

SMA Surface Mount General Purpose Rectifier

Features

- For surface mounted applications
- Low reverse leakage
- High forward surge current capability
- Glass passivated Standard rectifiers
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
50-1000 V
Forward Current
1 Ampere

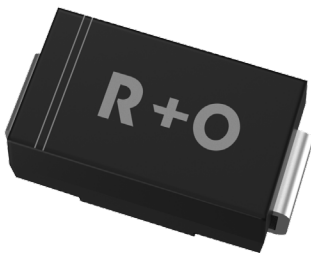
Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication

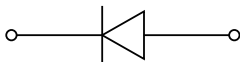
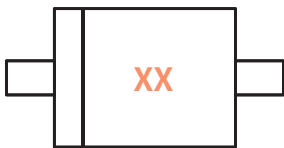
Mechanical Data

- Case: DO-214AC(SMA)
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

DO-214AC(SMA)



Function Diagram



Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	M1	M2	M3	M4	M5	M6	M7
Device marking code			M1	M2	M3	M4	M5	M6	M7
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	1.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	30.0						
Storage temperature	T_{stg}	°C	-55 ~+150						
Junction temperature	T_j	°C	-55 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}^{(1)}$	°C /W	65						
	$R_{\theta J-L}^{(1)}$	°C /W	25						

Note : (1)Thermal resistance from junction to ambient and from junction tolead mounted on P.C.B.with 0.2"× 0.2"(5.0mm x5.0 mm) copper pad areas

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Electrical Characteristics

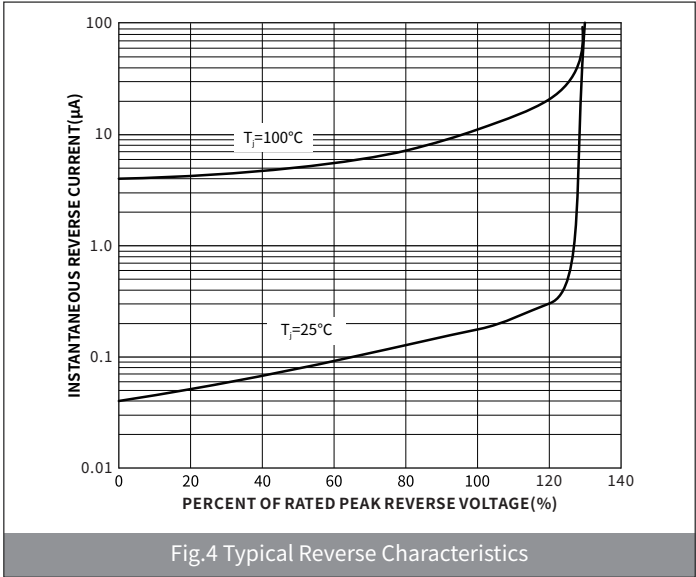
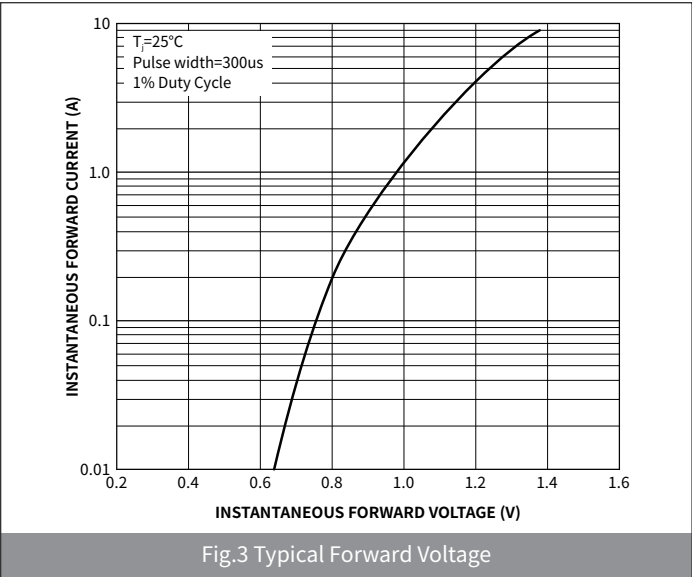
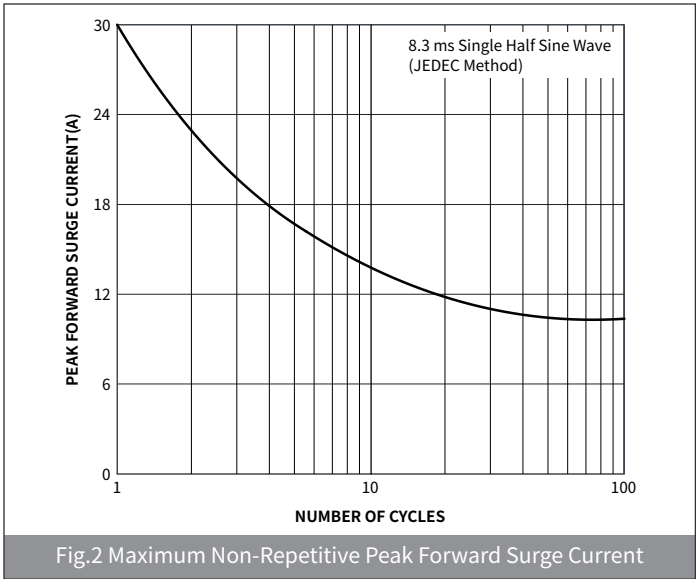
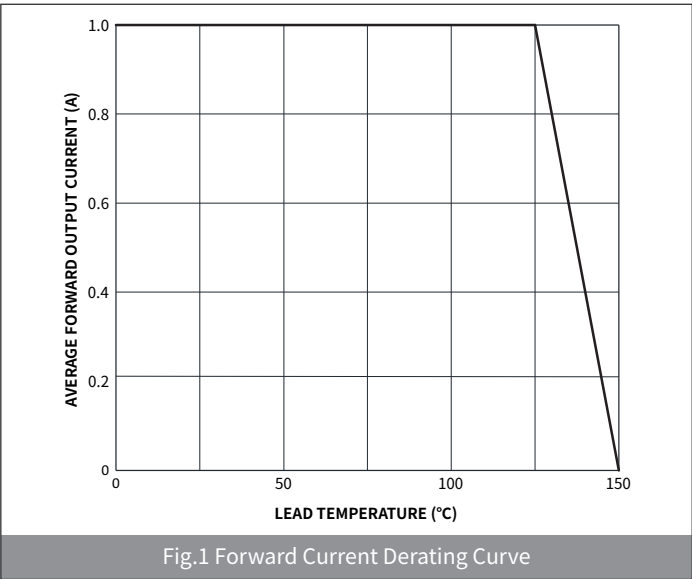
(Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	M1	M2	M3	M4	M5	M6	M7
Maximum instantaneous forward voltage	$I_F=1.0A$	V_F	V	1.0						
Maximum DC reverse currentat rated DC blocking voltage	$V_R=V_{DC}, T_A=25^{\circ}C$	I_{R1}	μA	2.0						
	$V_R=V_{DC}, T_A=125^{\circ}C$	I_{R2}		200						
Typical junction capacitance	4.0V DC,1MHz	C_J	pF	18						

