DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

ER3A
THRU
ER3J

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 600 Volts *CURRENT 3.0 Ampere*

FEATURES

* Ideal for surface mounted applications
* Low leakage current
* Glass passivated junction

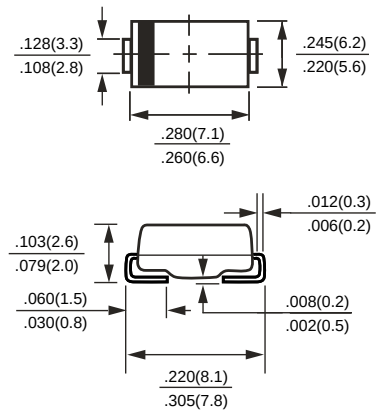
MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
*Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
* Polarity: As marked
* Mounting position: Any
* Weight: 0.24 gram

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%.

SMC(DO-214AB)



Dimensions in inches and (millimeters)

		SYMBOL	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_A = 55°C		I_O	3.0							Amps
Peak Forward Surge Current I_{FM}(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	100							Amps
Maximum Forward Voltage at 3.0A DC		V_F	0.95				1.25		1.7	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	5.0							µAmps
	@T_A = 100°C		200							
Maximum Reverse Recovery Time (Note 1)		trr	35							nSec
Typical Junction Capacitance (Note 2)		C_J	60							pF
Operating and Storage Temperature Range		T_J, T_{STG}	-65 to +175							°C

NOTES : 1. Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volrs.

RATING AND CHARACTERISTIC CURVES (ER3A THRU ER3J)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

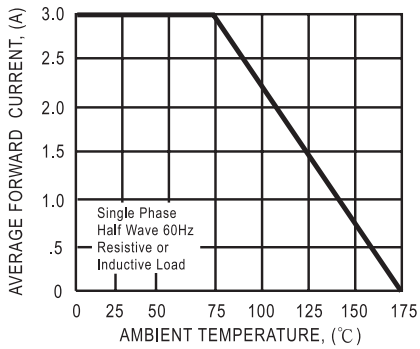


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

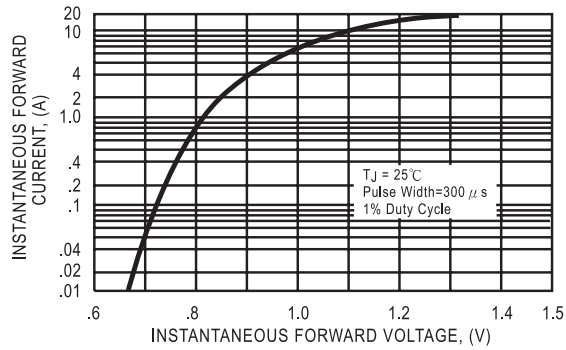


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

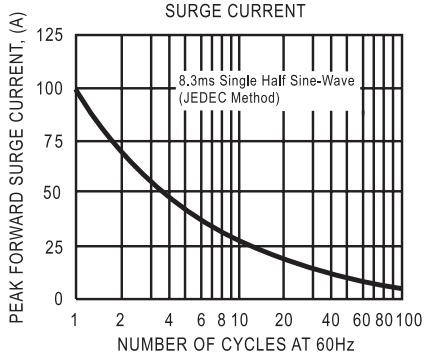


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

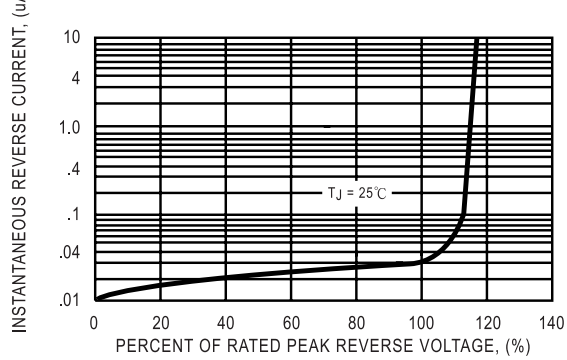
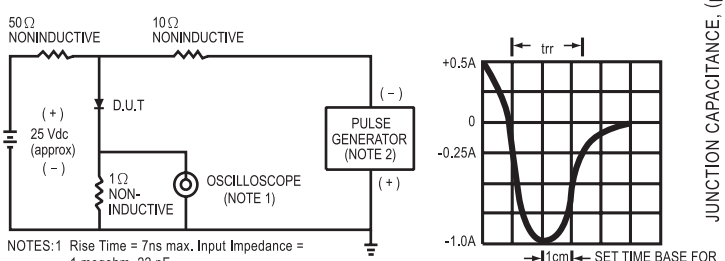


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG. 6 - TYPICAL JUNCTION CAPACITANCE