

Surface Mount Fast Recovery Rectifier

ES1A-ES1J

SMA



Cathode  **Anode**

Features

- Low forward voltage drop
- Low leakage current
- High current capability
- Super fast switching speed
- High forward surge capability
- High reliability.

Mechanical Data

- Epoxy: UL 94V-O rate flame retardant
- Lead: lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end

■Maximum Ratings (T_a=25°C Unless otherwise specified)

Parameter	Symbols	ES1A	ES1B	ES1D	ES1G	ES1J	Units
Maximum Repetitive Peak Reverse Voltage	VRRM	50	100	200	400	600	V
Maximum RMS voltage	VRMS	35	70	140	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	V
Maximum Average Forward Rectified Current	I(AV)	1.0					A
Reverse Recovery Time. IF=0.5A, IR=1A, IRR=0.25A	Trr	35					ns
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	IFSM	30					A
I ² t rating for fusing (1ms< t < 8.3ms)	I ² t	3.7					A ² S
Maximum Forward Voltage at 1.0A and 25°C	VF	1.0			1.25	1.50	V
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=100 °C	IR	5 100					μA
Typical Junction Capacitance (Note1)	Cj	15					pF
Operating and Storage Temperature Range	Tj, Tstg	-55 ~ +150					°C
Typical thermal resistance (Note 2)	RθJ-A	75					°C/W

Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.

2. Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

Fig.1 Maximum Average Forward Current Rating

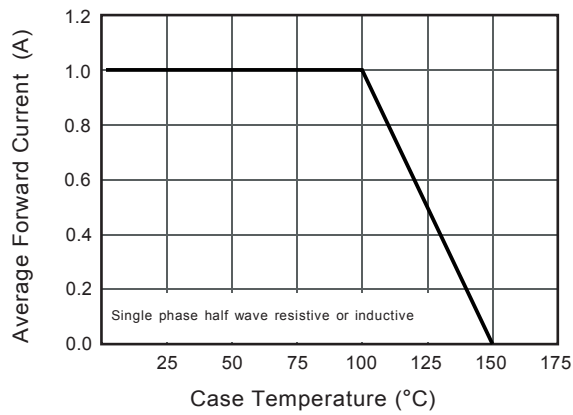


Fig.2 Typical Reverse Characteristics

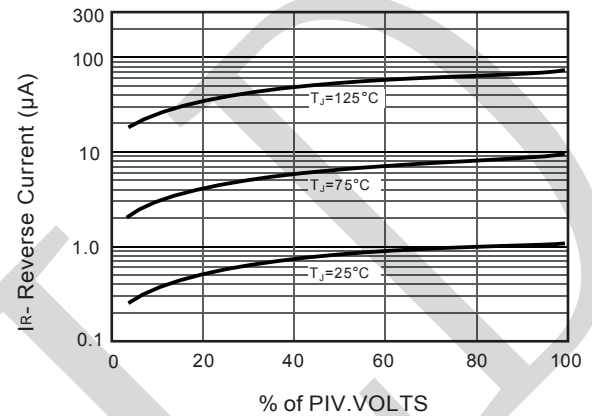


Fig.3 Typical Forward Characteristics

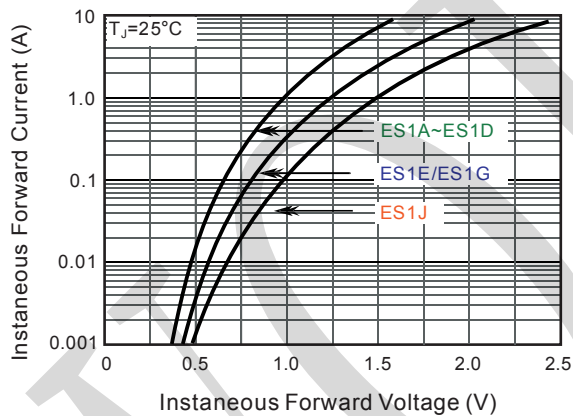


Fig.4 Typical Junction Capacitance

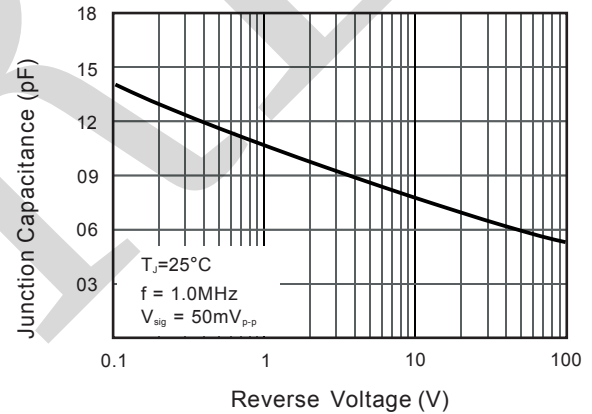
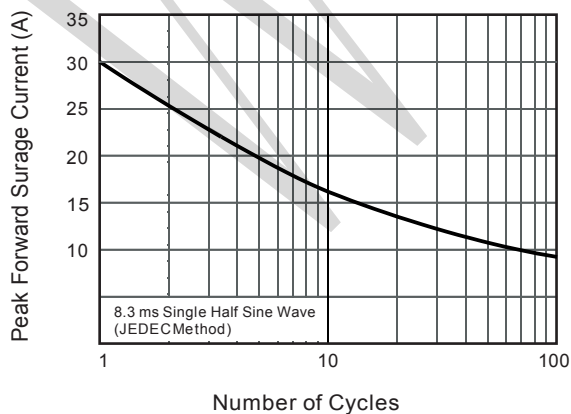
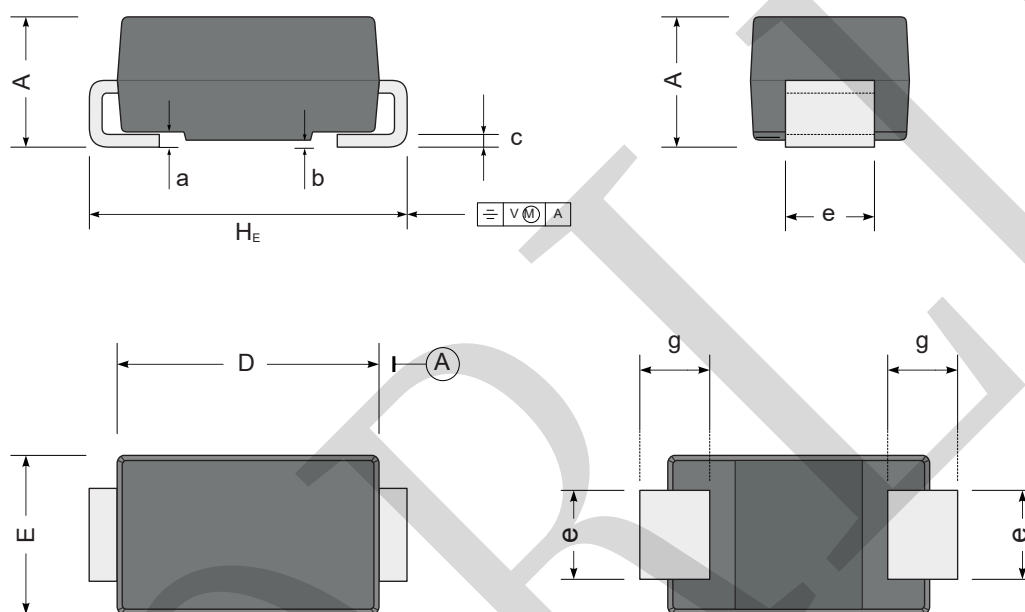


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

SMA



UNIT		A	D	E	H _E	c	e	g	b	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.2	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	0.05	
mil	max	87	181	106	205	12	63	59	7.9	12
	min	75	157	91	185	6	51	35	2	