SMA Surface Mount Schottky Barrier Rectifier

Features

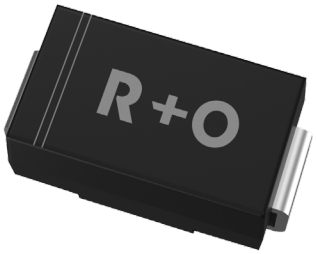
- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
20-200 V
Forward Current
1 Ampere

Applications

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping.

DO-214AC(SMA)



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

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

PARAMETER	SYMBOL	UNIT	SS12	SS13	SS14	SS15	SS16	SS18	SS110	SS115	SS120
Device marking code			SS12	SS13	SS14	SS15	SS16	SS18	SS110	SS115	SS120
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	20	30	40	50	60	80	100	150	200
Maximum RMS Voltage	V_{RMS}	V	14	21	28	35	42	56	70	105	140
Maximum DC blocking Voltage	V_{DC}	V	20	30	40	50	60	80	100	150	200
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								
Storage temperature	T_{stg}	°C	-55 ~ +150								
Junction temperature	T_j	°C	-55 ~ +150								
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	80								
	$R_{\theta J-L}$	°C /W	30								

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SS12	SS13	SS14	SS15	SS16	SS18	SS110	SS115	SS120
Maximum instantaneous forward voltage	I_F=1.0A	V_F	V	0.55			0.70		0.85		0.95	
Maximum DC reverse currentat rated DC blocking voltage	V_R=V_{DC}, T_A=25°C	I_{R1}	mA	0.5					0.05			
	V_R=V_{DC}, T_A=100°C	I_{R2}		50					10			
Typical junction capacitance	4.0V DC,1MHz	C_J	pF	110			90					

