

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

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic

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

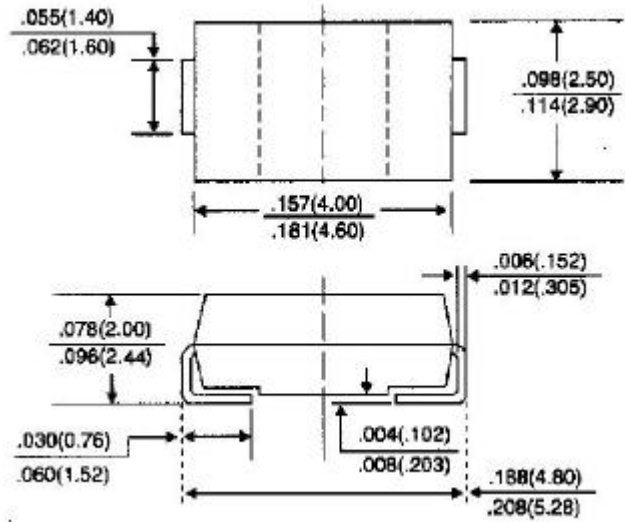
Method 2026

Polarity: Indicated by cathode band

Standard packaging: 12mm tape (EIA-481)

Weight: 0.002 ounce, 0.064 gram

SMA/DO-214AC



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				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: $I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$

2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3. 8.0mm² (.013mm thick) land areas

RATING AND CHARACTERISTIC CURVES ES1A THRU ES1J

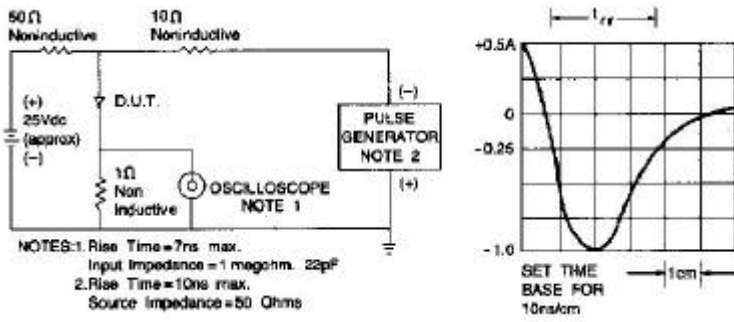


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM ES1A THRU ES1J

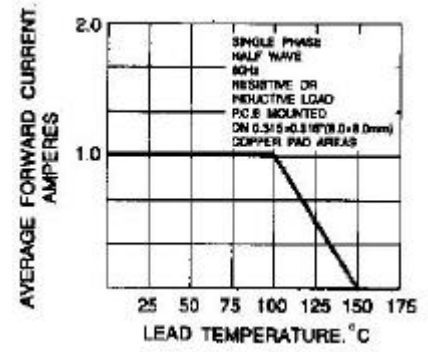


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

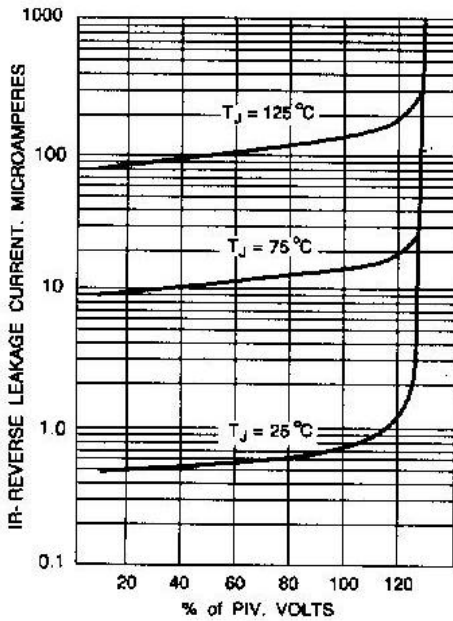


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

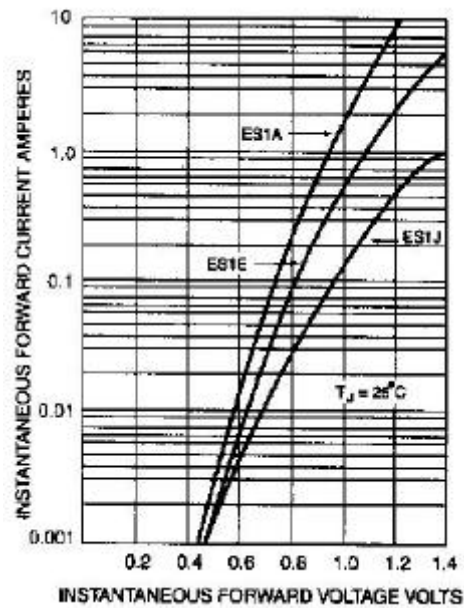


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

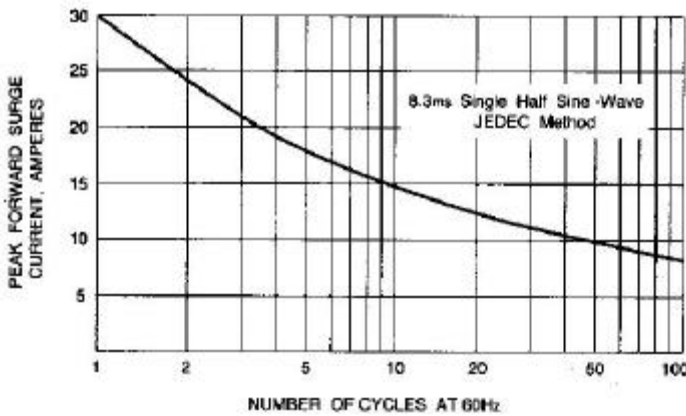


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

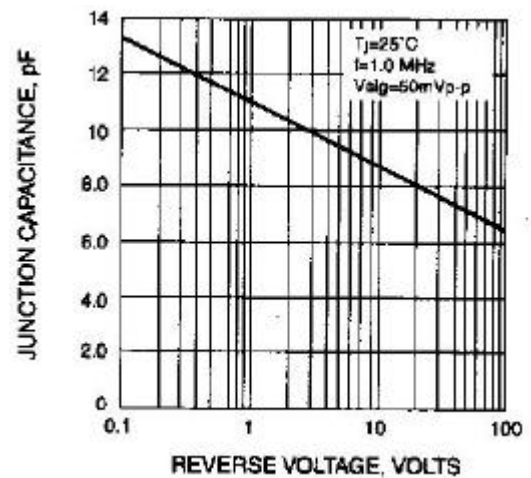


Fig. 6-TYPICAL JUNCTION CAPACITANCE