

SMA Surface Mount Fast Recovery Rectifier

Features

- Low profile package
- Ideal for automated placement
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability

Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication

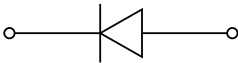
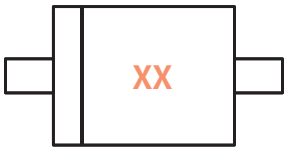
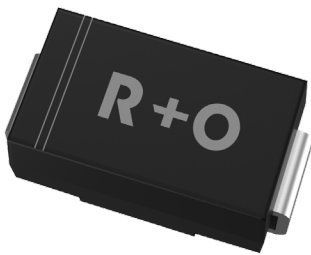
Mechanical Data

- 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

Function Diagram

Reverse Voltage
50-600 V
Forward Current
2 Ampere

DO-214AC(SMA)



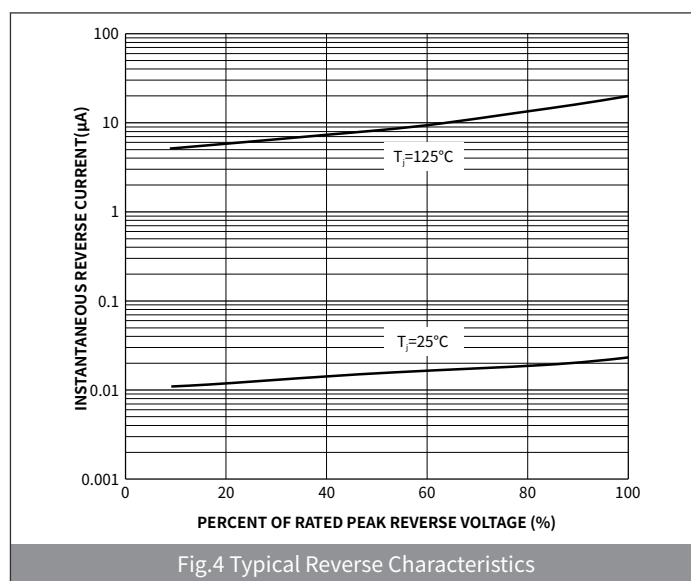
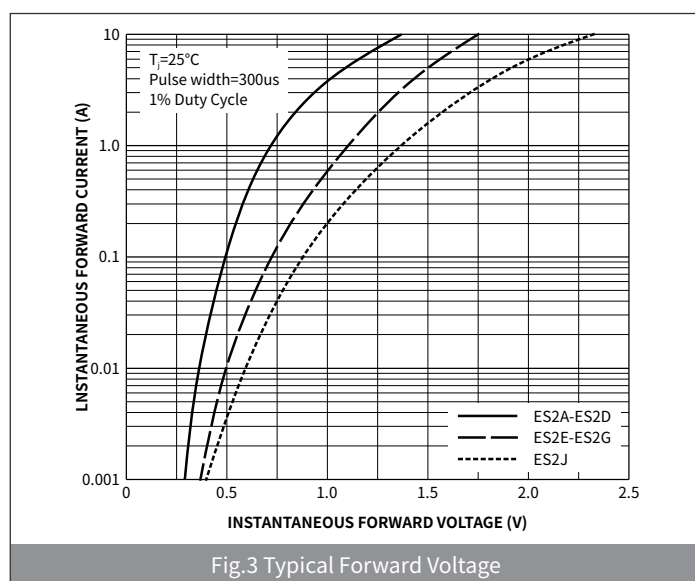
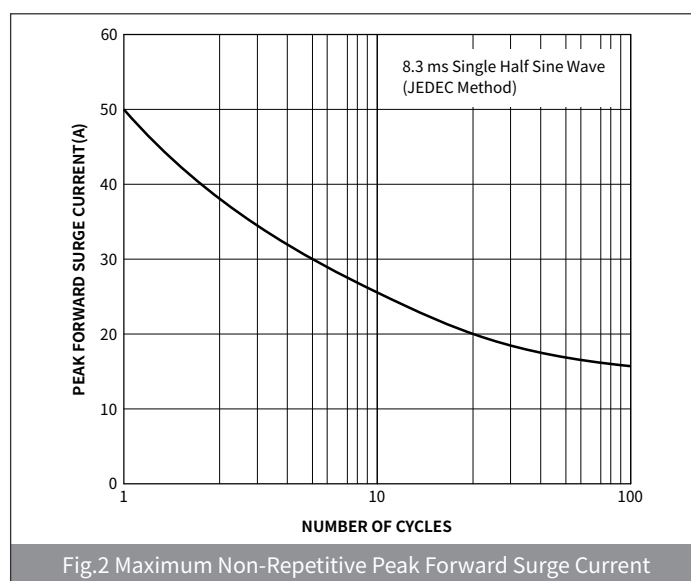
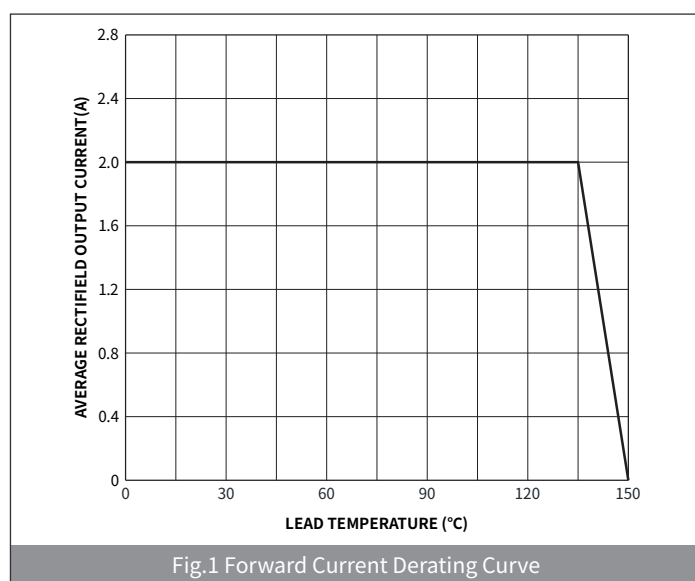
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J
Device marking code			ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	600
Maximum RMS Voltage	V_{RMS}	V	35	70	105	140	210	280	420
Maximum DC blocking Voltage	V_{DC}	V	50	100	150	200	300	400	600
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load,TL (Fig.1)	$I_{F(AV)}$	A	2.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	50.0						
Storage temperature	T_{stg}	°C	-55 ~+150						
Junction temperature	T_j	°C	-55 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	65						
	$R_{\theta J-L}$	°C /W	20						

● Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J
Maximum instantaneous forward voltage	I _F =2.0A	V _F	V	0.95				1.3		1.7
Maximum reverse recovery time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	T _{rr}	ns	35						
Maximum DC reverse current at rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	μA	5.0						
	V _R =V _{DC} , T _A =125°C	I _{R2}		100						
Typical junction capacitance	4.0V DC, 1MHz	C _J	pF	31				17		12

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



ES2A THRU ES2J

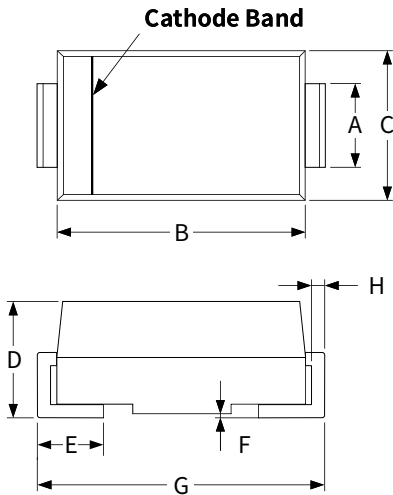
SURFACE MOUNT FAST RECOVERY RECTIFIER

● 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)

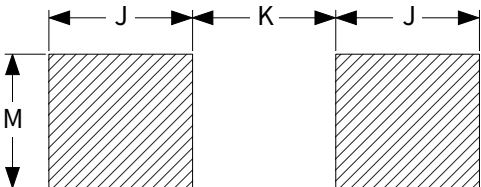
Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.25	1.65	0.049	0.065
B	3.95	4.65	0.156	0.183
C	2.35	2.85	0.093	0.112
D	1.98	2.41	0.078	0.095
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	4.70	5.30	0.185	0.209
H	0.15	0.31	0.006	0.012



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 H, the lead height D, the lead thickness 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 a top view of the suggested pad layout. It consists of two rectangular pads. The width of each pad is J, the height is M, and the distance between the pads is K.