



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

ES1A
THRU
ES1J

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 600 Volts

CURRENT 1.0 Ampere

FEATURES

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

MECHANICAL DATA

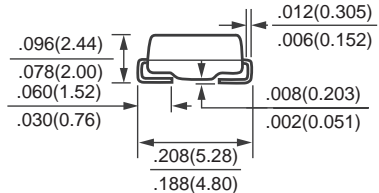
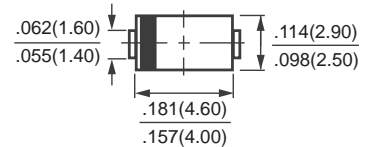
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

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%.



SMA(DO-214AC)



Dimensions in inches and (millimeters)

	SYMBOL	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	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 TA = 55°C	I _O	1.0							Amps	
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30							Amps	
Maximum Forward Voltage at 1.0A DC	V _F	0.95			1.25		1.7		Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	@TA = 25°C							μAmps	
		5.0								
		@TA = 100°C								
		100								
Maximum Reverse Recovery Time (Note 1)	t _{rr}	35							nSec	
Typical Junction Capacitance (Note 2)	C _J	15				10				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 volts.

RATING AND CHARACTERISTIC CURVES (ES1A THRU ES1J)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

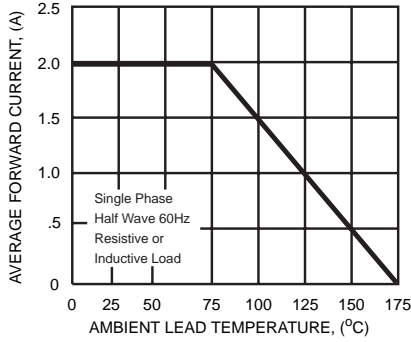


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

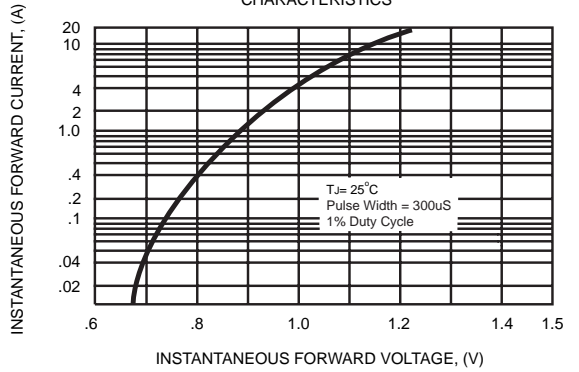


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

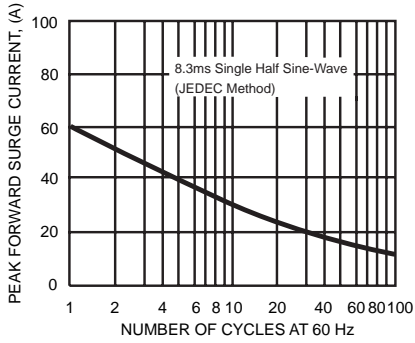


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

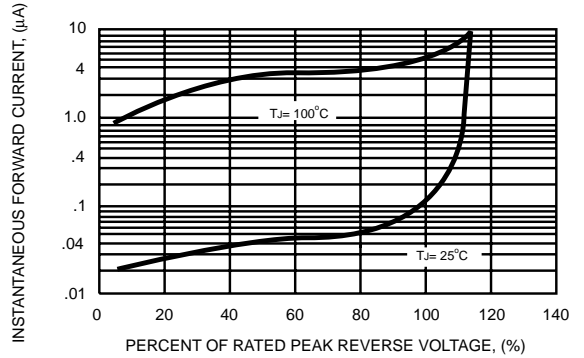


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

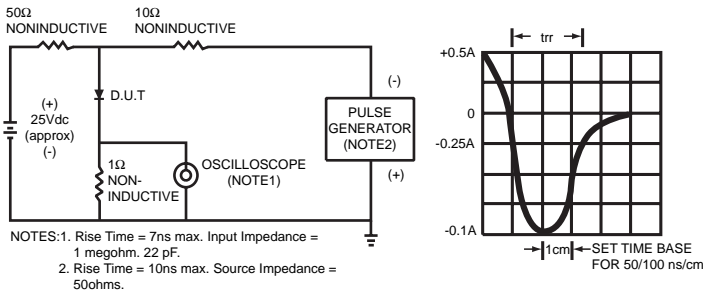
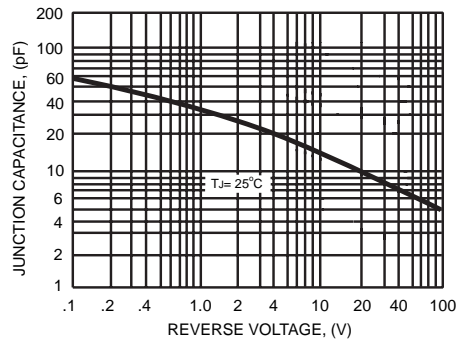


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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