

Surface Mount Fast Recovery Rectifier

RS1A—RS1M

Features

- ◆ Low profile package
- ◆ deal for automated placement
- ◆ Glass passivated chip junction
- ◆ High forward surge capability
- ◆ 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	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Units
Peak repetitive reverse voltage	VRRM	50	100	200	400	600	800	1000	V
RMS reverse voltage	VRMS	35	70	140	280	420	560	700	V
DC blocking voltage	VDC	50	100	200	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	3.74							A2sec
Maximum instantaneous forward voltage @ 1A	VF	1.3							V
Maximum Reverse current @TA =25°C	IR	5							μ A
Rated VR @TA =125°C		50							
Maximum Reverse Recovery Time IF = 0.5 A, IR = 1 A, Irr = 0.25 A.	Trr	150				250	500		nS

Thermal Characteristics

Characteristic	Symbol	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Units
Typical thermal resistance (Note 1)	R θJA	61							°C /W
	R θJC	30							
	R θJL	6							
Operating junction temperature range	TJ	- 55 ---- + 150							°C
Storage temperature range	TSTG	- 55 ---- + 150							°C

Note

(1) Device mounted on PCB with 5 mm x 5mm copper pad areas

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

Fig.1-Forward Current Derating Curve

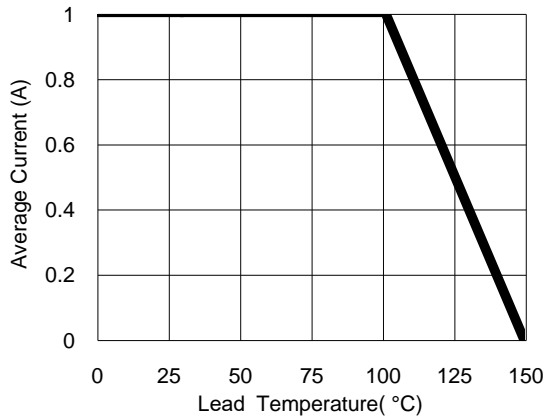


Fig.2- Surge Current Derating Curve

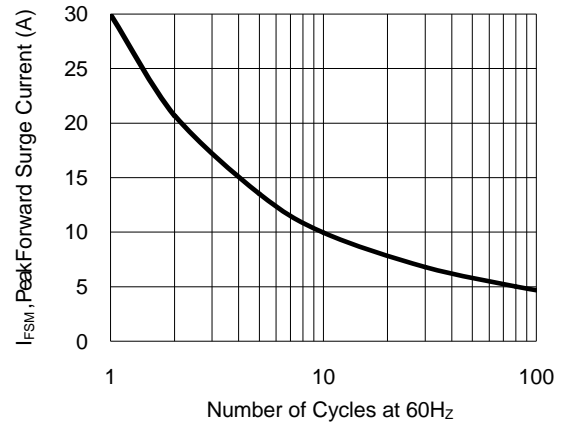


Fig.3- Typical Forward Voltage Characteristic

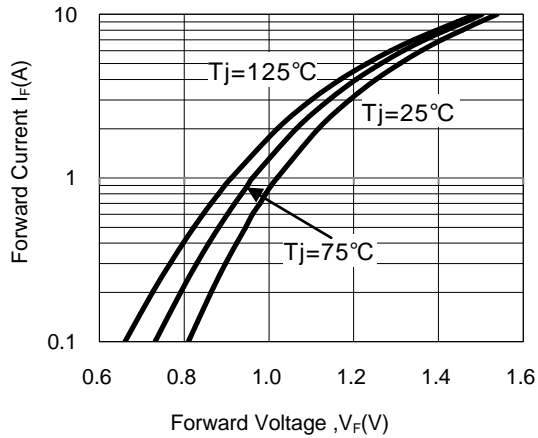
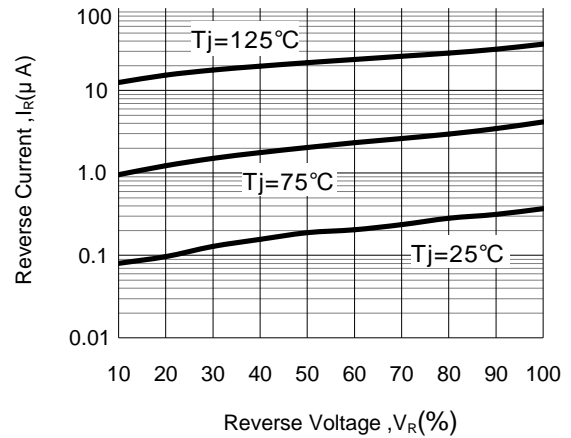


Fig.4- Typical Reverse Characteristic

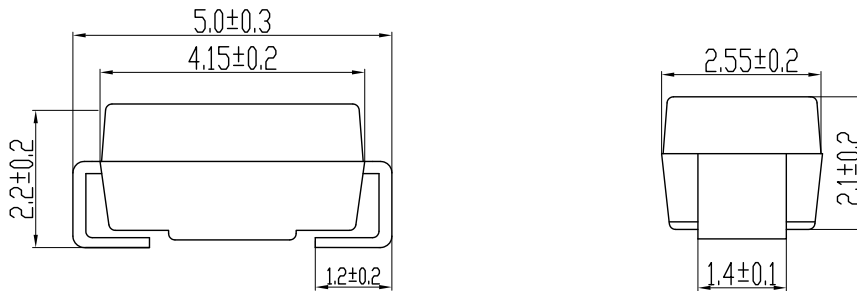


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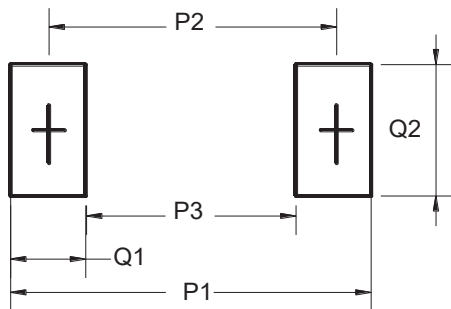
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Package Outline Dimensions(unit:mm)

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
RS1A	RS1A	SMA	5000PCS /Tape&Reel
RS1B	RS1B	SMA	5000PCS /Tape&Reel
RS1D	RS1D	SMA	5000PCS /Tape&Reel
RS1G	RS1G	SMA	5000PCS /Tape&Reel
RS1J	RS1J	SMA	5000PCS /Tape&Reel
RS1K	RS1K	SMA	5000PCS /Tape&Reel
RS1M	RS1M	SMA	5000PCS /Tape&Reel

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