

Surface Mount Superfast Recovery Rectifier
Reverse Voltage – 50 to 600 V Forward Current – 1 A
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



Top View
 Marking Code: ES1A~ES1J
 Simplified outline SMA and symbol

Absolute Maximum Ratings and Characteristics

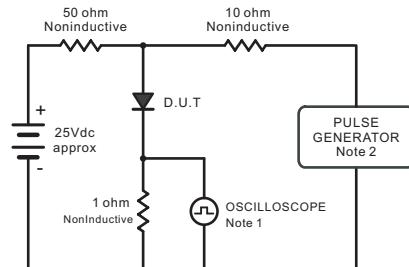
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Parameter	Symbols	ES1AG	ES1BG	ES1CG	ES1DG	ES1EG	ES1GG	ES1JG	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 at T _L = 100 °C	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			1.25	1.70	V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 125 °C	I _R				5	100			µA
Typical Junction Capacitance at V _R =4V, f=1MHz	C _j				15				pF
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}				35				ns
Typical Thermal Resistance ⁽²⁾	R _{θJA}				110				°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.

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

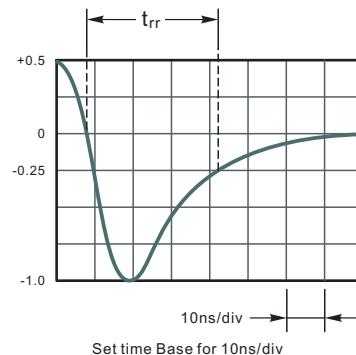


Fig.2 Maximum Average Forward Current Rating

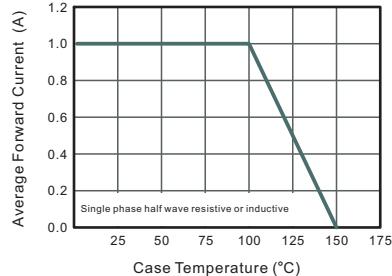


Fig.4 Typical Forward Characteristics

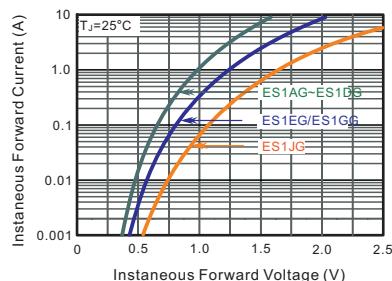


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

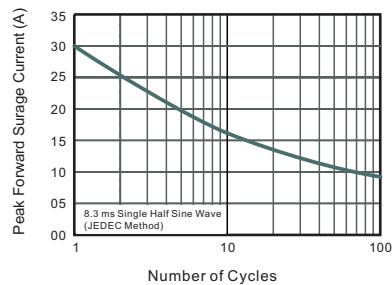


Fig.3 Typical Reverse Characteristics

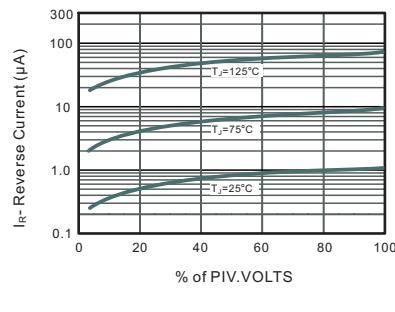
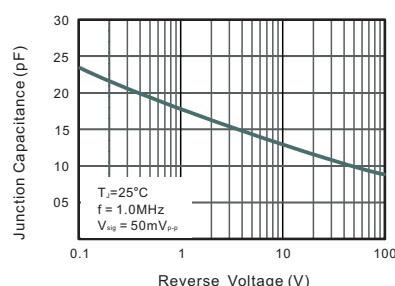