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

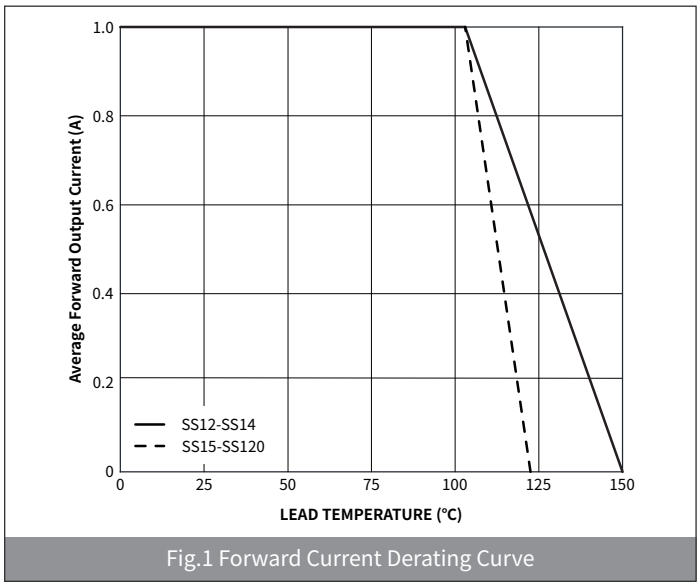


Fig.1 Forward Current Derating Curve

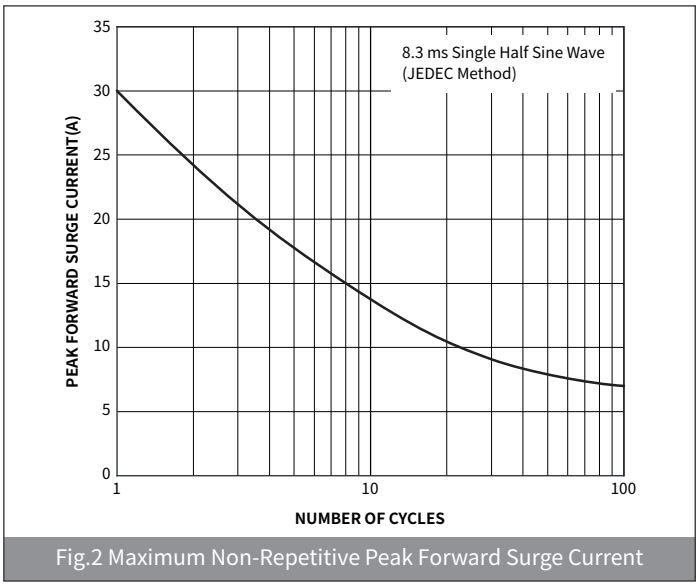


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

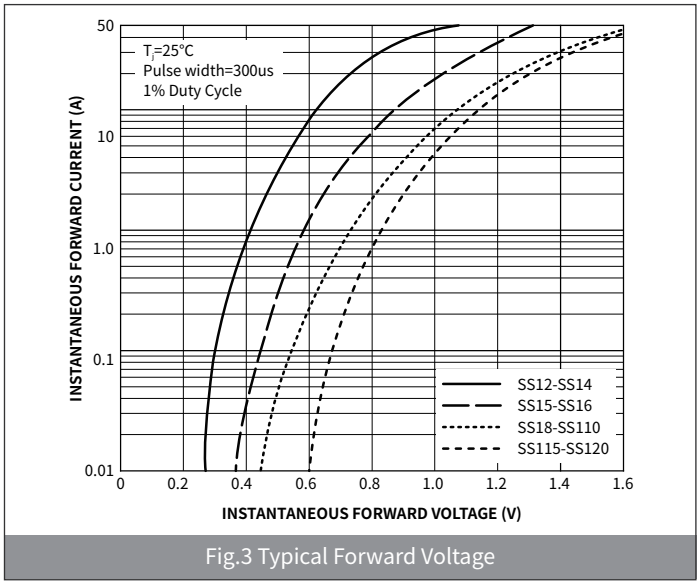


Fig.3 Typical Forward Voltage

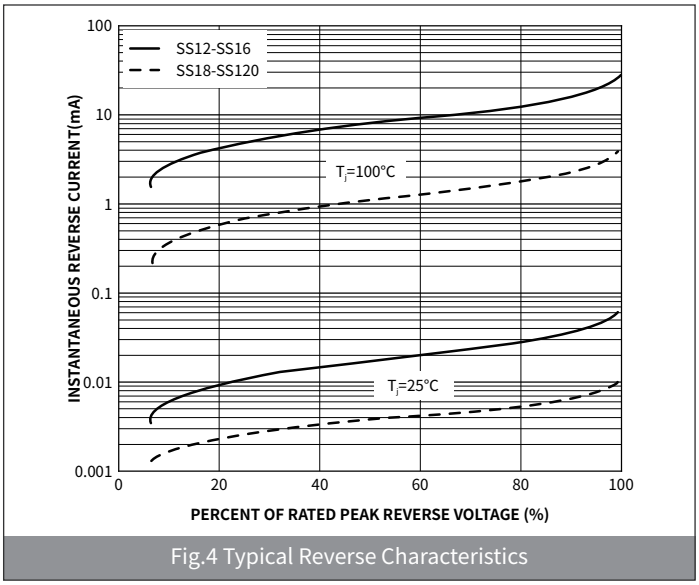
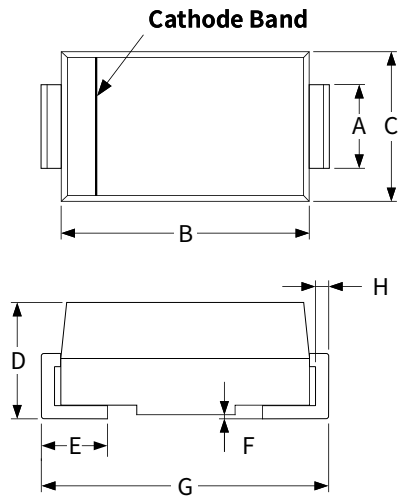


Fig.4 Typical Reverse Characteristics

Ordering Information

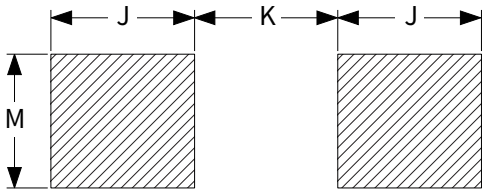
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMA	R2	0.07	5000	10000	80000	11''
SMA	R3	0.07	7500	15000	120000	13''

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

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