



ES8X SERIES

SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

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ES8A THRU ES8J

SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER



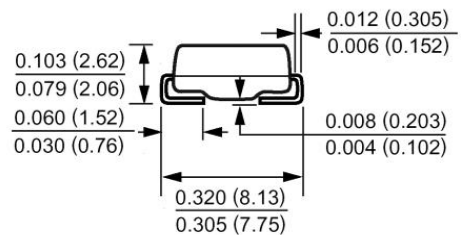
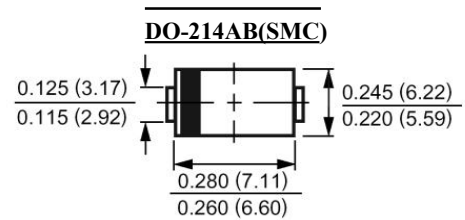
REVERSE VOLTAGE: 50 to 600 VOLTS
FORWARD CURRENT: 8.0 AMPERE

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
- High temperature soldering : 260°C /10 seconds at terminals

MECHANICAL DATA

Case: Molded plastic, DO-214AB(SMC)
 Terminals: Pure tin plated, lead free
 Polarity: Indicated by cathode band
 Packaging: 16mm tape per EIA STD RS-481
 Weight: 0.21 gram



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	ES8A	ES8B	ES8C	ES8D	ES8F	ES8G	ES8H	ES8J	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current at T _L =75°C	I _(AV)	8.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	150								Amp
Maximum Forward Voltage at 8.0A	V _F	0.95			1.30		1.70			Volts
Maximum Reverse Current at T _A =25°C at Rated DC Blocking Voltage T _A =125°C	I _R	10 350								μAmp
Typical Junction Capacitance (Note 1)	C _J	70								pF
Typical Thermal Resistance (Note 2)	R _{θJA}	20								°C/W
Maximum Reverse Recovery Time (Note 3)	T _{RR}	35								nS
Operating Junction Temperature Range	T _J	-55 to +150								°C
Storage Temperature Range	T _{stg}	-55 to +150								°C

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 0.6 x 0.6" (16.0 x 16.0mm) copper pad areas

3- Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I_{RR}=.25A.

