

ER3A THRU ER3J

SURFACE MOUNT SUPERFAST RECTIFIER
VOLTAGE - 50 - 600 Volts CURRENT - 3.0 Amperes

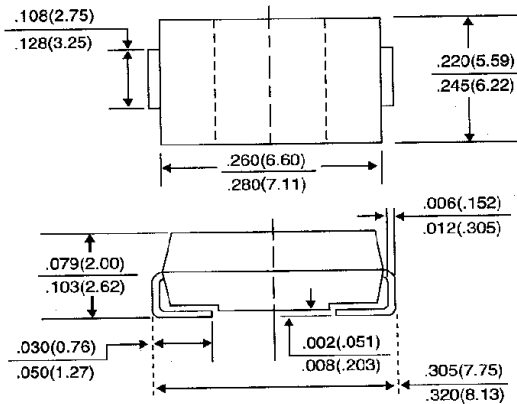
FEATURES

- 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

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	VOLTS
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	VOLTS
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	VOLTS
Maximum Average Forward Rectified Current at T _L = 75°C	I _(AV)	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	100							Amps
Maximum Instantaneous Forward Voltage at 3.0A	V _F	0.95			1.25		1.7		Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage		5.0							μA
		200							
Maximum Reverse Recovery (NOTE 1)	T _{RR}	35.0							Ns
Typical Junction Capacitance (NOTE 2)	C _J	45.0							pf
Typical Thermal Resistance (NOTE 3)	R _{ΘJL}	16							°C/W
Operating and Storage Temp	T _J , T _{STG}	-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 ER3A THRU ER3J

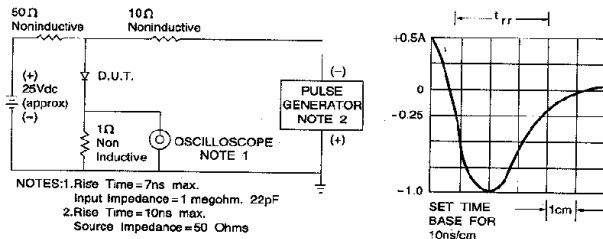


FIG. 1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST DIAGRAM

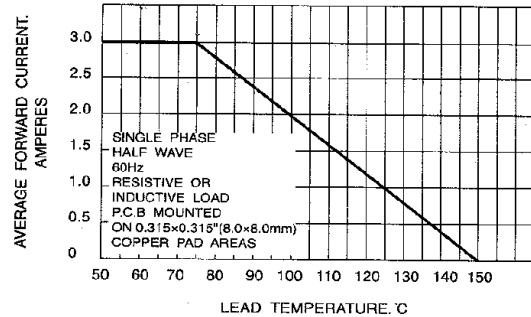


FIG. 2 - MAXIMUM AVERAGE FORWARD CURRENT RATING

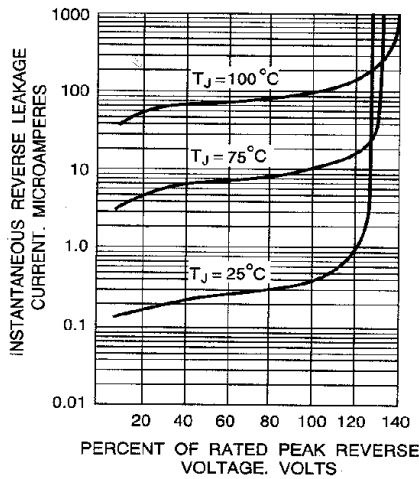


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

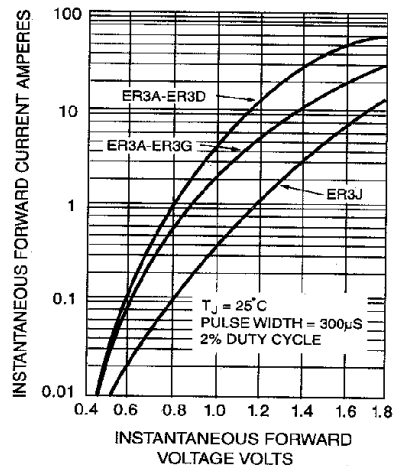


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

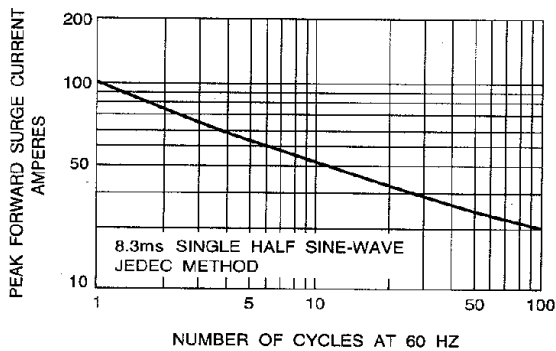


FIG. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

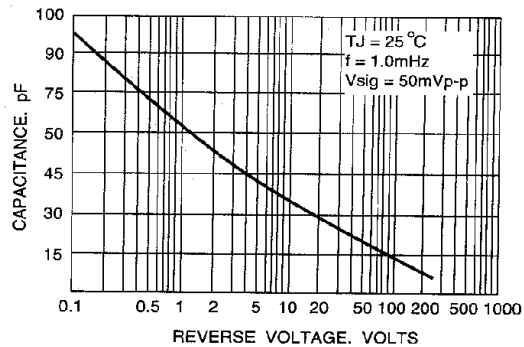


FIG. 6 - TYPICAL JUNCTION CAPACITANCE