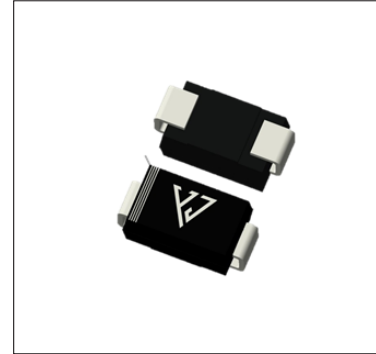


Surface Mount Super Fast Recovery Rectifier

ES1A—ES1M

Features

- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High forward surge capability
- ◆ Super fast reverse recovery time



Mechanical Data

Case: DO-214AC (SMA) Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed: 260°C/10 seconds

Polarity: Cathode line denotes the cathode end

Mounting Position: Any

Maximum Ratings & Electrical Characteristics

Ratings at TA = 25°C unless otherwise specified

Characteristic	Symbol	ES1A	ES1B	ES1D	ES1F	ES1G	ES1J	ES1K	ES1M	Units
Peak repetitive reverse voltage	VRRM	50	100	200	300	400	600	800	1000	V
RMS reverse voltage	VRMS	35	70	140	210	280	420	560	700	V
DC blocking voltage	VDC	50	100	200	300	400	600	800	1000	V
Maximum average forward output current	IF(AV)	1								A
Peak forward surge current, 8.3ms single half-sine-wave, @TJ = 25°C	IFSM	30								A
Rating for fusing (t<8.3ms)	I2t	3.7								A2sec
Maximum instantaneous forward voltage @ 1A	VF	0.95		1.3		1.7		1.85		V
Maximum reverse recovery time (Note 1)	Trr	35								nS
Maximum Reverse current @TA =25°C	IR	5								μ A
Rated VR @TA =125°C		50								

Thermal Characteristics

Characteristic	Symbol	ES1A	ES1B	ES1D	ES1F	ES1G	ES1J	ES1K	ES1M	Units
Typical thermal resistance (Note 2)	R ΘJA	85								°C /W
	R ΘJL	35								
Operating junction temperature range	TJ	- 55 ---- + 150								°C
Storage temperature range	TSTG	- 55 ---- + 150								°C

Note:

(1) IF=0.5A, IR=1A, IRR=0.25A

(2) Units mounted on P.C.B. with 5.0 x 5.0 mm land areas.

