ES1J-1-E

SURFACE MOUNT
ULTRAFAST EFFICIENT RECTIFIER

VOLTAGE: 600V **CURRENT: 1.0A**

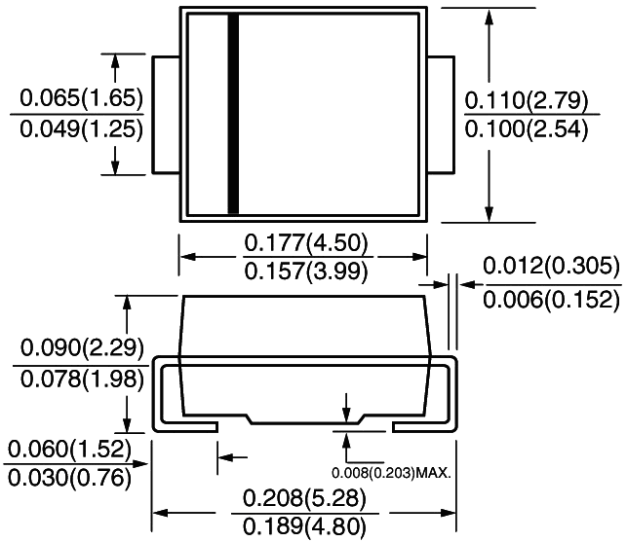
FEATURE

Ideal for surface mount pick and place application
Low profile package
Built-in strain relief
High surge capability
High temperature soldering guaranteed:
260℃/10sec at terminals
Glass passivated chip
Ultrafast recovery time for high efficiency
Halogen Free

MECHANICAL DATA

Terminal: Solder plated, solderable per J-STD-002
Case: JEDEC DO-214AC molded plastic body over passivated chip
Polarity: Color band denotes cathode
Weight: 0.064gram

SMA / DO-214AC



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25℃, unless otherwise stated)

	Symbol	ES1J-1-E	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	600	V
Maximum RMS Voltage	Vrms	420	V
Maximum DC blocking Voltage	Vdc	600	V
Maximum Average Forward Rectified Current at T_L =75℃	If(av)	1.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	Ifsm	30.0	A
Maximum Forward Voltage at rated forward current	Vf	1.5	V
Maximum DC Reverse Current Ta =25℃ at rated DC blocking voltage Ta =125℃	Ir	10.0 100.0	μ A
Maximum Reverse Recovery Time (Note1)	Trr	35	nS
Typical Junction Capacitance (Note 2)	Cj	8.0	pF
Typical Thermal Resistance (Note 3)	Rth(jl)	30.0	℃/W
Storage and Operating Junction Temperature	Tstg, Tj	-50 to +150	℃

