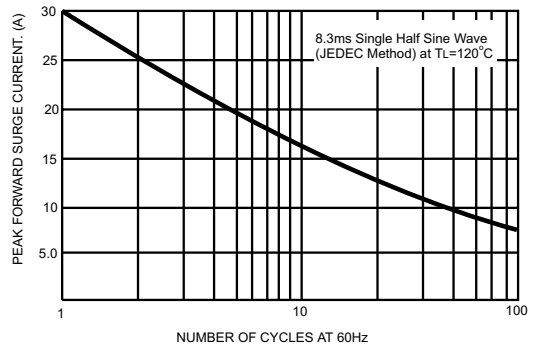


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

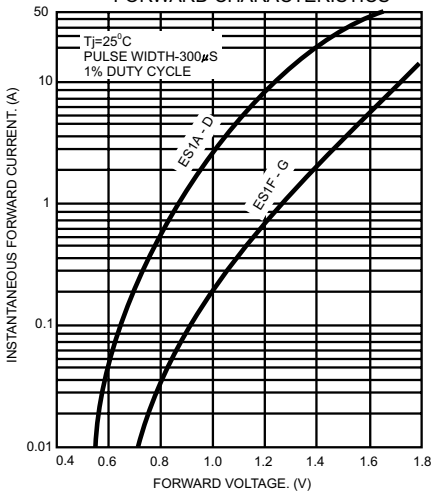


FIG.4- TYPICAL REVERSE CHARACTERISTICS

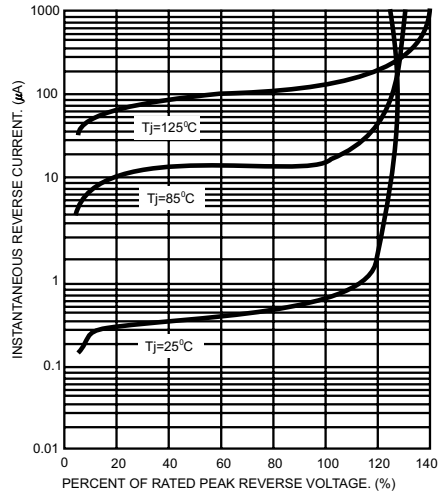


FIG.5- TYPICAL JUNCTION CAPACITANCE

