

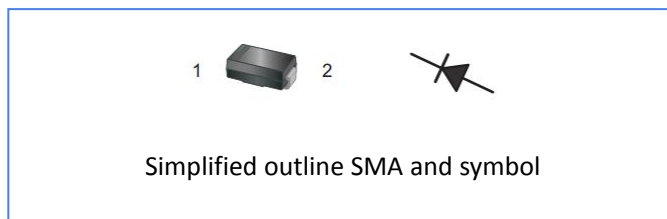
ES1A THRU ES1J

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case:SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx.Weight: 0.055g / 0.002oz



Pinning

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings And Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

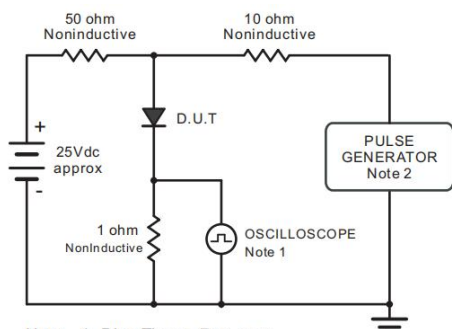
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30							A
Maximum Forward Voltage at 1 A	V _F	1.0				1.25		1.70	V
Maximum DC Reverse Current Ta = 25° C at Rated DC Blocking Voltage Ta =125° C	I _R	5 100							μ A
Typical Junction Capacitance at VR=4V, f=1MHz	Cj	15							pF
Maximum Reverse Recovery Time ⁽¹⁾	trr	35							ns
Typical Thermal Resistance ⁽²⁾	RθJA	75							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

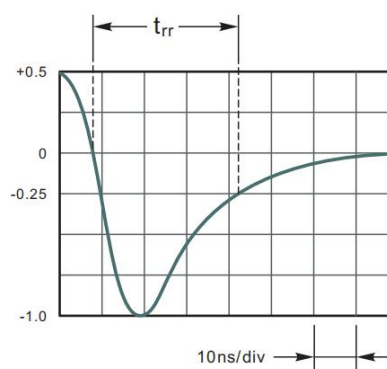
⁽¹⁾ Measured with $I_F = 0.5 A$, $I_R = 1 A$, $I_{rr} = 0.25 A$
⁽²⁾ P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas

