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,

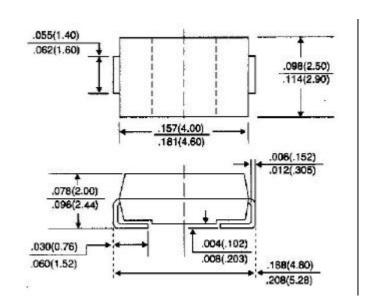
Method 2026

Polarity: Indicated by cathode band

neet.Directory 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%.

	CVMDOLC	EC1 A	EC4D	E010	EC4D	EC1E	E010	EC4 I	UNITS
	SYMBOLS	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	OINLI
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 sinewave 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					1.7	Volts	
Maximum DC Reverse Current T _A =25	I _R	5.0							Α
At Rated DC Blocking Voltage T _A =100		100							
Maximum Reverse Recovery Time (Note 1)	T_RR	35.0							nS
Typical Junction capacitance (Note 2)	CJ	10.0							₽F
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. 8.0mm² (.013mm thick) land areas

RATING AND CHARACTERISTIC CURVES ES1A THRU ES1J

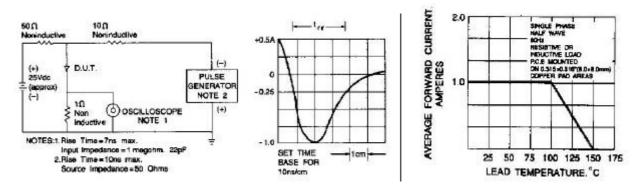
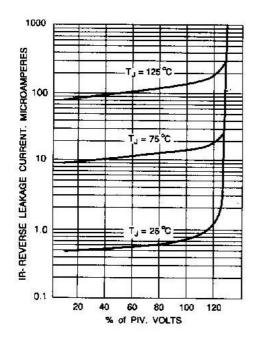


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM ES1A THRU ES1J

Fig. 2-MAXIMUM AVERAGE FORWARD

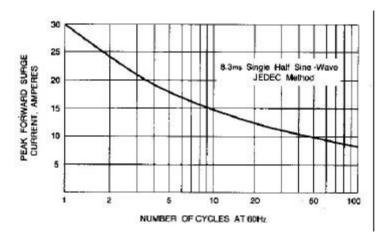
CURRENT RATING

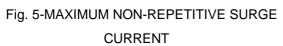


10 INSTANTANEOUS FORWARD CURRENT AMPERES E31A 1.0 ES1E 0.1 T, = 25 C 0.01 0.001 0.2 0.4 0.6 0.8 1.0 1.2 INSTANTANEOUS FORWARD VOLTAGE VOLTS

Fig. 3-TYPICAL REVERSE CHARACTERISTICS

Fig. 4-TYPICAL FORWARD CHARACTERISTICS





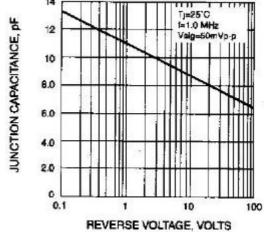


Fig. 6-TYPICAL JUNCTION CAPACITANCE