

ER3A thru ER3J

SURFACE MOUNT SUPERFAST RECTIFIER



**CHENG-YI
ELECTRONIC**



FEATURES

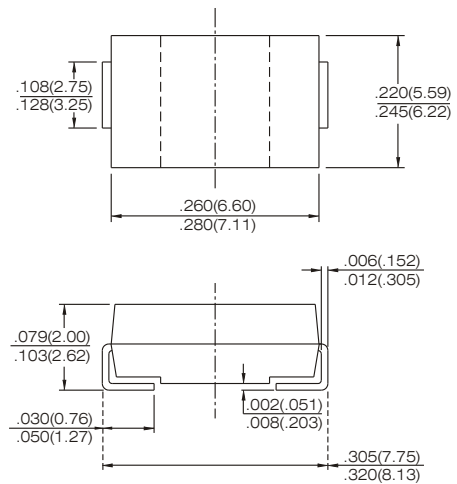
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- High temperature soldering:
260°C/10 seconds at terminals

MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard Packaging: 16mm tape (EIA-481)
- Weight: 0.007 ounces, 0.21 gram

VOLTAGE RANGE
-50 TO -600 VOLTS
CURRENT
-3.0 Amperes

SMC/DO-214AB



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	ER3A	ER3B	ER3C	ER3D	ER3E	ER3G	ER3J	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current, at $T_L=75^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage at 3.0A	V_F	0.95				1.25	1.7		V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	I_R					5.0			μA
Maximum Reverse Recovery Time (Note 1)	T_{RR}					35.0			nS
Typical Junction Capacitance (Note 2)	C_J					45.0			pF
Maximum Thermal Resistance (Note 3)	$R\theta_{JL}$					16			$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}					-50 to +150			$^\circ\text{C}$

Notes : 1. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Measured at 1.0 MHz and Applied $V_r=4.0$ volts.
3. 8.0mm^2 (.013mm thick) land areas.

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RATING AND CHARACTERISTICS CURVES ER3A THRU ER3J

Fig. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM ES1A THRU ES1G

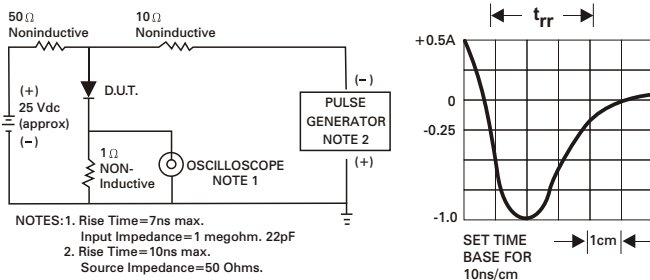


Fig. 2 - MAXIMUM AVERAGE FORWARD CURRENT RATING

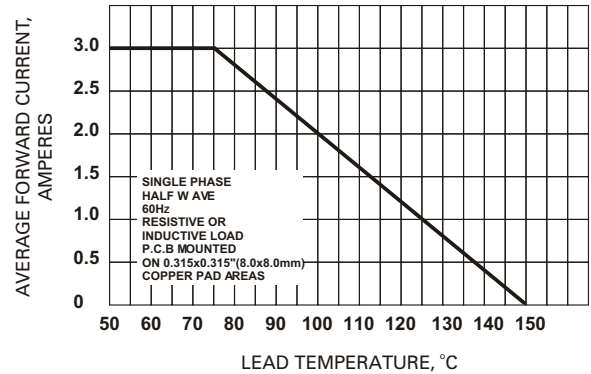


Fig. 3 - TYPICAL REVERSE CHARACTERISTICS

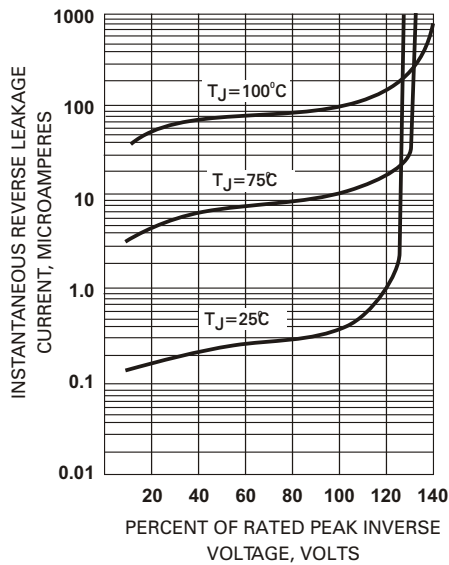


Fig. 4 - TYPICAL FORWARD CHARACTERISTICS

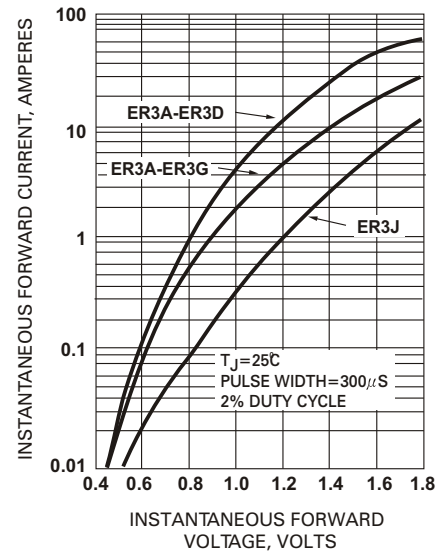


Fig. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

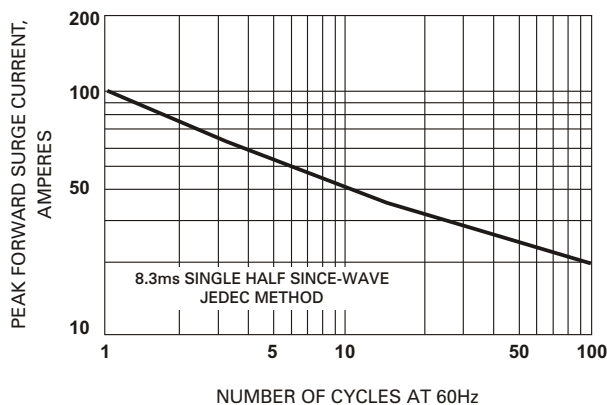


Fig. 6 - TYPICAL JUNCTION CAPACITANCE