Note：

1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area

RATINGS AND CHARACTERISTIC CURVES ES1J-1-E

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

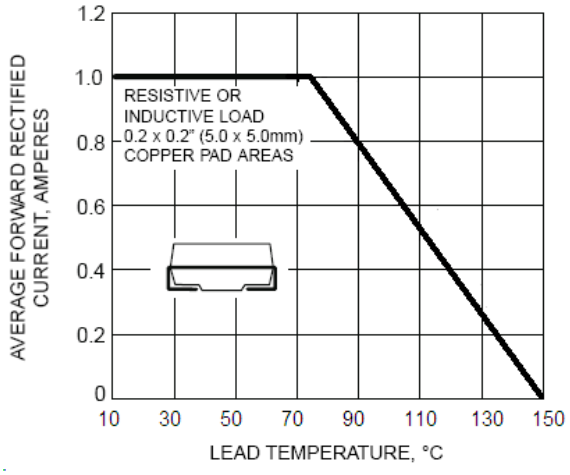


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

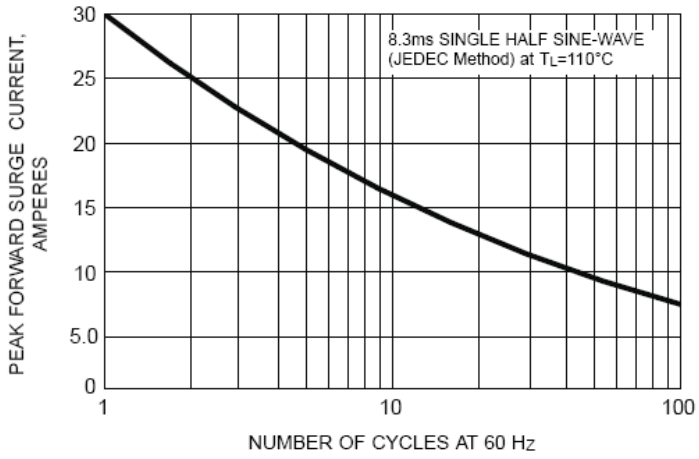


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

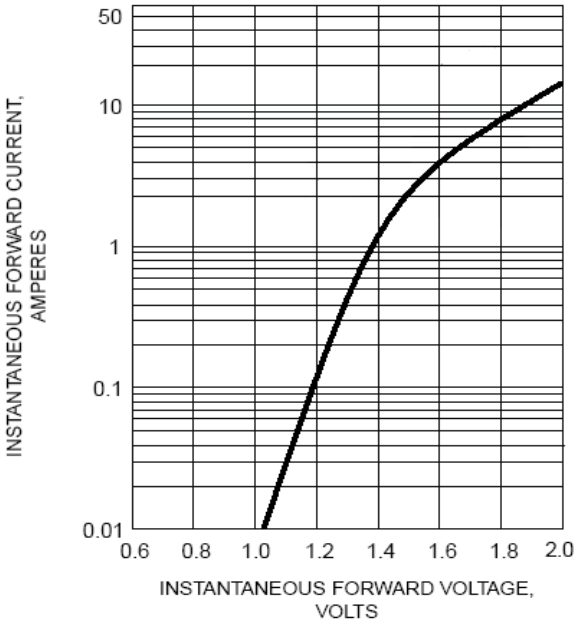


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

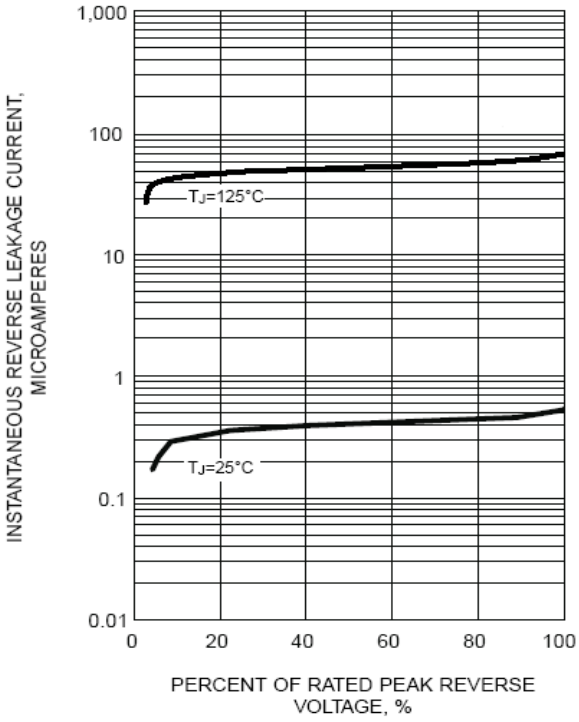
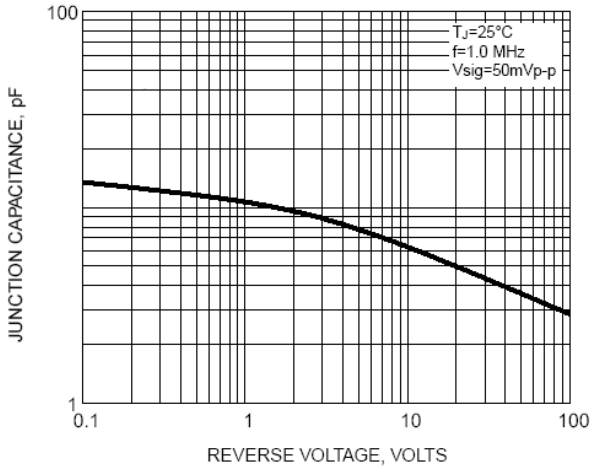


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



Typical Transient Thermal Impedance