

5A, 200V - 1000V General Purpose Rectifier

Features

- AEC-Q101 Qualified
- High efficiency
- High current capability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 265°C max.10 s, per JESD 22-B106
- Meets MSL level 1


SMC (DO-214AB)

Cathode  Anode

Typical Applications

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

Mechanical Data

- Case: SMC(DO-214AB) molding compound meets UL94V-0 flammability rating, RoHS-Compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end

Maximum Ratings ($T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	S5D	S5G	S5J	S5M	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	1000	V
Maximum RMS Voltage	V_{RMS}	140	280	420	700	V
Maximum DC blocking Voltage	V_{DC}	200	400	600	1000	V
Average Forward Current @Half-sine wave, Resistance load, T_c (Fig.1)	I_o	5.0				A
Forward Surge Current (Non-repetitive) @60HZ sine wave, 1 cycle, $T_a=25^\circ\text{C}$	I_{FSM}	150				A
Current squared time @1ms≤t≤8.3ms $T_a=25^\circ\text{C}$, Rating of per diode	I^2t	93.3				A ² s
Thermal Resistance(Typical) @Between junction and ambient	$R_{\theta J-A}$	47				°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	- 55 to + 175°C				°C

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	S5D	S5G	S5J	S5M	Unit
Peak Forward Voltage $I_F=5.0A$	V_{FM}	1.15				V
Peak Reverse Current $T_a=25^\circ\text{C}$ $T_a=100^\circ\text{C}$	I_{RRM1} I_{RRM2}	10 250				μA

Electrical Characteristics Curves

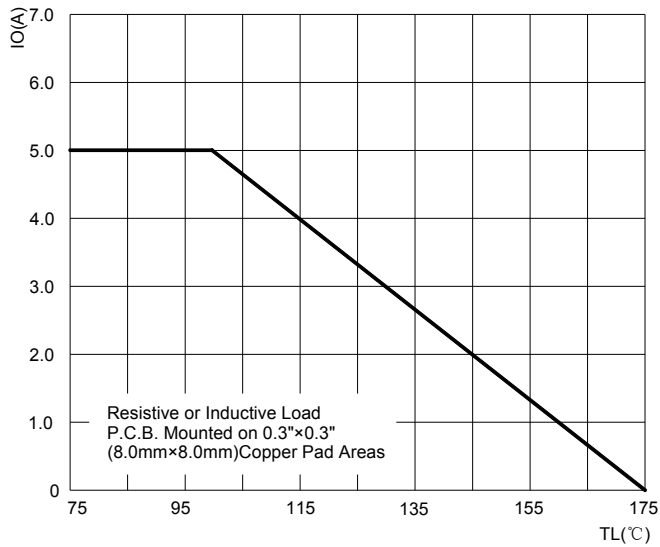
FIG.1: I_o - T_a Curve

FIG.2: Forward Surge Current Capability

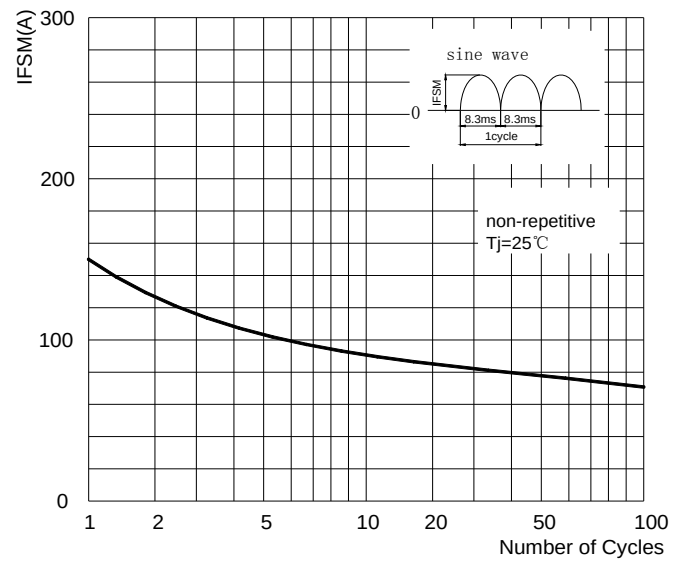


FIG.3: Forward Voltage

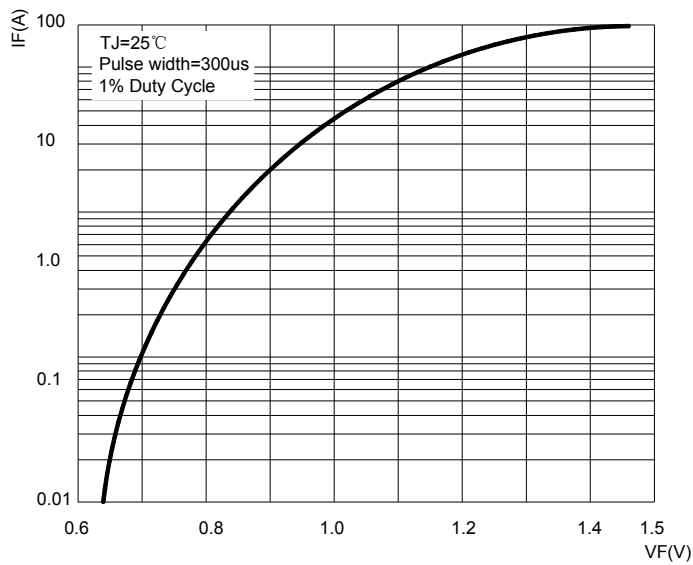
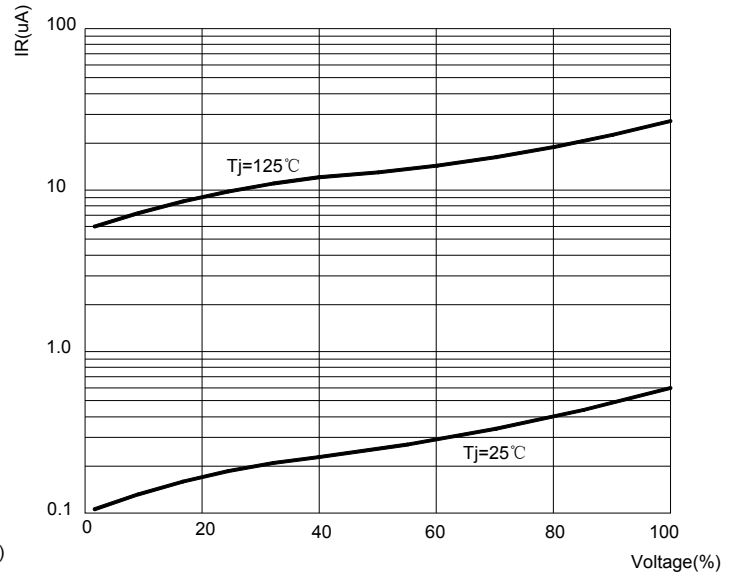


FIG.4: Typical Reverse Characteristics



Package Outline Dimensions in inches (millimeters)

SMC(DO-214AB)

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.06	2.62	0.079	0.103
E	0.76	1.52	0.030	0.060
F	-	0.203	-	0.008
G	7.75	8.130	0.305	0.320
H	0.152	0.305	0.006	0.012
I	3.30	-	0.129	-
J	2.40	-	0.094	-
K	-	4.20	-	0.165

Packing Information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SMC	16	8±0.1	0.315±0.004	330	13	3,000

Marking information

" S5D " = Part No.

" YWW " = Date Code Marking

" Y " = Last digit of year (ex: 2 = 2022)

" WW " = Week Code (ex: 24 = the 24th week of the year)

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