ES1A THRU ES1J

SURFACE MOUNT SUPERFAST RECTIFIER

VOLTAGE - 50 to 600 Volts CURRENT - 1.0 Ampere

FEATURES

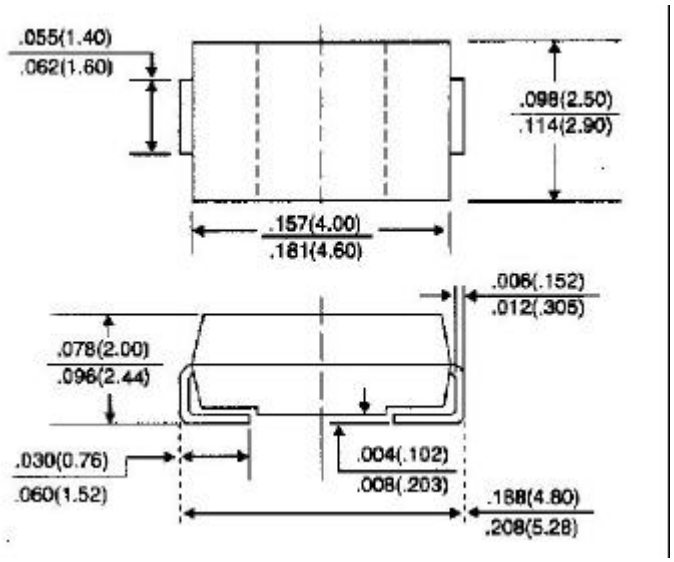
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency
- Plastic package has Underwriters Laboratory

Flammability Classification 94V-O

- Glass passivated junction
- High temperature soldering:

260 /10 seconds at terminals

SMA/DO-214AC



MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic

Terminals: Solder plated, solderable per MIL-STD-750,

Method 2026

Polarity: Indicated by cathode band

Standard packaging: 12mm tape (EIA-481)

Weight: 0.002 ounce, 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave 60Hz resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOLS	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current, at T_L=120	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	0.95				1.25		1.7	Volts
Maximum DC Reverse Current T_A=25 At Rated DC Blocking Voltage T_A=100	I_R	5.0 100							A
Maximum Reverse Recovery Time (Note 1)	T_{RR}	35.0							nS
Typical Junction capacitance (Note 2)	C_J	10.0							pF
Typical Thermal Resistance (Note 3)	R JL	35							/W
Operating and Storage Temperature Range	T_J,T_{STG}	-50 to +150							

NOTES:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, Irr=0.25A

2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3. 8.0mm^2 (.013mm thick) land areas