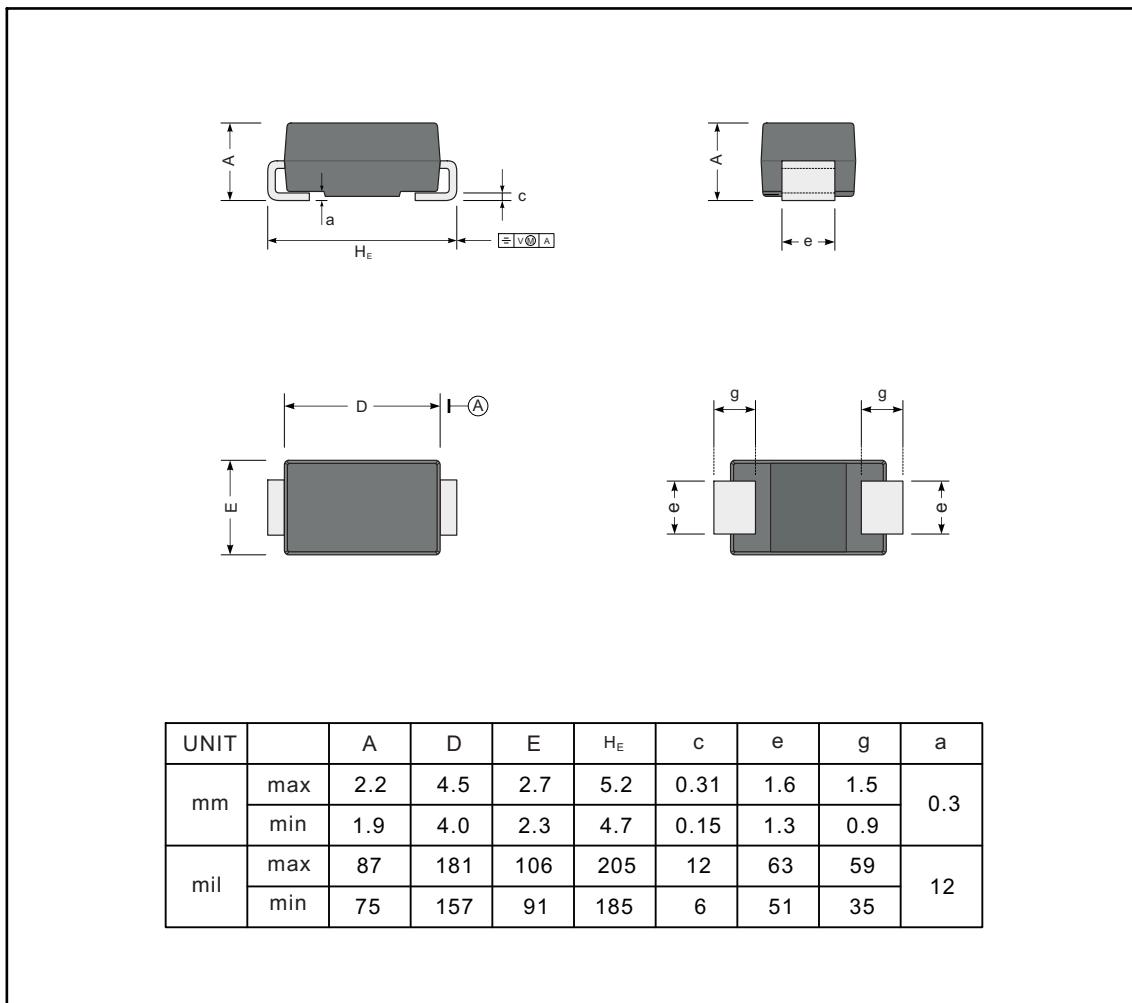
Fig.5 Typical Junction Capacitance



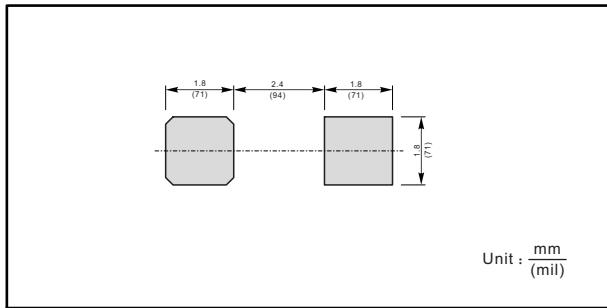
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMA



The recommended mounting pad size



Marking

Type number	Marking code
ES1AG	ES1A
ES1BG	ES1B
ES1CG	ES1C
ES1DG	ES1D
ES1EG	ES1E
ES1GG	ES1G
ES1JG	ES1J

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