

/ Descriptions

800V 1.0A SMA
Surface Mount Superfast Recovery Rectifier,Reverse Voltage:800V,Forward Current:1.0A, SMA package.

/ Features

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

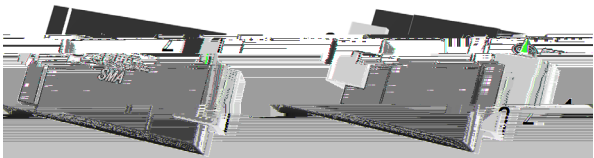
/ Applications

General purpose.

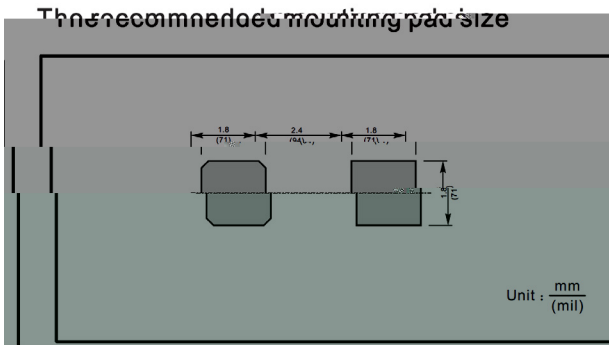
/ Equivalent Circuit



/ Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode



/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
		ES1K	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	800	V
Maximum RMS voltage	V_{RMS}	560	V
Maximum DC Blocking Voltage	V_{DC}	800	V
Maximum Average Forward Rectified Current at $T_c=125^\circ\text{C}$	$I_{F\text{ AV}}$	1.0	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30	A
Typical Junction Capacitance at $V_R=4\text{V}$, $f=1\text{MHz}$	C_j	15	pF
Typical Thermal Resistance ¹	$R_{\theta JA}$	60	/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150	

Note:

1 P.C.B. mounted with 1.0 X 1.0" (2.54 X 2.54 cm) copper pad areas.

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Rating	Unit
			ES1M	
Maximum Forward Voltage	V_F	$I_F=1.0\text{A}$	1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_a=25$	5.0	μA
		$T_a=125$	100	μA
Maximum Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$	35	ns

