

Surface Mount General Purpose Rectifier

M1—M7

Features

- ◆ Low profile package
- ◆ Ideal for automated placement
- ◆ Glass passivated chip junction
- ◆ High forward surge capability



Mechanical Data

Case: 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	M1	M2	M3	M4	M5	M6	M7	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	35							A
Rating for fusing (t<8.3ms)	I2t	5.1							A2sec
Maximum instantaneous forward voltage @ 1A	VF	1.1							V
Maximum Reverse current @TA =25°C	IR	5							μ A
Rated VR @TA =125°C		50							

Thermal Characteristics

Characteristic	Symbol	M1	M2	M3	M4	M5	M6	M7	Units
Typical thermal resistance (Note 1)	R θJA	70							°C /W
	R θJC	25							
	R θJL	30							
Operating junction temperature range	TJ	- 55 ---- + 150							°C
Storage temperature range	TSTG	- 55 ---- + 150							°C

Note

(1) Units mounted on PCB with 10 mm x 20mmx0.1mm Copper Pads

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

Fig.1-Forward Current Derating Curve

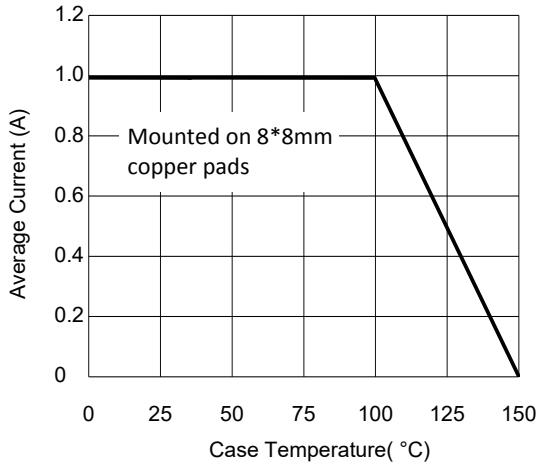


Fig.2- Surge Current Derating Curve

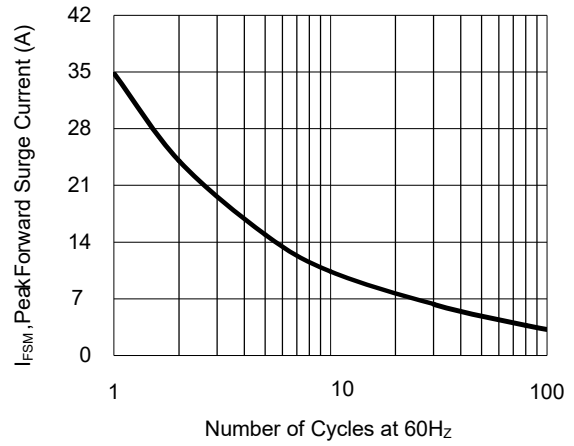


Fig.3- Typical Forward Voltage Characteristic

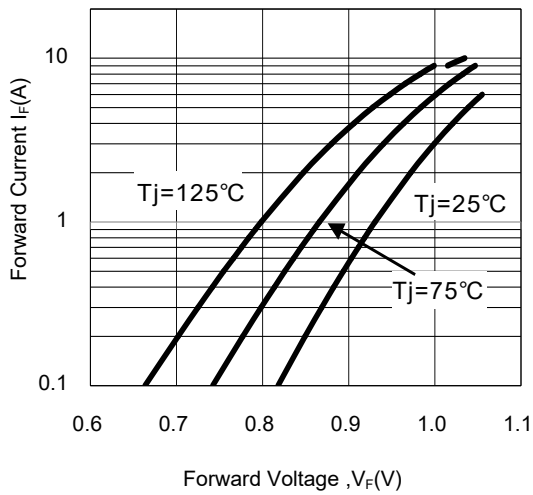
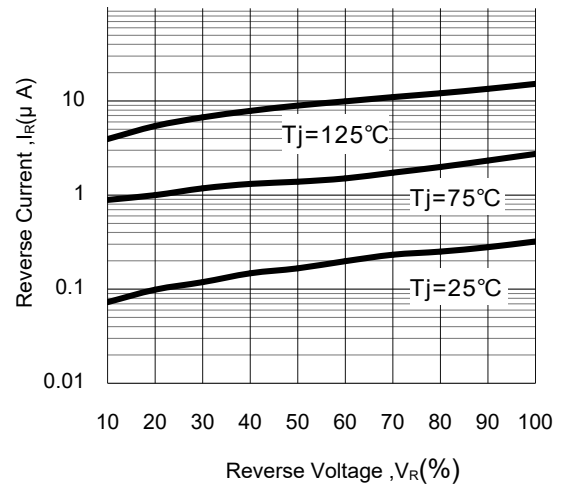


Fig.4- Typical Reverse Characteristic

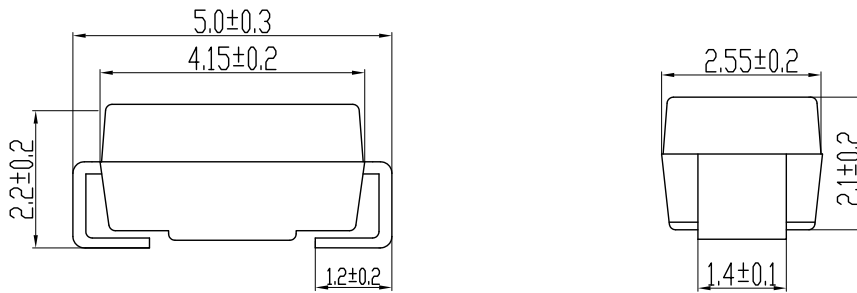


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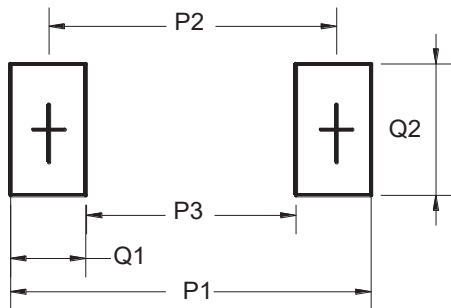
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Package Outline Dimensions(unit:mm)

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
M1	M1	SMA	5000PCS /Tape&Reel
M2	M2	SMA	5000PCS /Tape&Reel
M3	M3	SMA	5000PCS /Tape&Reel
M4	M4	SMA	5000PCS /Tape&Reel
M5	M5	SMA	5000PCS /Tape&Reel
M6	M6	SMA	5000PCS /Tape&Reel
M7	M7	SMA	5000PCS /Tape&Reel