RATING AND CHARACTERISTIC CURVES ES1A THRU ES1J

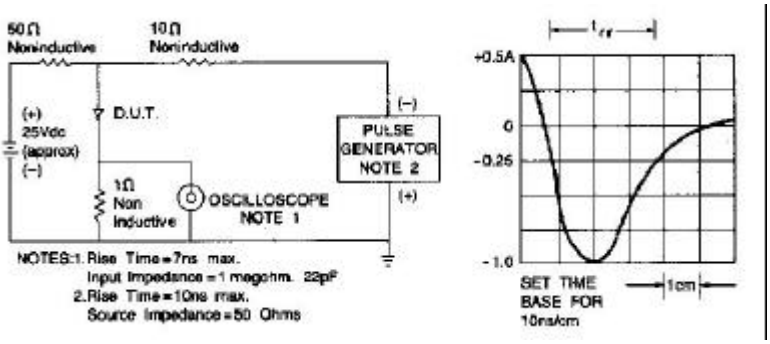


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM ES1A THRU ES1J

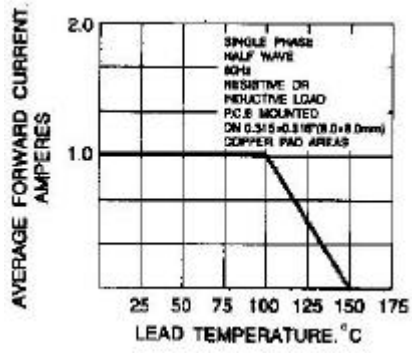


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

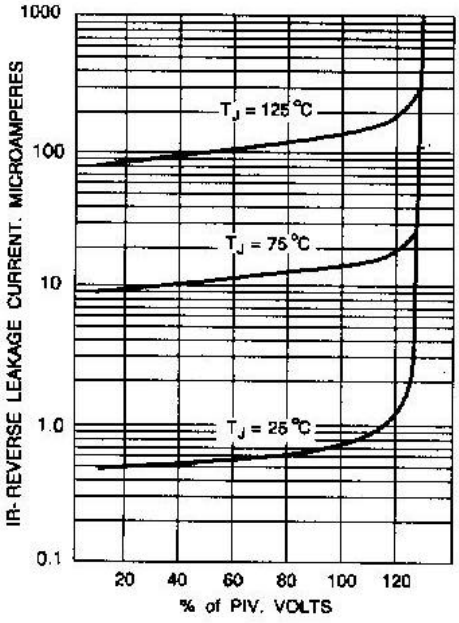


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

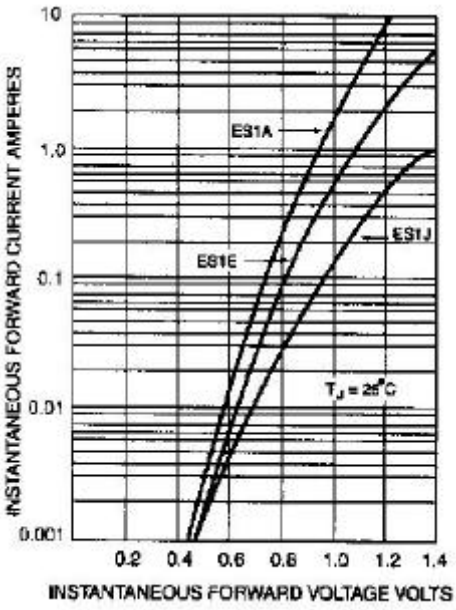


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

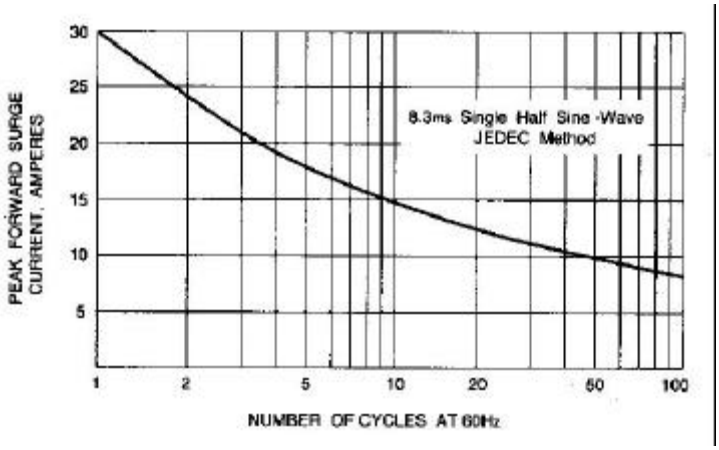


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

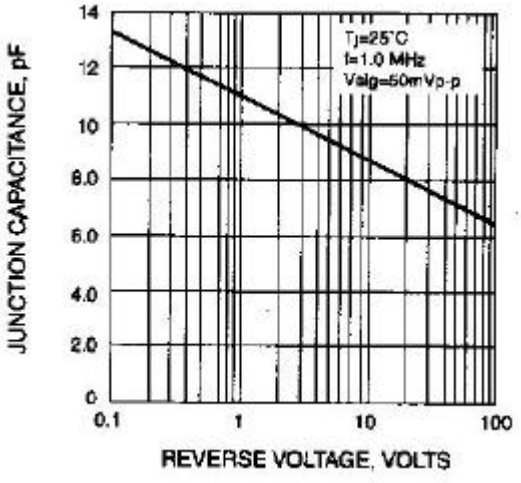


Fig. 6-TYPICAL JUNCTION CAPACITANCE