

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

www.msksemi.com

VOLTAGE RANGE

50 to 600 Volts

CURRENT

1.0 Ampere



FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Fast switching speed

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

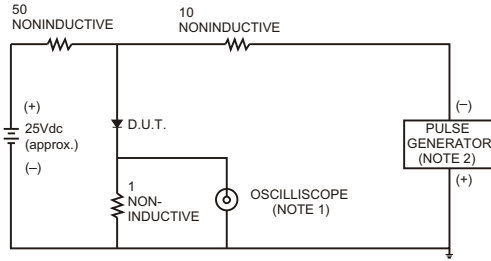
Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

P/N(MARK)	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at Ta=25°C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	25							A
Maximum Instantaneous Forward Voltage at 1.0A	0.95		1.25			1.7		V
Maximum DC Reverse Current Ta=25°C	5.0							µA
at Rated DC Blocking Voltage Ta=100°C	500							µA
Maximum Reverse Recovery Time (Note 1)	35							nS
Typical Junction Capacitance (Note 2)	15							pF
Typical Thermal Resistance R JA (Note 3)	80							°C/W
Operating and Storage Temperature Range Tj, Tstg	-65 — +150							°C
Marking Code								

- NOTES:**
1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal Resistance from Junction to Ambient.

RATING AND CHARACTERISTIC CURVES (ES1AF THRU ES1JF)

