SMC Surface Mount Schottky Barrier Rectifier

Features

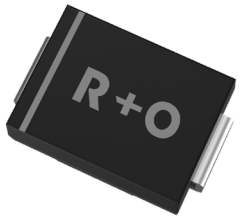
- For surface mounted applications
- High forward surge current capability
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
20-200 V
Forward Current
5 Ampere

Applications

For use in low voltage high frequency inverters, free wheeling,DC/DC converters, and polarity protection applications.

DO-214AB(SMC)



Mechanical Data

- Case: DO-214AB(SMC)
  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	SS52C	SS53C	SS54C	SS55C	SS56C	SS58C	SS510C	SS515C	SS520C
Device marking code			SS52	SS53	SS54	SS55	SS56	SS58	SS510	SS515	SS520
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	5.0								
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	120								
Storage temperature	T_{stg}	°C	-55 ~ +150								
Junction temperature	T_j	°C	-55 ~ +125			-55 ~ +150					
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	45								
	$R_{\theta J-L}$	°C /W	15								

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SS52C	SS53C	SS54C	SS55C	SS56C	SS58C	SS510C	SS515C	SS520C
Maximum instantaneous forward voltage	I_F=5.0A	V_F	V	0.55			0.68		0.85		0.95	
Maximum DC reverse currentat rated DC blocking voltage	V_R=V_{DC}, T_A=25°C	I_{R1}	mA	0.15					0.05			
	V_R=V_{DC}, T_A=100°C	I_{R2}		50					10			
Typical junction capacitance	4.0V DC,1MHz	C_J	pF	550			450					

