



DATA SHEET

SEMICONDUCTOR

ER1A-A THRU ER1J-A



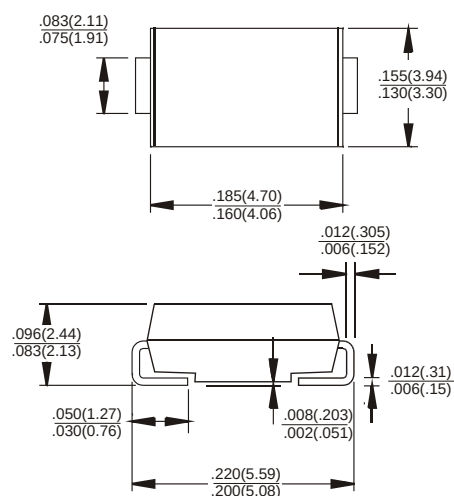
SURFACE MOUNT SUPERFAST RECTIFIER

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°C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request
- AEC-Q101 qualified

SMB/DO-214AA Unit:inch(mm)



MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Base P/N - RoHS compliant, commercial grade
- Base P/N-A - RoHS compliant, AEC-Q101 qualified
- Terminals: Solder plated, solderable per
- MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)

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	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	I(AV)	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave super imposed on rated load(JEDEC method)	IFSM	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							uA
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)	RθJA	34							°C/W
Operating and Storage Temperature Range	TJ,TSTG	-55to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: IF=0.5AIR=10A, Irr=0.25A
2. Measured at 1 MHz and Applied reverse voltage of 4.0 volts
3. 80mm2(.013mm thick) land areas

RATINGS AND CHARACTERISTIC CURVES

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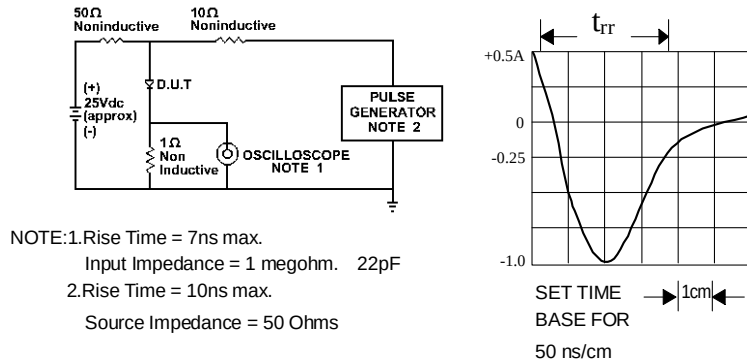


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

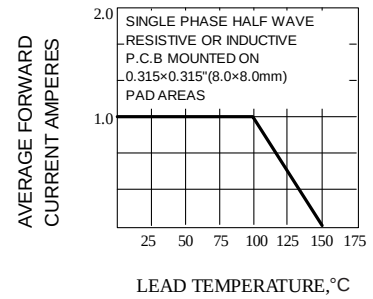


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

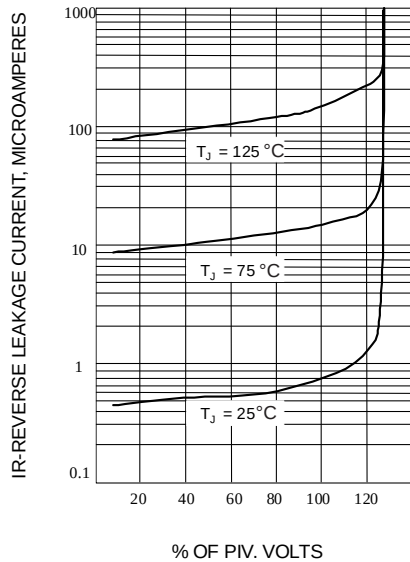


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

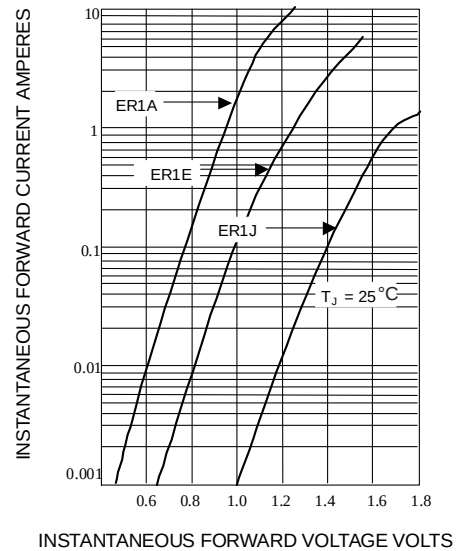


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

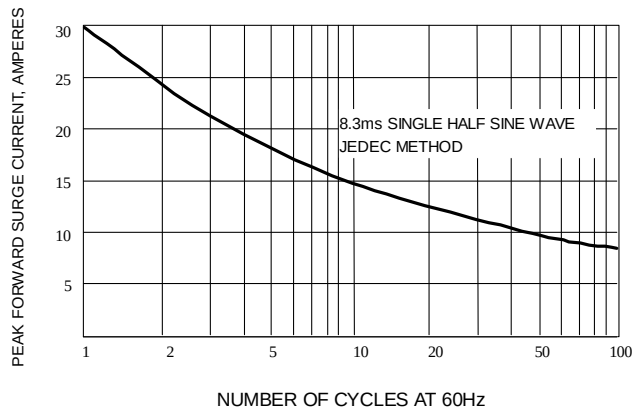


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

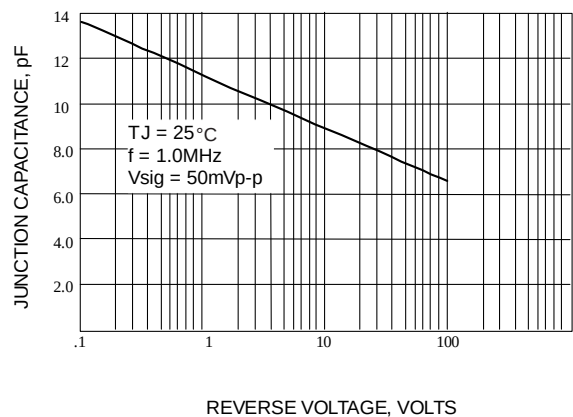


Fig. 6-TYPICAL JUNCTION CAPACITANCE