

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

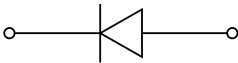
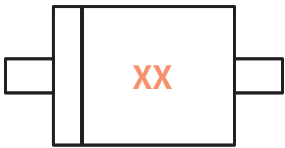
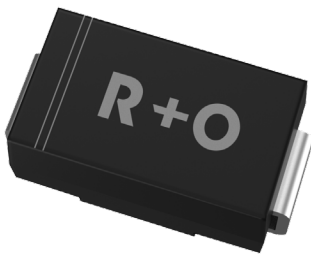
Mechanical Data

- 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
50-1000 V
Forward Current
1 Ampere

DO-214AC(SMA)



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

PARAMETER	SYMBOL	UNIT	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1H	ES1J	ES1K	ES1M
Device marking code			ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1H	ES1J	ES1K	ES1M
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	150	200	300	400	500	600	800	1000
Maximum RMS Voltage	V _{RMS}	V	35	70	105	140	210	280	350	420	560	700
Maximum DC blocking Voltage	V _{DC}	V	50	100	150	200	300	400	500	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 _{θJ-A}	°C /W	80									
	R _{θJ-L}	°C /W	35									

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1H	ES1J	ES1K	ES1M
Maximum instantaneous forward voltage	$I_F=1.0A$	V_F	V			1.0			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	$V_R=V_{DC}, T_A=25^{\circ}C$	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				

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

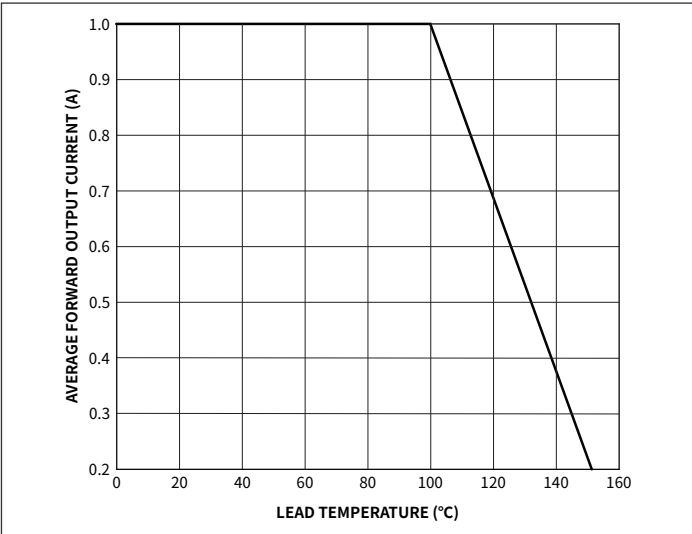


Fig.1 Forward Current Derating Curve

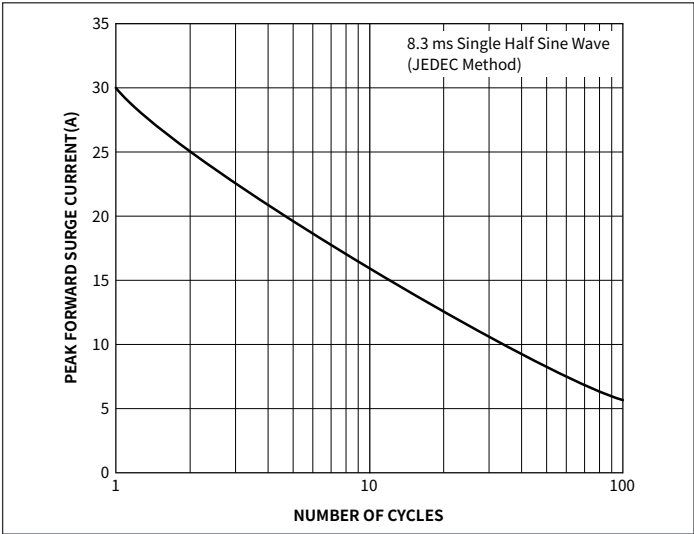


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

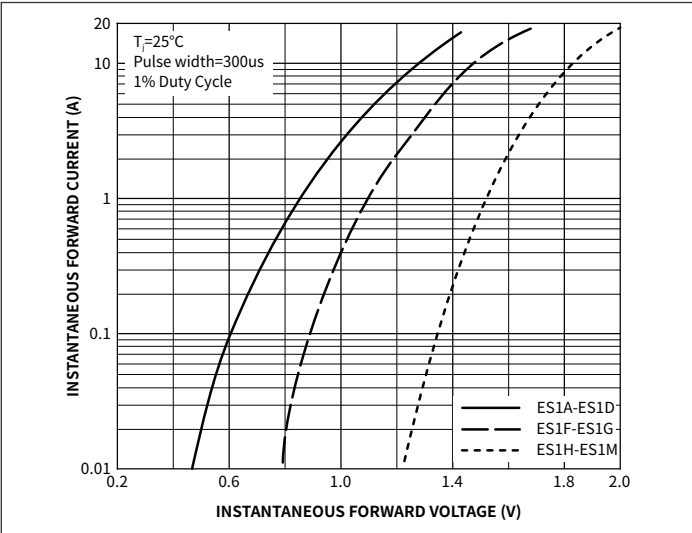


Fig.3 Typical Forward Voltage

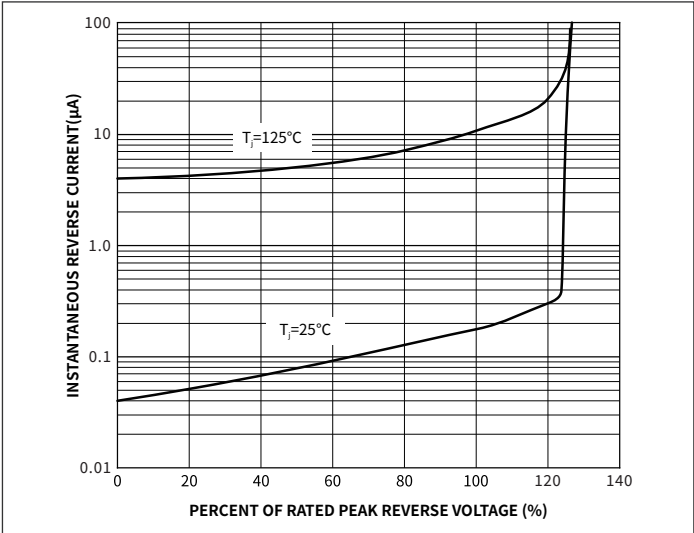


Fig.4 Typical Reverse Characteristics

Ordering Information

Table with 7 columns: PACKAGE, PACKAGE CODE, UNIT WEIGHT(g), REEL(pcs), BOX(pcs), CARTON(pcs), DELIVERY MODE. It lists specifications for SMA packages with codes R2 and R3.

Package Outline Dimensions (SMA/DO-214AC)

Diagram of SMA package outline with dimensions A-H and a table of dimension values in millimeters and inches.

Suggested Pad Layout

Diagram of suggested pad layout with dimensions J, K, M and a table of dimension values in millimeters and inches.