



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

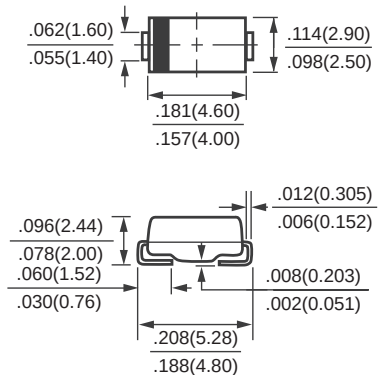
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per
MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

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		VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage		VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage		VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at TA = 55°C		IO	1.0							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM	30							Amps
Maximum Forward Voltage at 1.0A DC		VF	0.95				1.25		1.7	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	IR	5.0						μAmps	
	@ TA = 100°C		100							
Maximum Reverse Recovery Time (Note 1)		ttr	35							nSec
Typical Junction Capacitance (Note 2)		CJ	15				10			pF
Operating and Storage Temperature Range		TJ, TSTG	-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

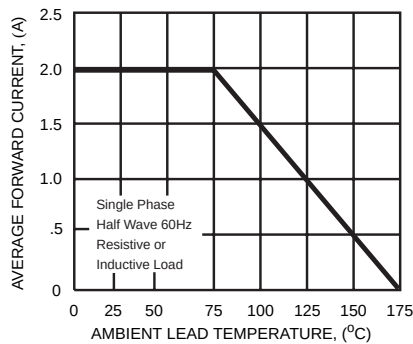


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

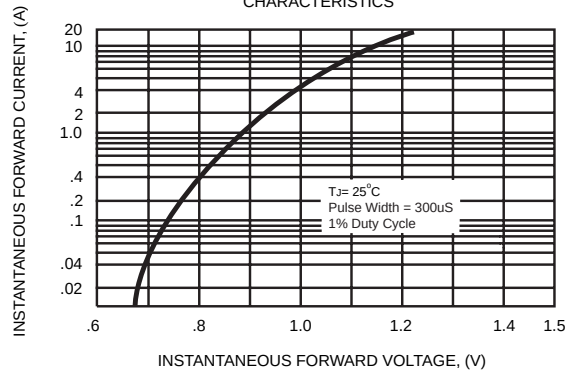


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

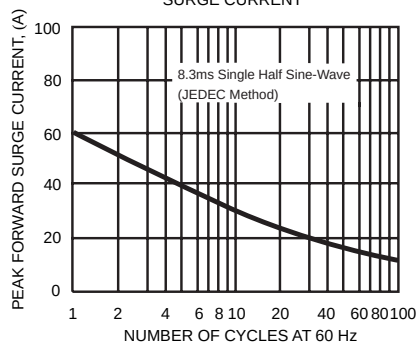


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

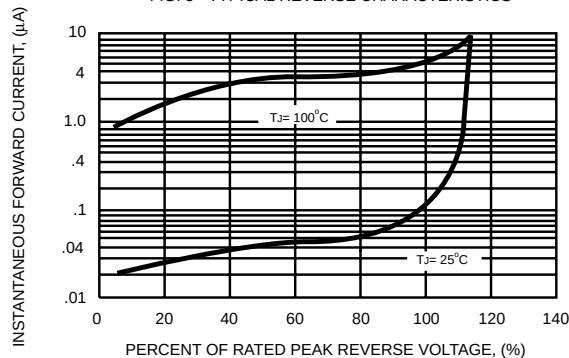


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

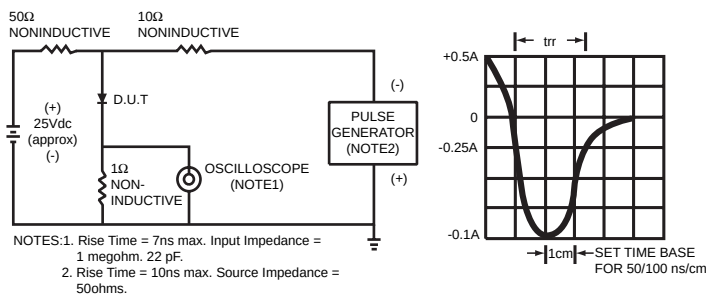
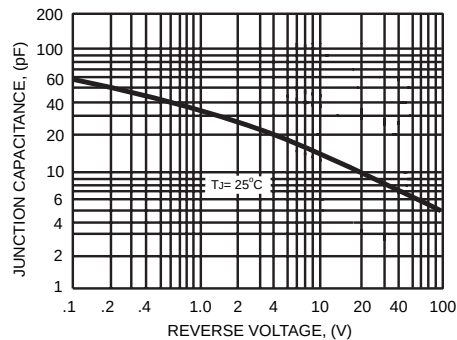


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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