/ Electrical Characteristic Curve

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

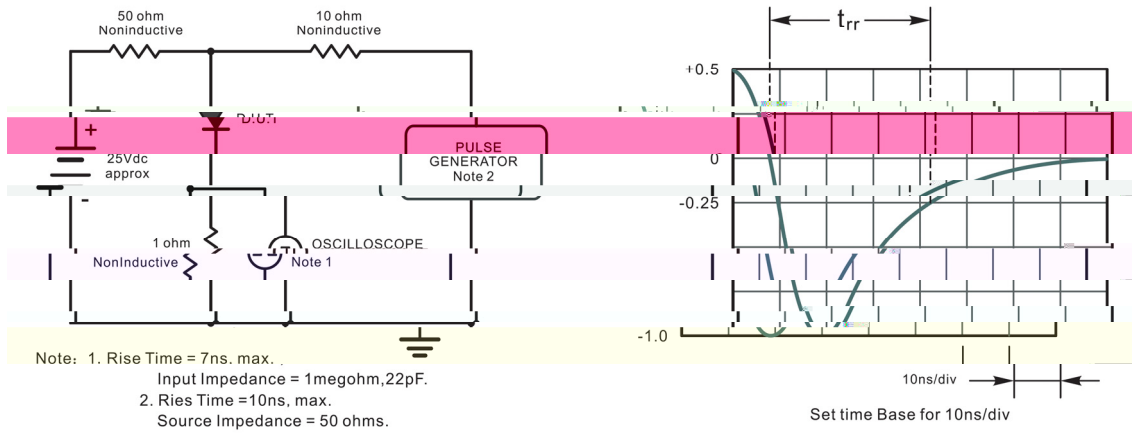


Fig.2 Maximum Average Forward Current Rating

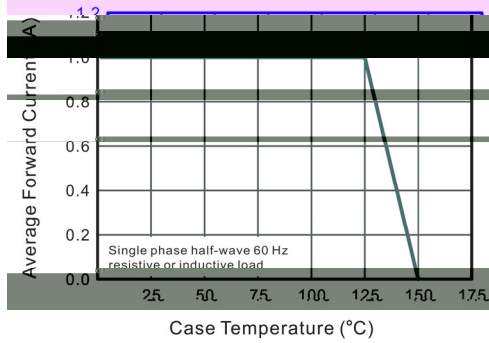


Fig.3 Typical Reverse Characteristics

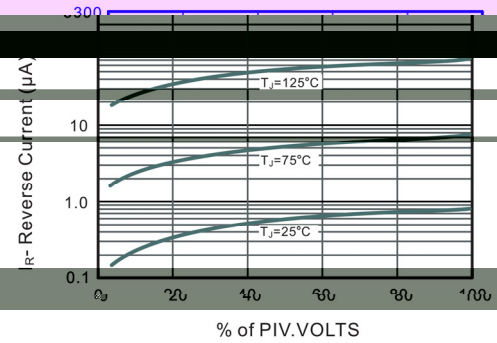


Fig.4 Typical Forward Characteristics

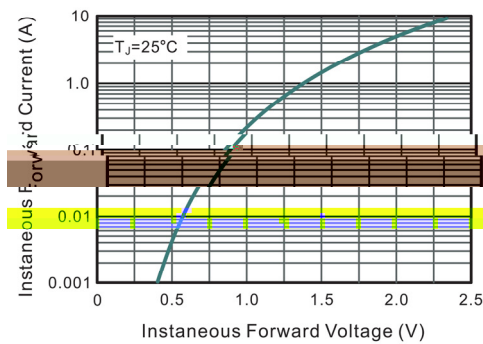


Fig.5 Typical Junction Capacitance

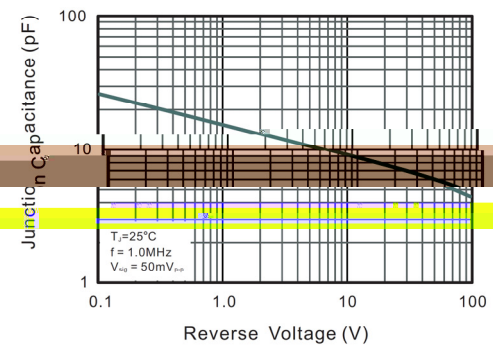
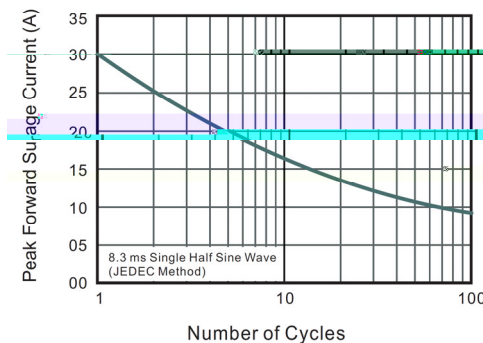
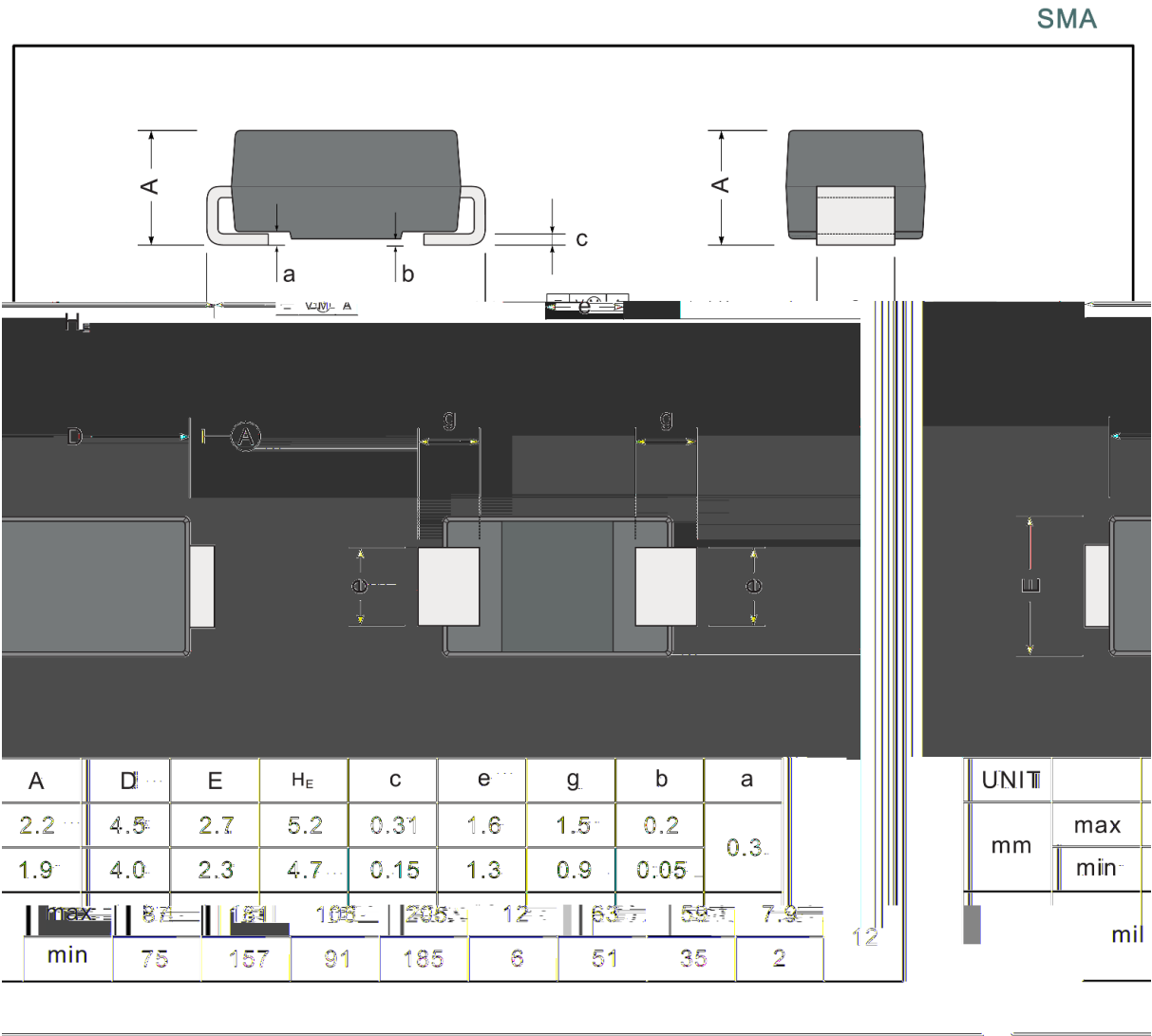


