

ER1A THRU ER1J

SURFACE MOUNT SUPERFAST RECTIFIER
VOLTAGE - 50 - 600 Volts CURRENT - 1.0 Ampere

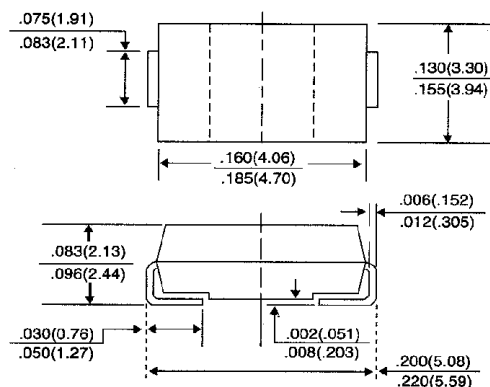
FEATURES

- 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-0
- Glass passivated junction
- High temperature soldering:
260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic
Terminals: Solder plated solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Standard Packaging: 12mm tape (EIA-481)
Weight: 0.003 ounces, 0.093 gram

SMB/DO-214AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOLS	ER1A	ER1B	ER1C	ER1D	ER1E	ER1G	ER1J	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at TL = 100°C	l(AV)	1.0							Amps
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	lFSM	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	VF	0.95				1.25		1.7	Volts
Maximum DC Reverse Current TA = 25°C	IR	5.0							μA
at Rated DC Blocking Voltage TA = 100°C		100							
Maximum Reverse Recovery Time (NOTE 1)	TRR					35.0			nS
Typical Junction Capacitance (NOTE 2)	CJ					10.0			pf
Typical Thermal Resistance (NOTE 3)	ROJL					34			°C/W
Operating and Storage Temperature Range	TJ,TSTG	-50 to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.
3. 8.0mm² (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES ER1J THRU ER1J

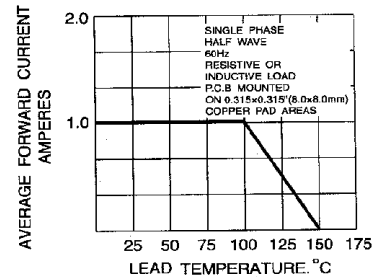
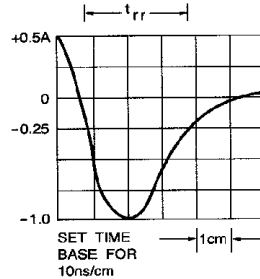
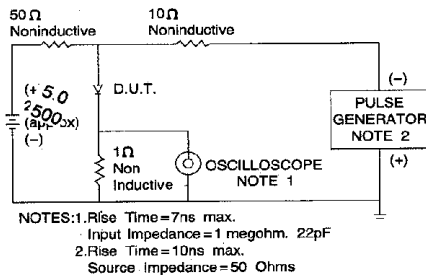


Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC
AND TEST CIRCUIT DIAGRAM ER1A THRU ER1G

Fig. 2 - MAXIMUM AVERAGE
FORWARD CURRENT RATING

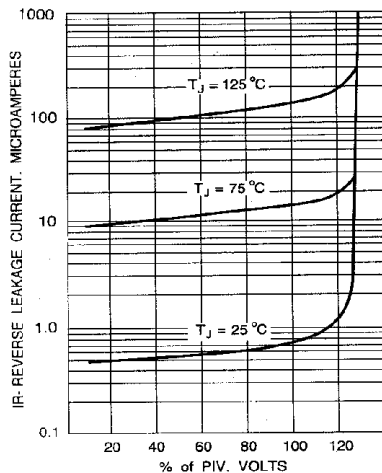


Fig. 3 - TYPICAL REVERSE CHARACTERISTICS

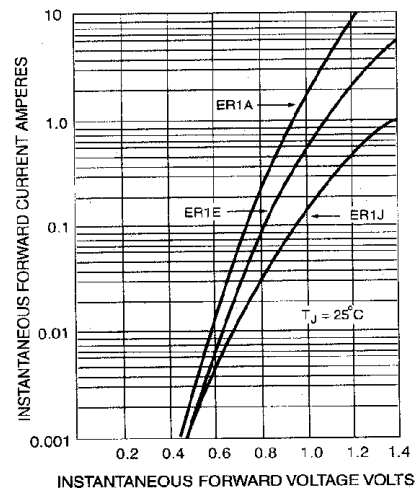


Fig. 4 - TYPICAL FORWARD CHARACTERISTICS

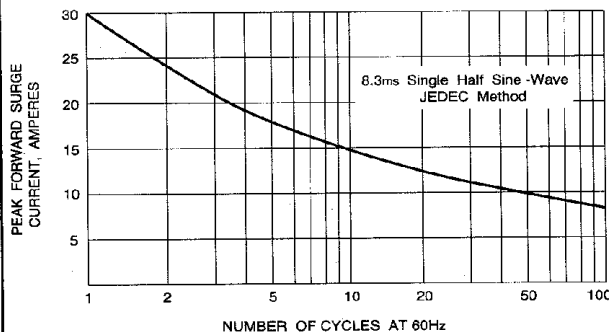


Fig. 5 - MAXIMUM NON-REPETITIVE SURGE CURRENT

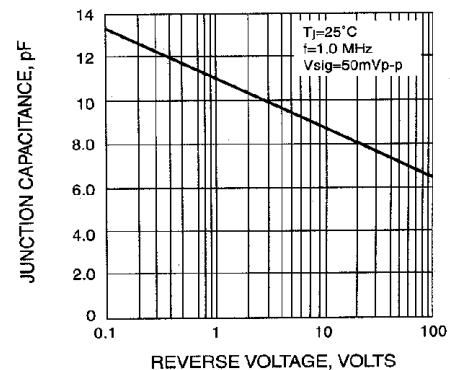


Fig. 6 - TYPICAL JUNCTION CAPACITANCE