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

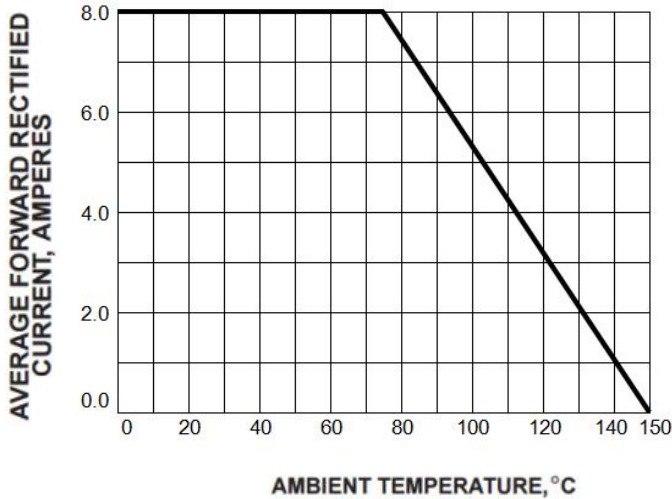


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

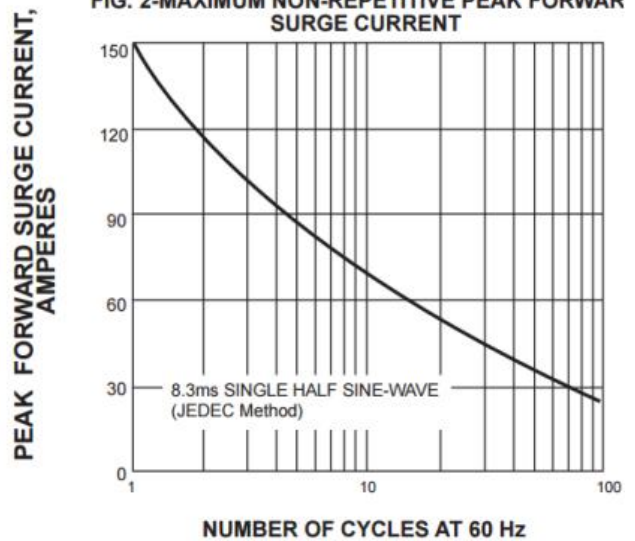


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

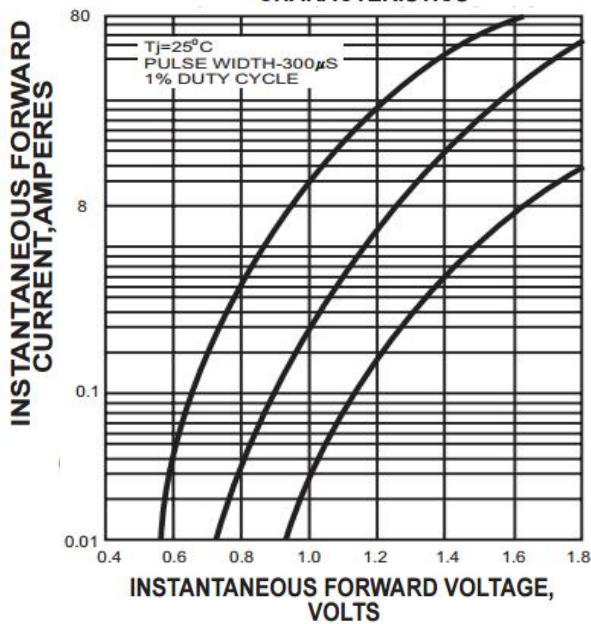


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

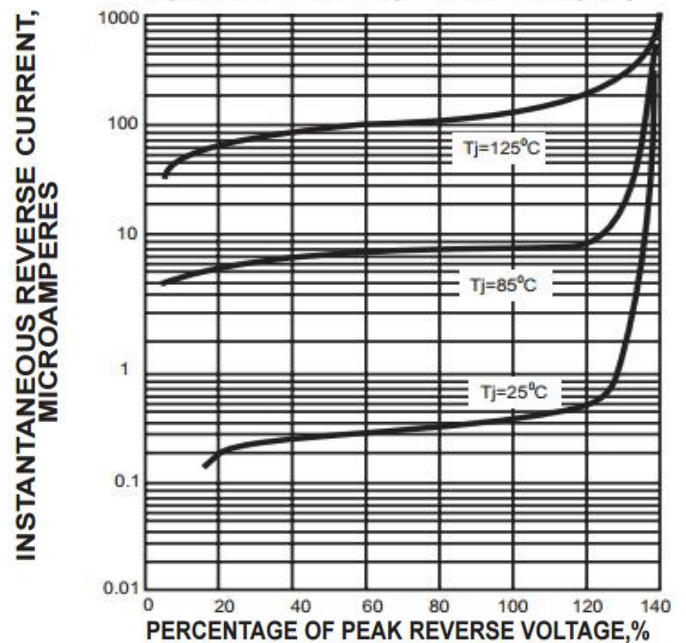
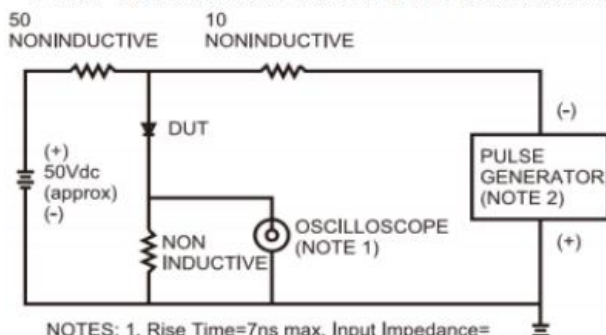


FIG.5- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Source Impedance= 50 ohms