Surface Mount Super Fast Recovery Rectifier

ES1A-ES1M

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

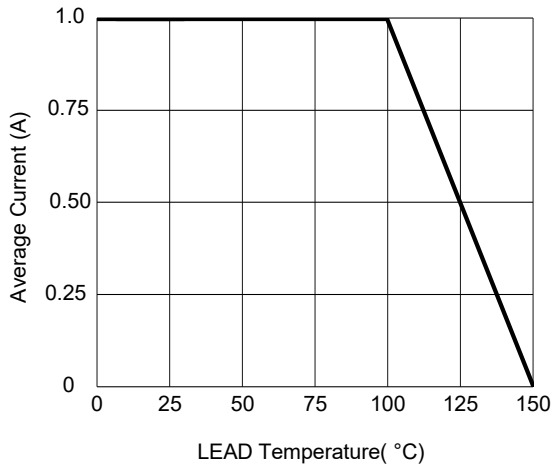


Fig.1-Forward Current Derating Curve

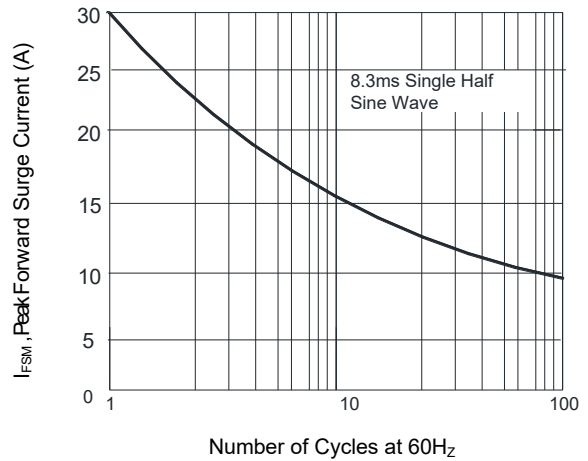


Fig.2- Surge Forward Current Capability

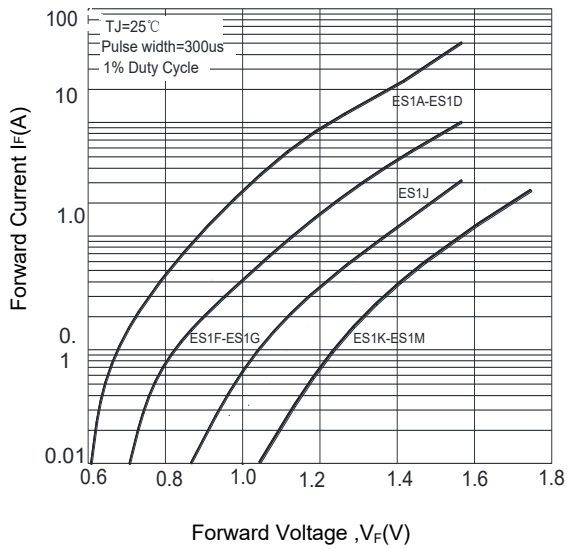


Fig.3- Typical Forward Voltage Characteristic

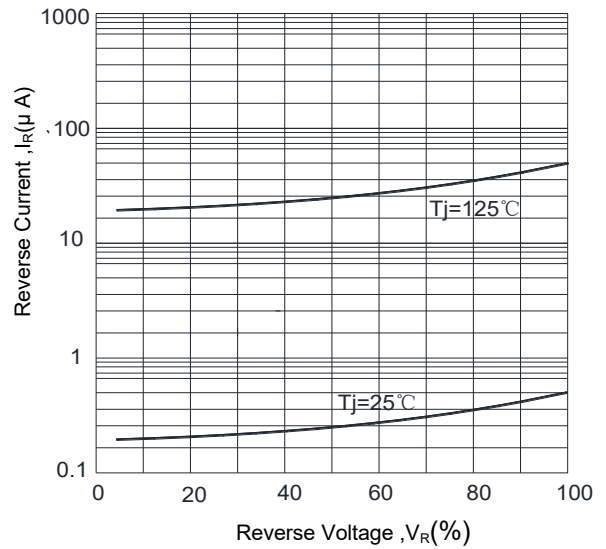


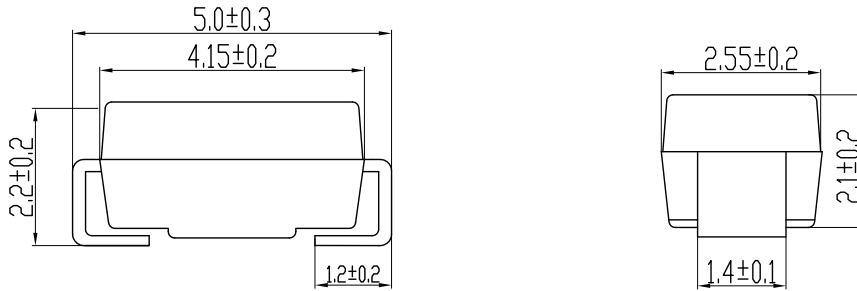
Fig.4- Typical Reverse Characteristic

Surface Mount Super Fast Recovery Rectifier

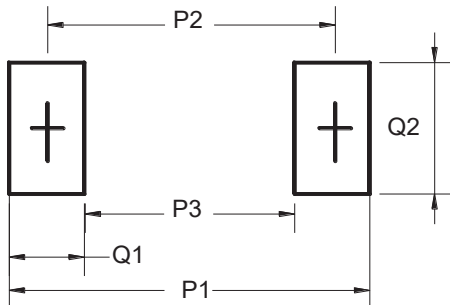
ES1A-ES1M

Package Outline Dimensions(unit:mm)

DO-214AC (SMA)



Mounting Pad Layout(unit:mm)



Dim	Millimeters
P1	6.50
P2	4.00
P3	1.50
Q1	2.50
Q2	1.70

Ordering Information

Part No.	Marking	Package	Shipping
ES1A	ES1A	SMA	5000PCS /Tape&Reel
ES1B	ES1B	SMA	5000PCS /Tape&Reel
ES1D	ES1D	SMA	5000PCS /Tape&Reel
ES1F	ES1F	SMA	5000PCS /Tape&Reel
ES1G	ES1G	SMA	5000PCS /Tape&Reel
ES1J	ES1J	SMA	5000PCS /Tape&Reel
ES1K	ES1K	SMA	5000PCS /Tape&Reel
ES1M	ES1M	SMA	5000PCS /Tape&Reel