

ES1A THRU ES1J

SURFACE MOUNT GLASS PASSIVATED JUNCTION SUPER FAST RECOVERY RECTIFIER

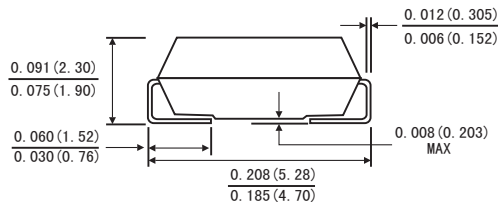
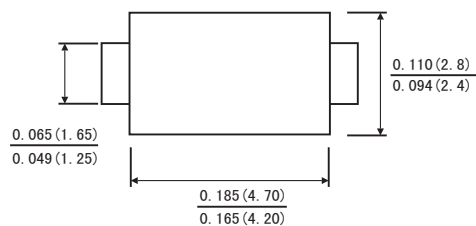
Reverse Voltage: 50 to 600 Volts
Forward Current: 1.0 Ampere

FEATURES

- Glass passivated cavity-free junction
- Ideal for surface mount automotive applications
- Ultrafast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Lead (Pb)-free component
- Component in accordance to RoHS 2011/65/EU
- High temperature soldering guaranteed: 260°C/10 seconds at terminals



SMA(DO-214AC)



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDEC SMA(DO-214AC) molded plastic body
- Terminals: Solder Plated, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	ES1					Units
		A	B	D	G	J	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current at Ta=100°C	I _(AV)	1.0					Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30					Amps
Maximum Instantaneous Forward Voltage at 1.0 A	V _F	0.95		1.3		1.7	Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage	T _A =25°C	5					μA
	T _A =125°C	100					
Maximum Reverse Recovery Time(Note1)	T _{rr}	35					ns
Typical Junction Capacitance(Note2)	C _J	25					pF
Typical Thermal Resistance(Note3)	R _{θJA}	90					°C/W
	R _{θJL}	30					
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +150					°C

Note: 1. Test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

2. Measured at 1MHZ and applied reverse voltage of 4.0 Volts.

3. Thermal resistance from junction to ambient P. C. B. mounted on 0.2x0.2" (5.0x5.0mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES ES1A THRU ES1J

FIG.1- FORWARD CURRENT DERATING CURVE

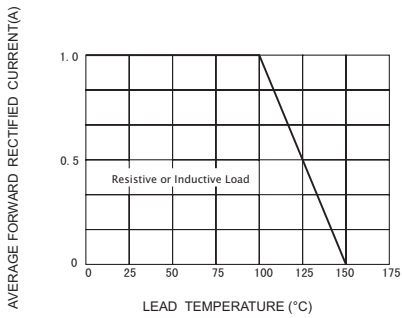


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

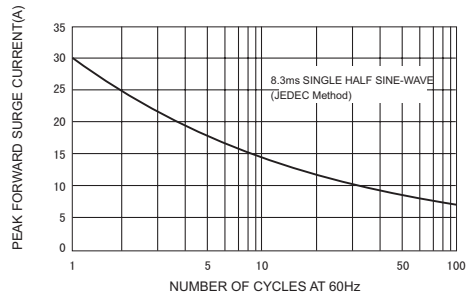


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

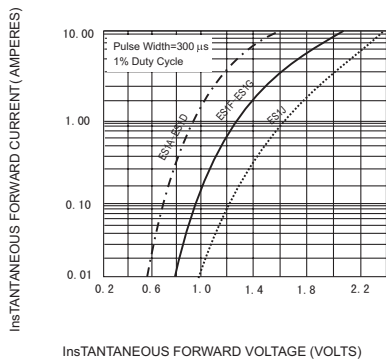


FIG.4-TYPICAL REVERSE CHARACTERISTICS

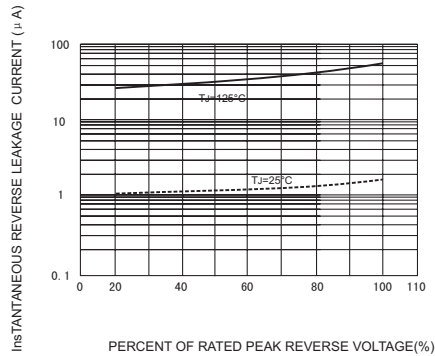
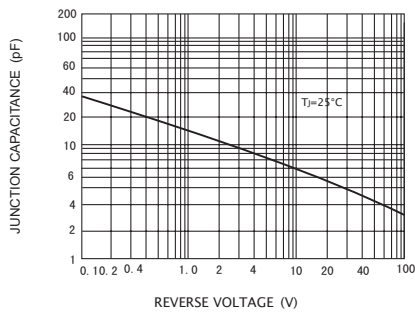


FIG.5-TYPICAL JUNCTION CAPACITANCE



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