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

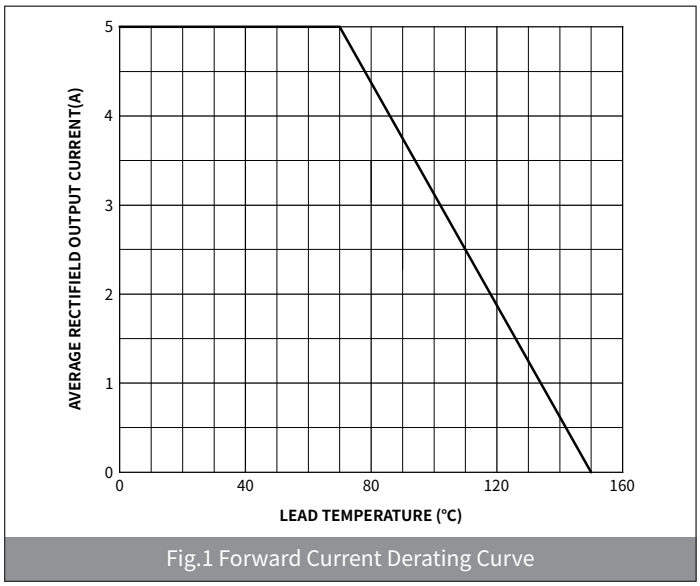


Fig.1 Forward Current Derating Curve

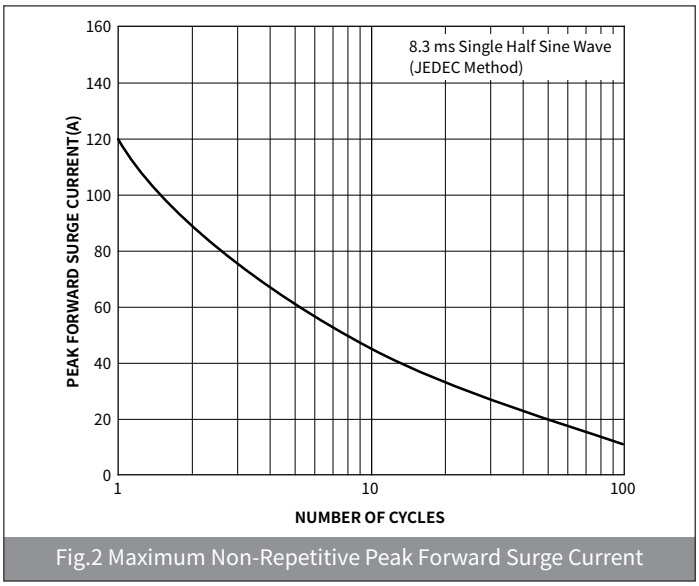


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

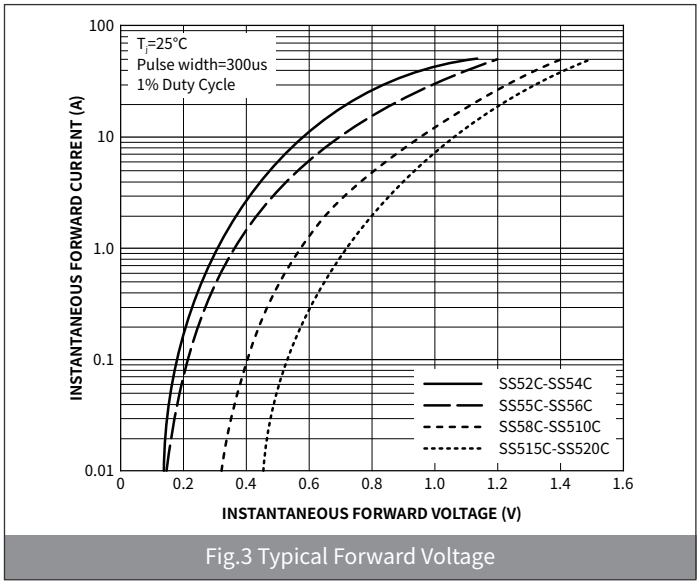


Fig.3 Typical Forward Voltage

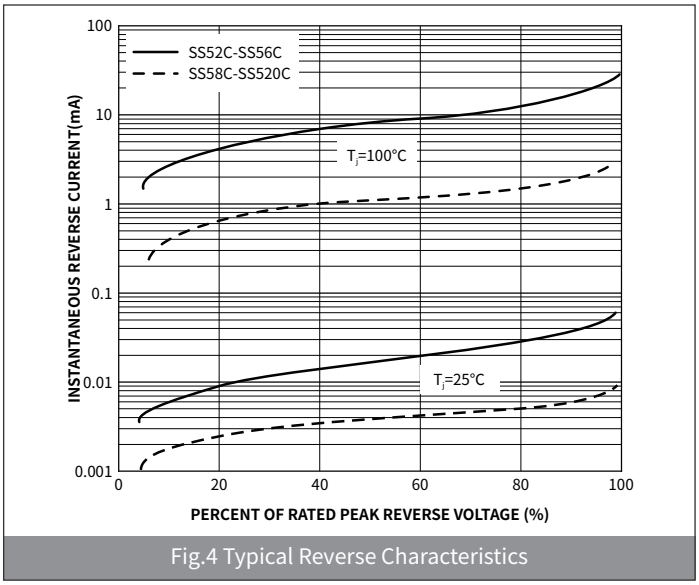
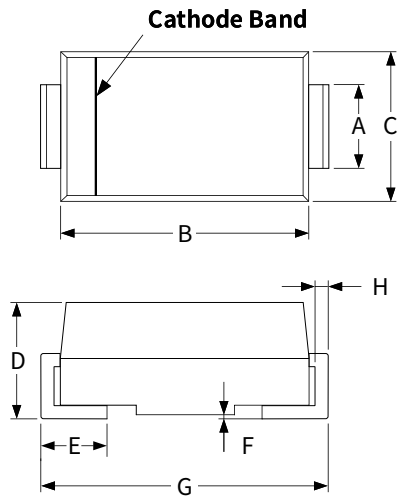


Fig.4 Typical Reverse Characteristics

Ordering Information

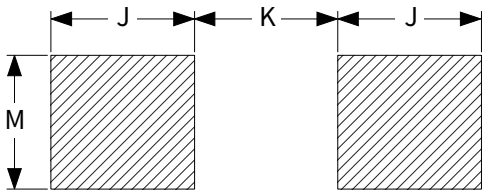
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMC	R3	0.257	3000	6000	48000	13''

Package Outline Dimensions (SMC/DO-214AB)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.85	3.27	0.112	0.129
B	6.60	7.11	0.261	0.281
C	5.59	6.22	0.221	0.246
D	1.99	2.61	0.078	0.103
E	0.76	1.52	0.030	0.060
F	-	0.20	-	0.008
G	7.75	8.13	0.306	0.321
H	0.15	0.31	0.006	0.012

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	3.82	-	0.151	-
J	3.03	-	0.120	-
K	-	3.84	-	0.152

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