



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**ES1A
THRU
ES1G**

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

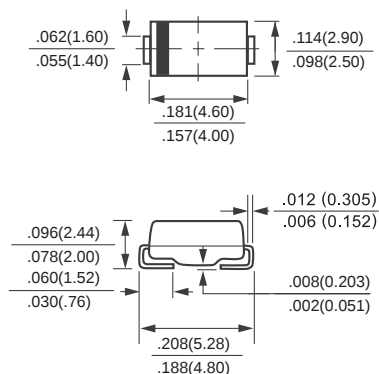
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram

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	UNITS
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Volts		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 Current at TA = 55°C		I _O	1.0						Amps
Peak Forward Surge Current I _{FM} (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		Volts
Maximum DC Reverse Current	@TA = 25°C	I _R	5.0						uAmps
at Rated DC Blocking Voltage	@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 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (ES1A THRU ES1G)

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

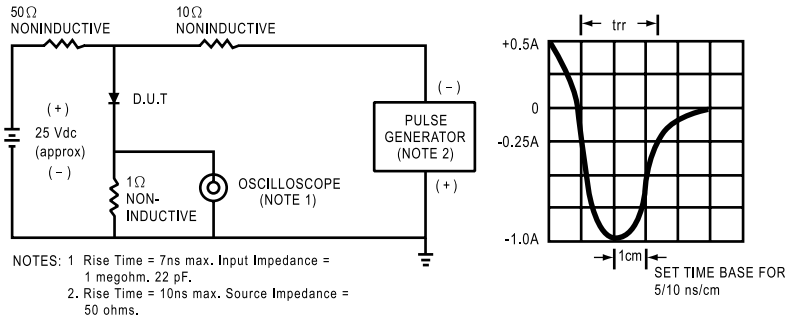


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

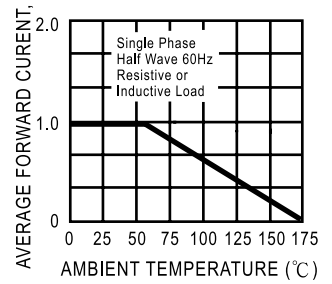


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

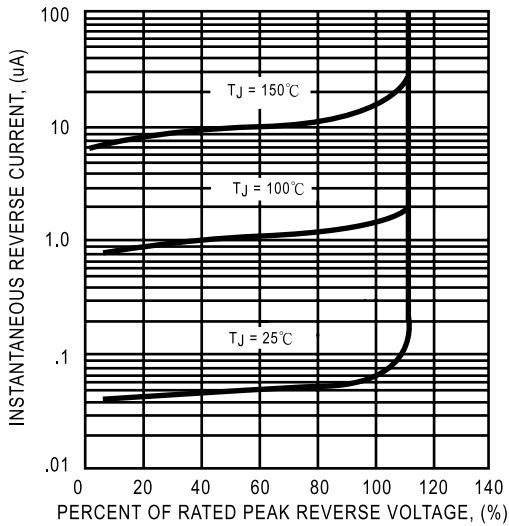


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

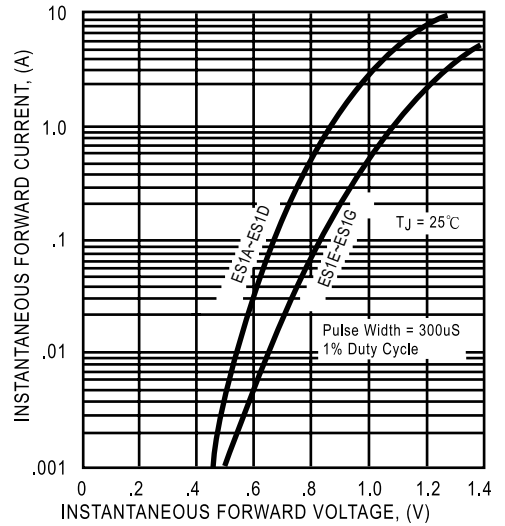


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

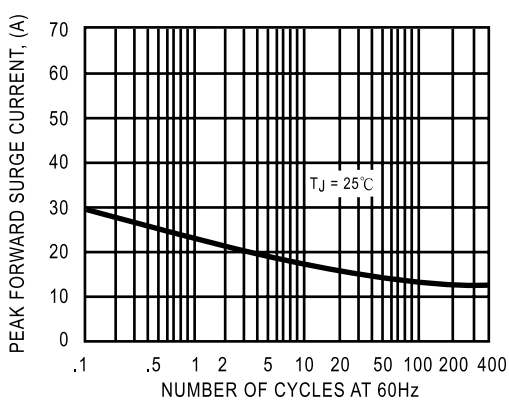
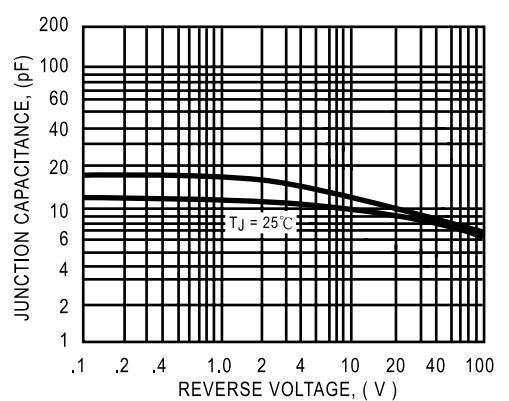


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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