

Description

The ES1A~ES1J is Surface Mount Superfast Recovery Rectifier, Reverse Voltage:50 to 600V, Forward Current:1.0A, SMA package.

Features

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

Applications

- General purpose.

Equivalent Circuit

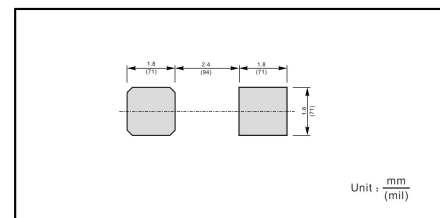


Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



Marking

- See Marking Instructions.

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating							Unit
		ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	
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	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Typical Junction Capacitance at $V_R=4V, f=1MHz$	C_j	15							pF
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	75							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150							°C

Note:

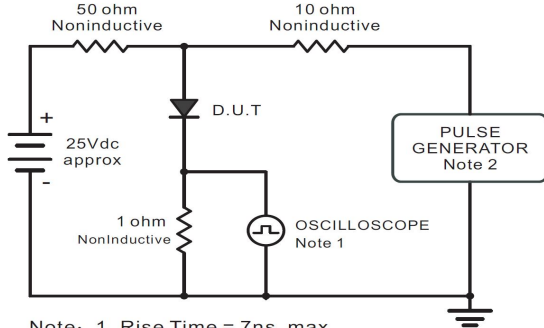
1) P.C.B. mounted with 1.0X1.0"(2.54X2.54 cm) copper pad areas.

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Rating							Unit
			ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	
Maximum Forward Voltage	V_F	$I_F=1.0A$	1.0			1.25		1.70	V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_a=25^\circ C$	5.0							μA
		$T_a=125^\circ C$	100							μA
Maximum Reverse Recovery Time	t_{rr}	$I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$	35							ns

Electrical Characteristic Curve

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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

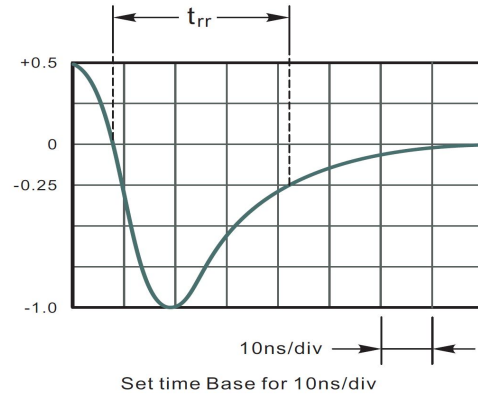


Fig.2 Maximum Average Forward Current Rating

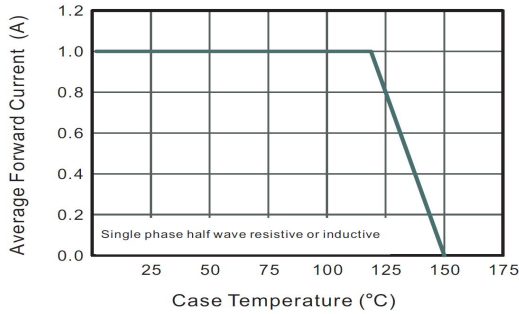


Fig.3 Typical Reverse Characteristics

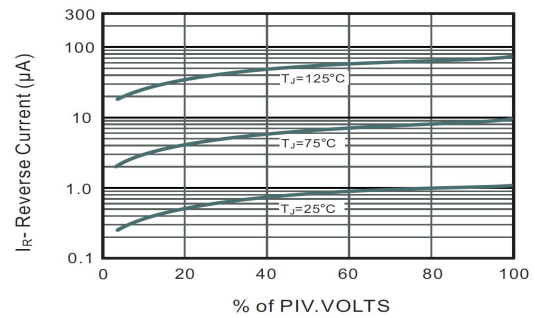


Fig.4 Typical Forward Characteristics

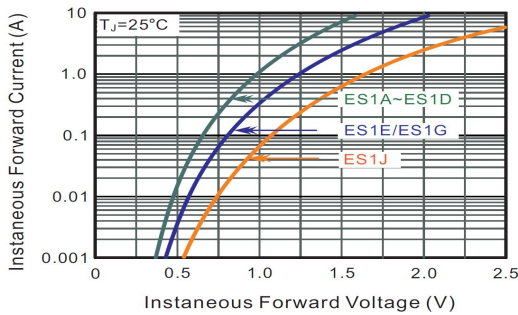


Fig.5 Typical Junction Capacitance

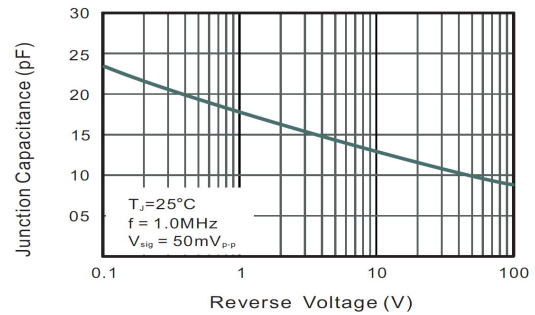
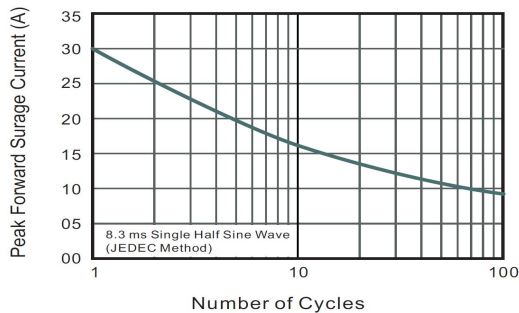


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking instructions

Marking

Type number	Marking code
ES1A	ES1A
ES1B	ES1B
ES1C	ES1C
ES1D	ES1D
ES1E	ES1E
ES1G	ES1G
ES1J	ES1J



Note:

ES1D: Product Type Code
 ****: Lot No. Code, The 1st * means:YM Code
 The last 3 * means:little Lot No Co

Packaging SPEC.

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SMA	5000	2	10000	7	70000	13" ×12	336X336X40	380X335X366

Package Dimensions

SMA

