



ER3A THRU ER3J

SURFACE MOUNT FAST SWITCHING RECTIFIER

Voltage Range 50 to 600 Volts
Current 3.0 Amperes

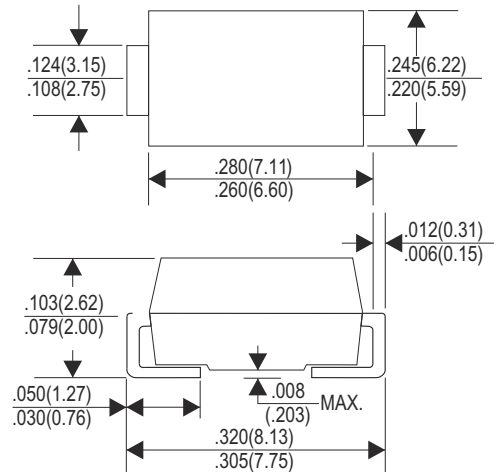
Features

- * Low forward voltage drop
- * Plastic material used carries Underwriters Laboratory Classification 94V-0
- * For surface mounted application
- * Glass passivated junction chip
- * Built-in strain relief
- * Superfast recovery times for high efficiency
- * High temperature soldering: 250°C / 10 seconds at terminals

Mechanical Data

- * Case: Molded plastic
- * Terminals: Solder plated
- * Polarity: Indicated by cathode band
- * Packing: 12mm tape
- * Weight: 0.021 gram

DO-214AB(SMC)



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating 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%

Type Number	ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	Units
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current @ T _J =75 °C	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30.0							A
Maximum Instantaneous Forward Voltage @ 3.0A	0.95				1.25	1.7		V
Maximum DC Reverse Current @ T _A =25°C	5.0							uA
At Rated DC Blocking Voltage @ T _A =125°C	100							
Maximum Reverse Recovery Time (Note 1)	35.0							nS
Typical Junction Capacitance (Note 2)	10.0							pF
Maximum Thermal Resistance (Note 3) R _{θJA}	34							°C/W
Operating and Storage Temperature Range T _J	-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 MHz and Applied VR= 4.0 Volts.
3. 8.0mm² (.13mm thick) land areas

[Http://www.upm.com.tw](http://www.upm.com.tw)

E - mail: upm.tw@msa.hinet.net

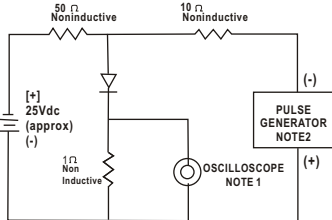


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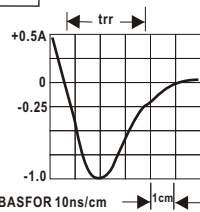
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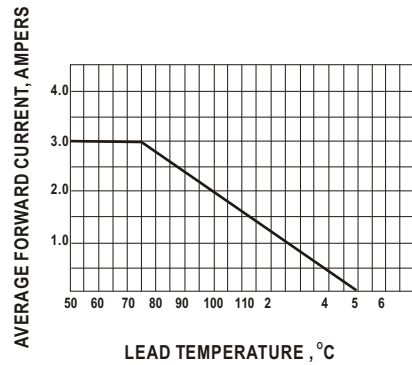
RATING AND CHARACTERISTIC CURVES (ER3A THRU ER3J)



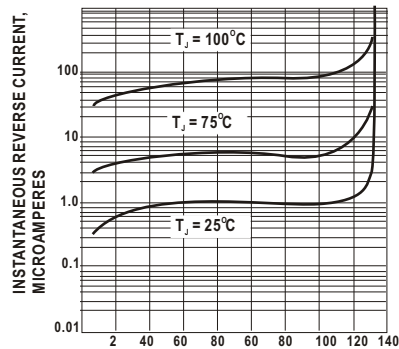
NOTE: 1. Rise TIME = 7ns max
Input Impedance = 1 megohm, 22 pF
2. Rise Time = 10ns max
Source Impedance = 50 Ohms



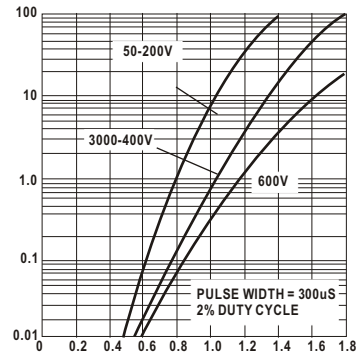
REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM



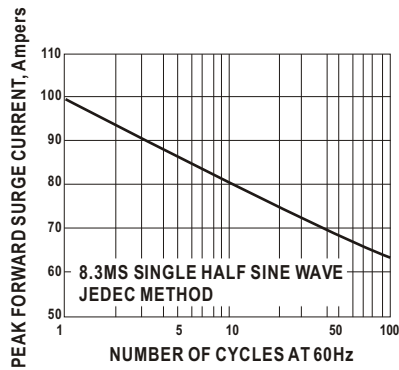
FORWARD CURRENT DERATING CURVE



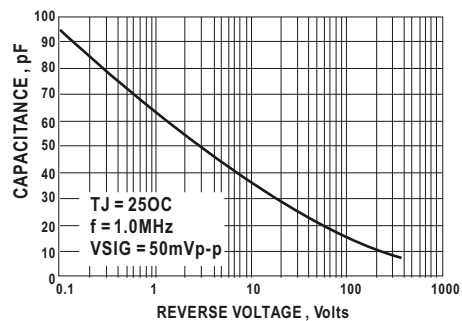
TYPICAL REVERSE CHARACTERISTICS



TYPICAL FORWARD CHARACTERISTICS



MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



TYPICAL JUNCTION CAPACITANCE