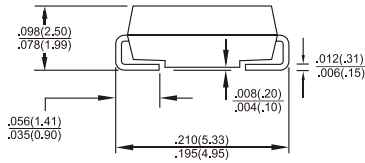
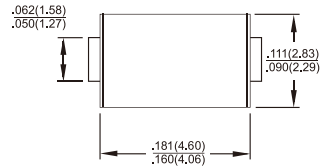




ES1A - ES1J

1.0 AMP. Surface Mount Super Fast Rectifiers

SMA/DO-214AC



Dimensions in inches and (millimeters)

Marking Diagram



ES1X = Specific Device Code
 G = Green Compound
 Y = Year
 M = Work Month

Features

- ✧ UL Recognized File # E-326243
- ✧ 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
- ✧ Qualified as per AEC-Q101
- ✧ Green compound with suffix "G" on packing
code & prefix "G" on datecode.

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 grams

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	VRRM	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current See Fig. 1	IF(AV)	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	IFSM	30								A
Maximum Instantaneous Forward Voltage @ 1.0A	VF	0.95			1.3		1.7			V
Maximum DC Reverse Current at Rated @TA=25°C DC Blocking Voltage (Note 1) @ TA=125 °C	IR				5.0					uA
					100					uA
Maximum Reverse Recovery Time (Note 2)	Trr				35					nS
Typical Junction Capacitance (Note 3)	Cj	16			18					pF
Maximum Thermal Resistance (Note 4)	RθJA RθJL				85 35					°C /W
Operating Temperature Range	TJ				-55 to +150					°C
Storage Temperature Range	TSTG				-55 to +150					°C

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
 2. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A
 3. Measured at 1 MHz and Applied VR=4.0 Volts
 4. 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

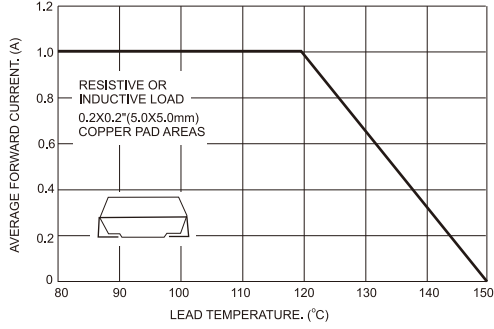


FIG.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

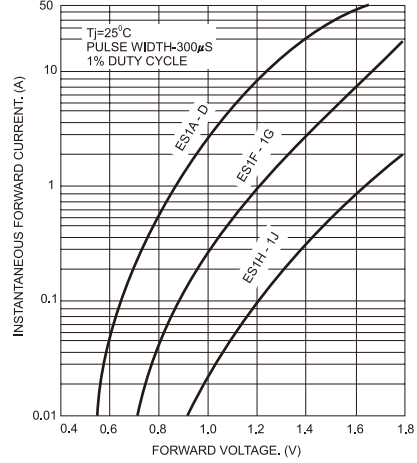


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

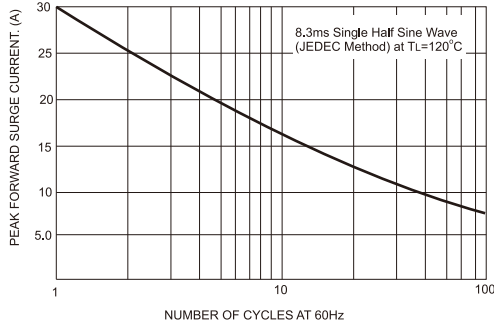


FIG.5- TYPICAL REVERSE CHARACTERISTICS

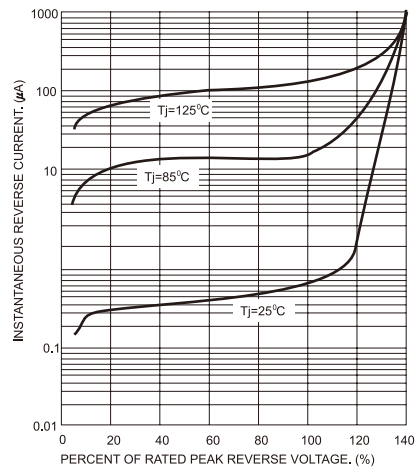


FIG.4- TYPICAL JUNCTION CAPACITANCE

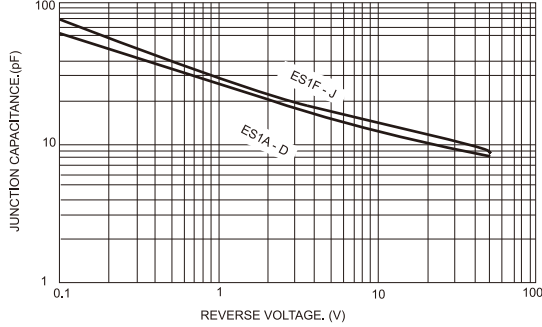


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