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



/ Package Dimensions



/ **Marking Instructions**



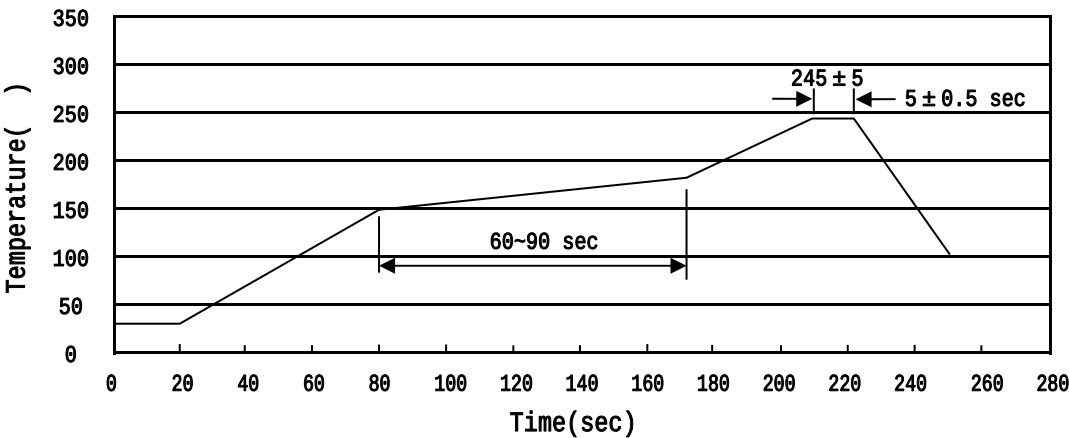
ES1K

Note:

ES1K Product Type Code

***** Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 °C , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 °C , Duration:5±0.5sec.
- 3

2 10

/sec.

3. Cooling Speed: 2~10 °C /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
SMA	5,000	2	10,000	7	70,000	13 ×12	336×336×40	380×335×366

/ Notices