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



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

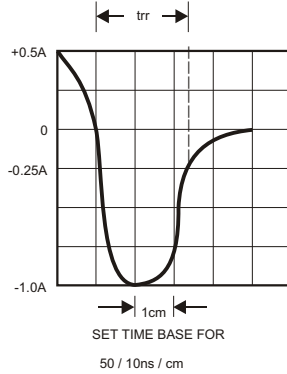


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

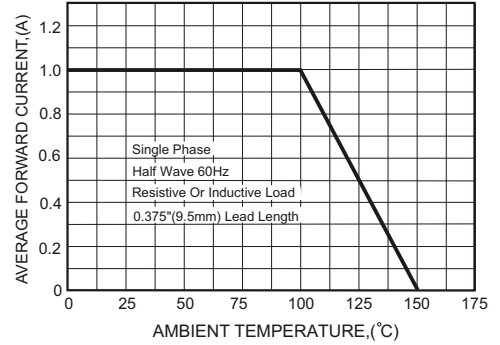


FIG.3-TYPICAL FORWARD CHARACTERISTICS

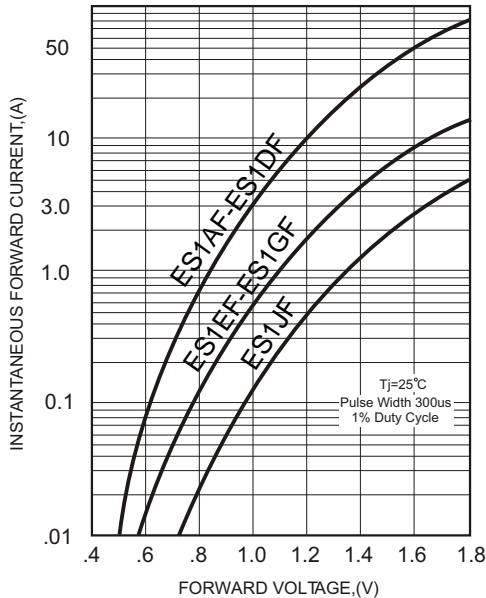


FIG.4-TYPICAL REVERSE CHARACTERISTICS

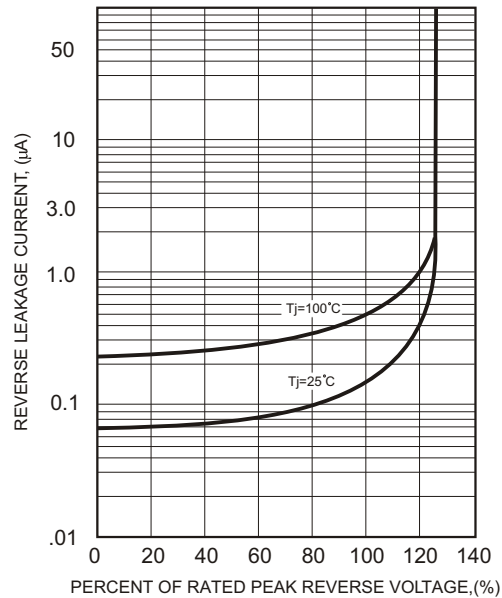


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

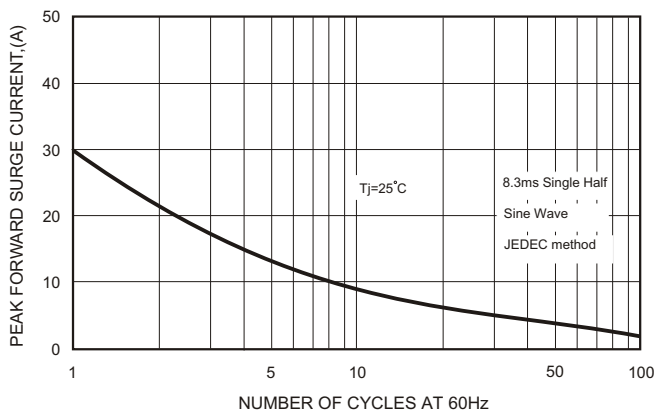
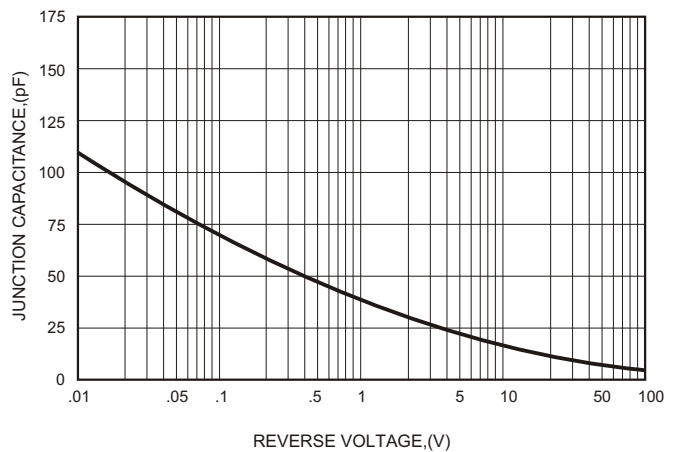
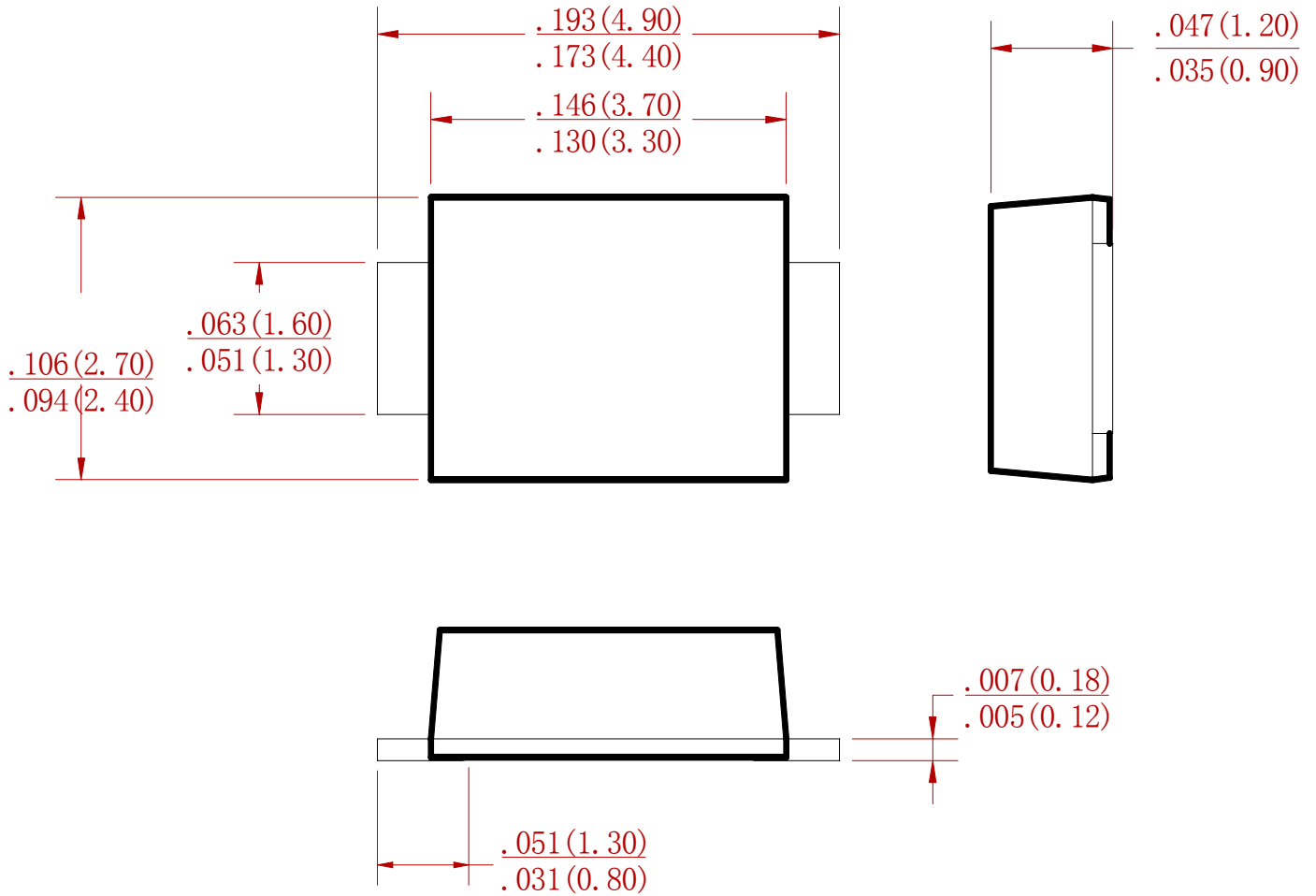


FIG.6-TYPICAL JUNCTION CAPACITANCE



PACKAGE MECHANICAL DATA



Dimensions in inches and (millimeters)

REEL SPECIFICATION

P/N	PKG	QTY
ES1AF THRU ES1JF	SMAF	3000

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