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Ratings And Characteristics Curves

(Ta=25°C Unless otherwise specified)



M1 THRU M7

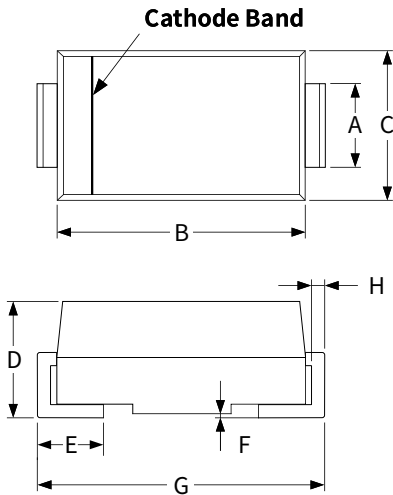
SURFACE MOUNT GENERAL PURPOSE RECTIFIER

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMA	R2	0.07	5000	10000	80000	11"
SMA	R3	0.07	7500	15000	120000	13"

● Package Outline Dimensions (SMA/DO-214AC)

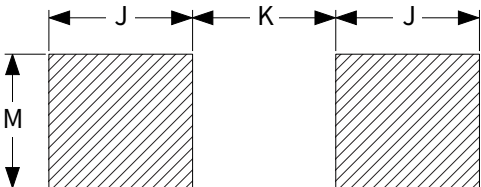
Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.65	0.156	0.183
C	2.35	2.85	0.093	0.112
D	1.98	2.41	0.078	0.095
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	4.70	5.30	0.185	0.209
H	0.15	0.31	0.006	0.012



The diagram shows two views of the SMA package. The top view is a rectangle with dimensions B (width) and C (height). A vertical line on the left side is labeled 'Cathode Band'. The bottom view is a cross-section showing the package height D, the lead thickness H, the lead length E, the lead width F, and the total width G.

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	1.70	-	0.067	-
J	2.10	-	0.082	-
K	-	2.30	-	0.090



The diagram shows two rectangular pads. The left pad has a width J and a height M. The right pad has a width J and a height M. The distance between the two pads is K.