

ES1A THRU ES1M

SURFACE MOUNT GLASS PASSIVATED JUNCTION SUPER FAST RECOVERY RECTIFIER

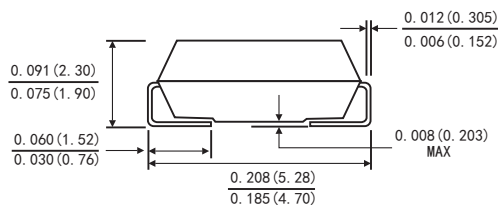
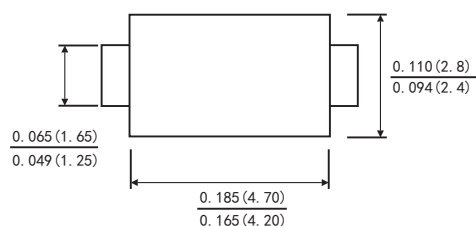
Reverse Voltage: 50 to 1000 Volts
Forward Current: 1.0 Ampere

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 2002/95/EC and WEEE 2002/96/EC
- 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	K	M	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at Ta=110°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		1.25		1.7		Volts	
Maximum DC Reverse Current At Rated DC Blocking Voltage	I _R	5							μA
		100							
Maximum Reverse Recovery Time(Note1)	T _{rr}	35					100		ns
Typical Junction Capacitance(Note2)	C _J	15							pF
Typical Thermal Resistance	R _{θJA}	90							°C/W
	R _{θJC}	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.

RATINGS AND CHARACTERISTIC CURVES ES1A THRU ES1M

FIG.1- FORWARD CURRENT DERATING CURVE

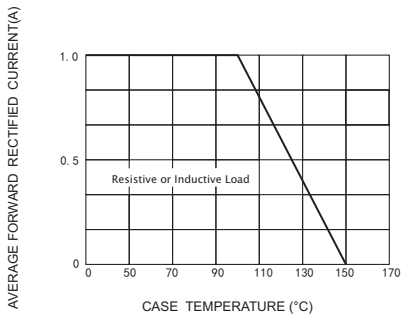


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

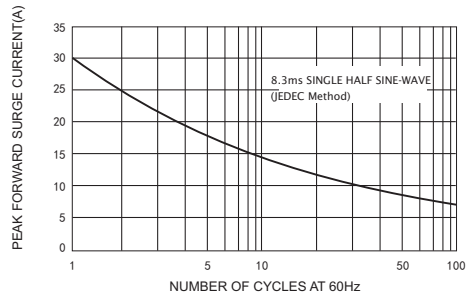


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

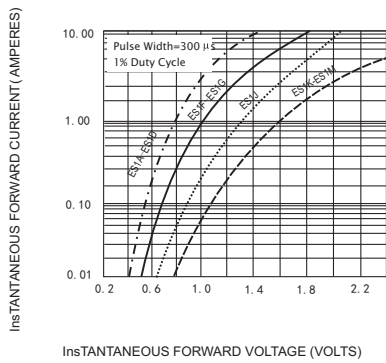


FIG.4-TYPICAL REVERSE CHARACTERISTICS

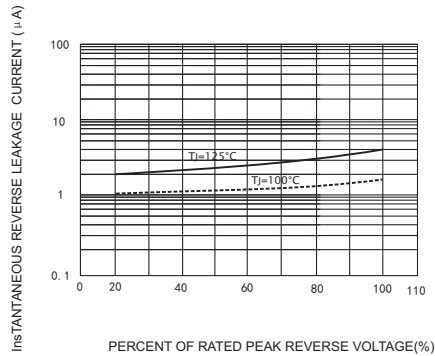
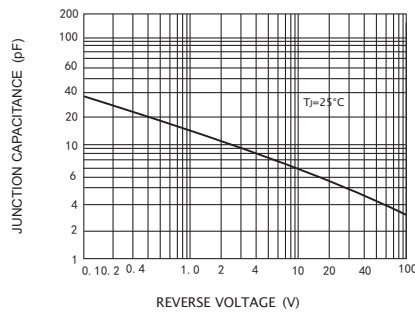


FIG.5-TYPICAL JUNCTION CAPACITANCE



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