



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

ER1A
THRU
ER1G

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 400 Volts

CURRENT - 1.0 Ampere

FEATURES

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

MECHANICAL DATA

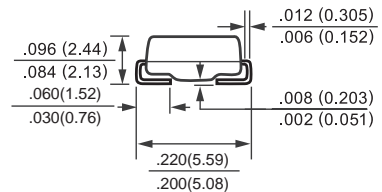
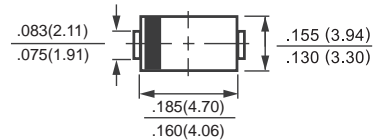
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.093 gram

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%.



SMB (DO-214AA)



Dimensions in inches and (millimeters)

	SYMBOL	ER1A	ER1B	ER1C	ER1D	ER1E	ER1G	UNITS	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	Volts	
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	Volts	
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	Volts	
Maximum Average Forward Rectified Current at T _A = 75 °C	I _O	1.0						Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30						Amps	
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	0.95			1.25			Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@ T _A = 25 °C	5.0						uAmps
		@ T _A = 100 °C	100						
Maximum Reverse Recovery Time (Note 3)	t _{rr}	35						nSec	
Typical Thermal Resistance (Note 2)	R _{θJL}	20						°C/W	
Typical Junction Capacitance (Note 1)	C _J	30						pF	
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 175						°C	

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 2. Thermal Resistance (Junction to Ambient), 0.2x0.2in² (5X5mm²) copper pads to each terminal.
 3. Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.

RATING AND CHARACTERISTIC CURVES (ER1A THRU ER1G)

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

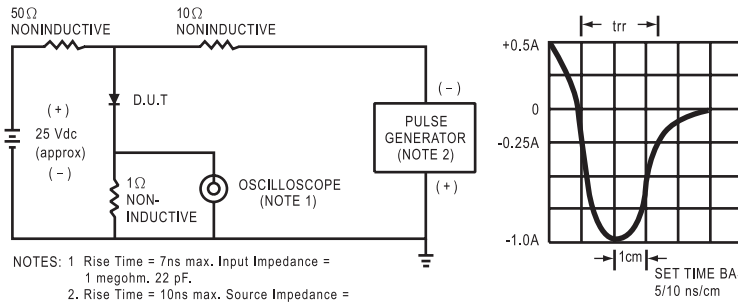


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

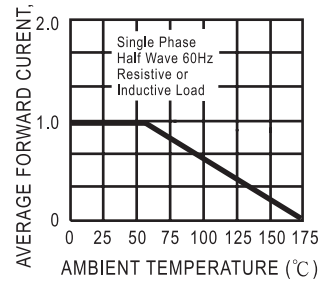


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

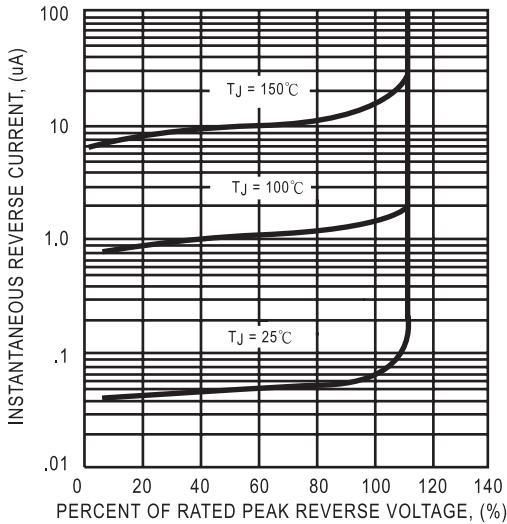


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

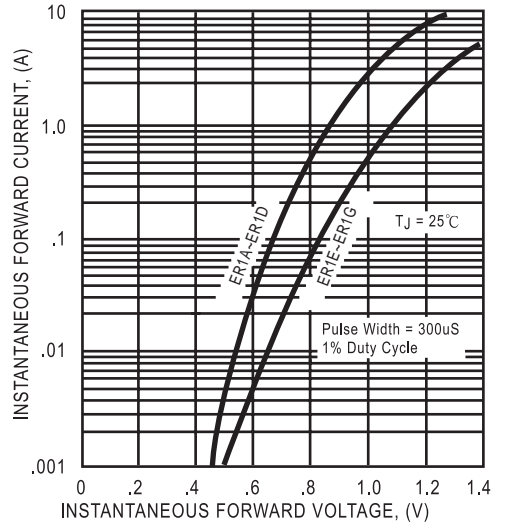


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

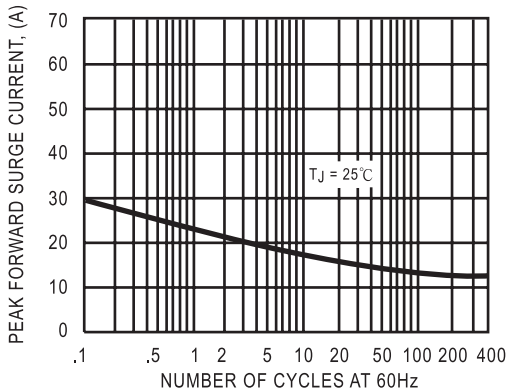
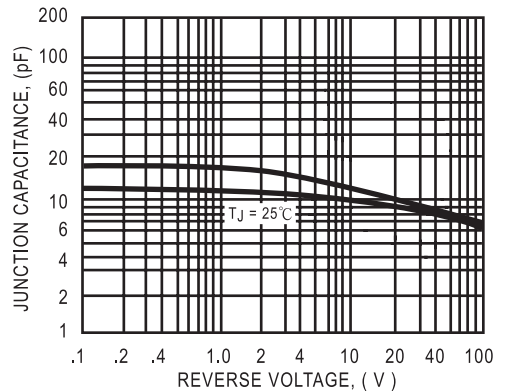


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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