

ES1A THRU ES1J

SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER



康 比 電 子
HORNBY ELECTRONIC

REVERSE VOLTAGE: 50 to 600 VOLTS

FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Superfast recovery times for high efficiency
- High temperature soldering : 250°C /10 seconds at terminals

MECHANICAL DATA

Case: Molded plastic, DO-214AC(SMA)

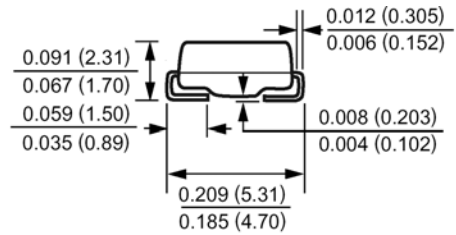
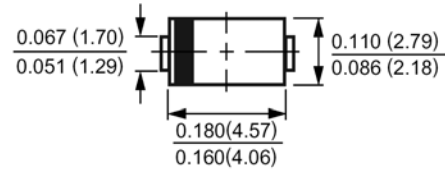
Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity: Color band denotes cathode end

Packaging: 12mm tape per EIA STD RS-481

Weight: 0.002 ounce, 0.064 gram

DO214-AC(SMA)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings 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	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 =100℃	I _(AV)	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30							Amp
Maximum Forward Voltage at 1.0A	V _F	0.95				1.25		1.70	Volts
Maximum Reverse Current at T _A =25℃ at Rated DC Blocking Voltage T _A =100℃	I _R	5.0 100							μAmp
Typical Junction Capacitance (Note 1)	C _J	10							pF
Typical Thermal Resistance (Note 2)	R _{θJL}	35							℃/W
Maximum Reverse Recovery Time (Note 3)	T _{RR}	35					50		nS
Operating Junction Temperature Range	T _J	-55 to +150							℃
Storage Temperature Range	T _{stg}	-55 to +150							℃

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

3- Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.

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RATINGS AND CHARACTERISTIC CURVES

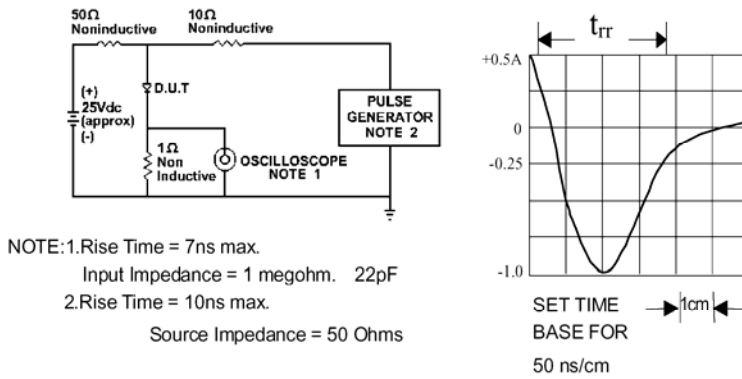


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

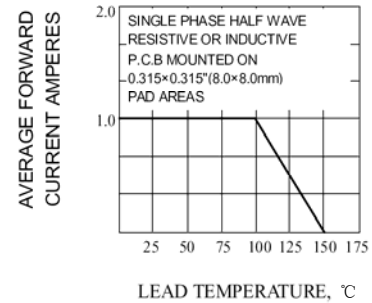


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

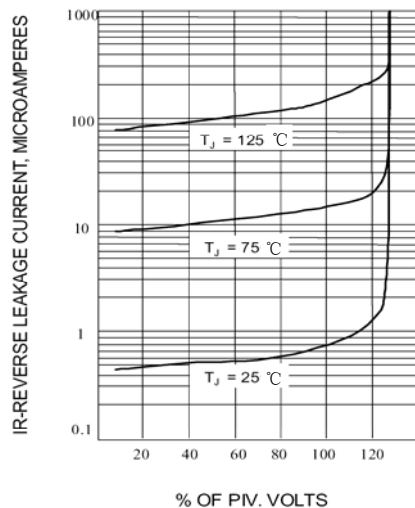


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

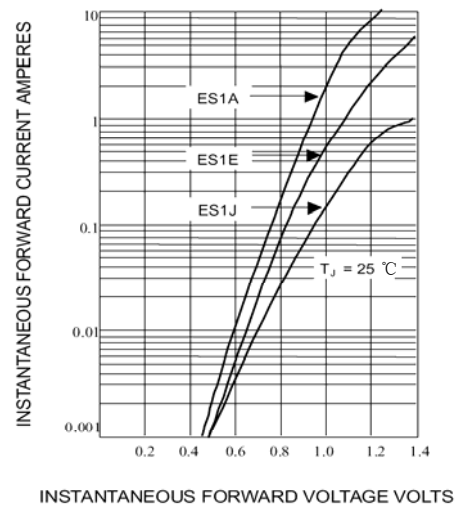


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

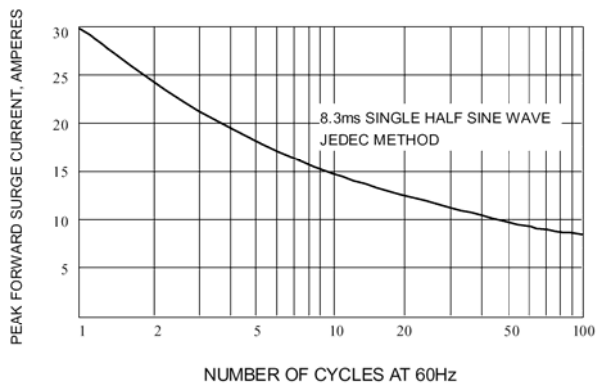


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

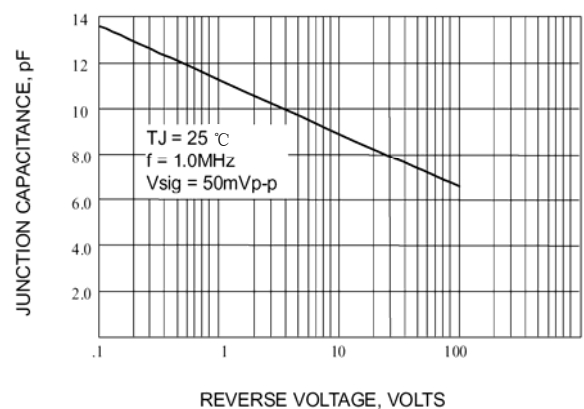


Fig. 6-TYPICAL JUNCTION CAPACITANCE