Rating And Characteristic Curves

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

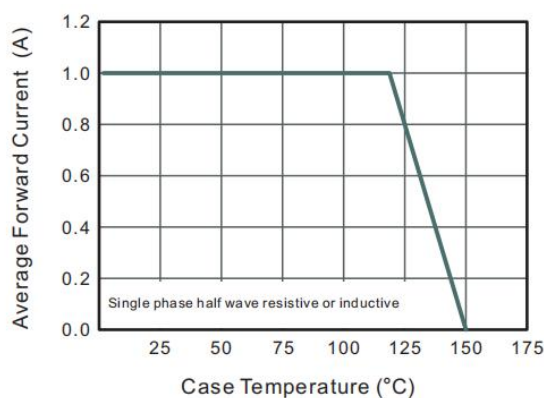


Fig.3 Typical Reverse Characteristics

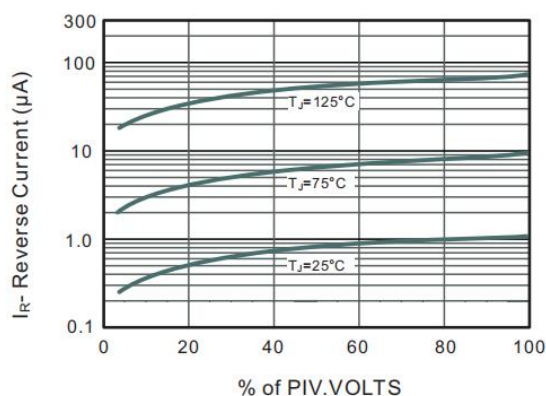


Fig.4 Typical Forward Characteristics

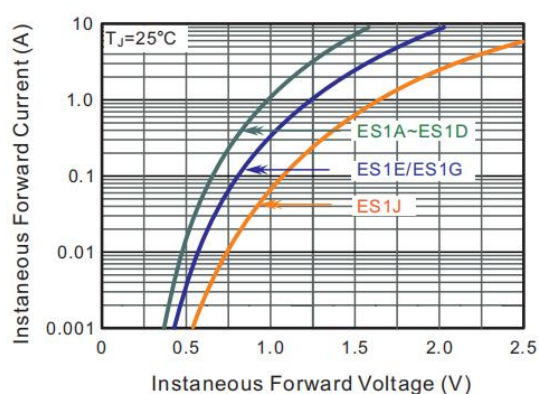


Fig.5 Typical Junction Capacitance

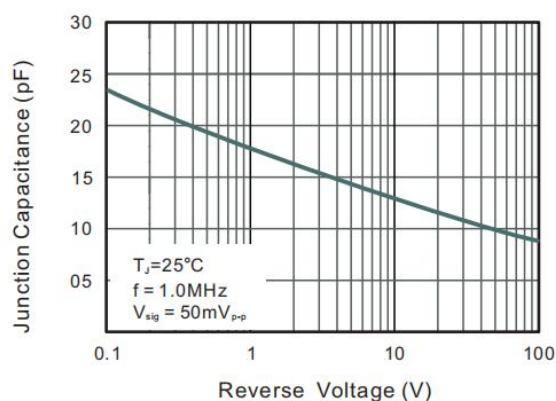
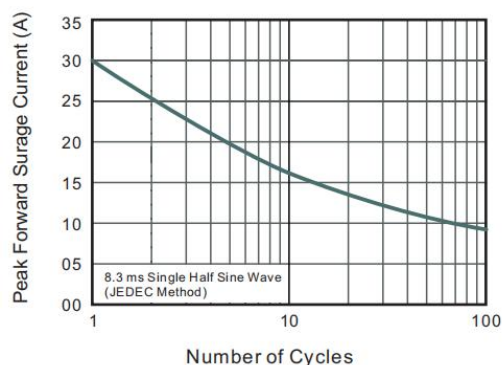


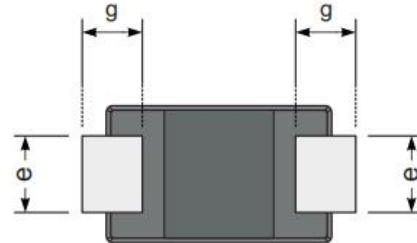
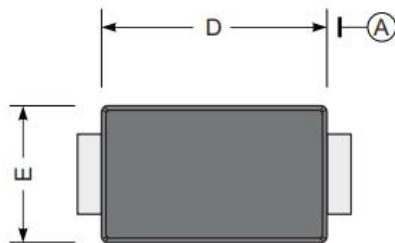
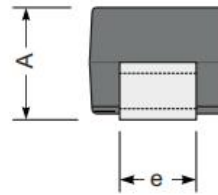
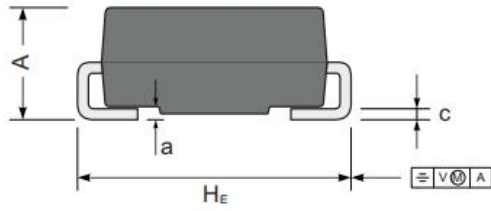
Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

Plastic surface mounted package; 2 leads

SMA



UNIT		A	C	D	E	e	g	H _E	a
mm	max	2.2	0.31	4.5	2.7	1.6	1.5	5.2	0.3
	min	1.9	0.15	4.0	2.3	1.3	0.9	4.7	
mil	max	87	12	181	106	63	59	205	12
	min	75	6	157	91	51	35	185	

The recommended mounting pad size



Unit : $\frac{\text{mm}}{(\text{mil})}$