3.0Amp Ultra Fast Recovery Surface Mounted Rectifiers

Description

General Application Standard Surface Mounted rectifier, encapsulated in a SMC Surface-Mounted Device （SMD）plastic package.

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 260℃/10 seconds at terminals

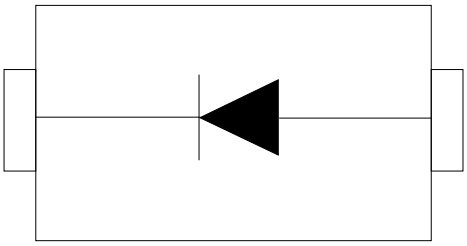
Mechanical Characteristics

- Case: JEDEC DO-214AB molded plastic
- Terminals:Solder plated,solderable per MIL-STD-750,Method 2026
- Polarity: Polarity symbol marking on body
- Case Material: “Green” Molding Compound

Applications

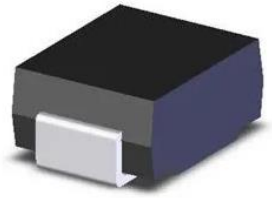
- For use in high frequency rectification of power Supplies,inverters,converters,and freewheeling Diodes for consumer and telecommunication

Dimensions and Pin Configuration



Graphic symbol

Package



SMC (Top View)

Ordering Informatio

Part Number	Shipping	Reel Size
RS3AC	3000/Tape & Reel	13 inch
RS3BC	3000/Tape & Reel	13 inch
RS3DC	3000/Tape & Reel	13 inch
RS3GC	3000/Tape & Reel	13 inch
RS3JC	3000/Tape & Reel	13 inch
RS3KC	3000/Tape & Reel	13 inch
RS3MC	3000/Tape & Reel	13 inch

Absolute Maximum Ratings (T_A=25℃ unless otherwise specified)

Ratings at 25℃ ambient temperature unless otherwise specified.Single phase half-ware 60Hz,resistive or inductive load,for capacitive load current derate by 20%

Items	Symbol	RS3AC	RS3BC	RS3DC	RS3GC	RS3JC	RS3KC	RS3MC	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T_L=100℃	$I_{(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100.0							A
Typical thermal resistance	R_{QJA}	47.0							℃/W
Operating junction temperature range	T_J	-55 ~ + 150							℃
Storage temperature range	T_{STG}	–55 ~ +150							℃

Electrical Characteristics (T_A=25℃unless otherwise specified)

Items	Test conditions	Symbol	RS3AC	RS3BC	RS3DC	RS3GC	RS3JC	RS3KC	RS3MC	UNIT
Maximum instantaneous forward voltage	I_F=3.0A	V_F	1.3							V
Maximum DC reverse current	T_A=25℃	I_R	2							uA
at rated DC blocking voltage	T_A=125℃		200							
Maxinum reverse recovery time(Note 1)		Trr	150				250	500		ns
Typical junction capacitance(Note 2)		Cj	60							pF

Note:

1. Reverse recovery time test condition：IF=0.5A IR=1.0A Irr=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C

Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

FIG.1-DERATING CURVE OUTPUT RECTIFIED CURRENT

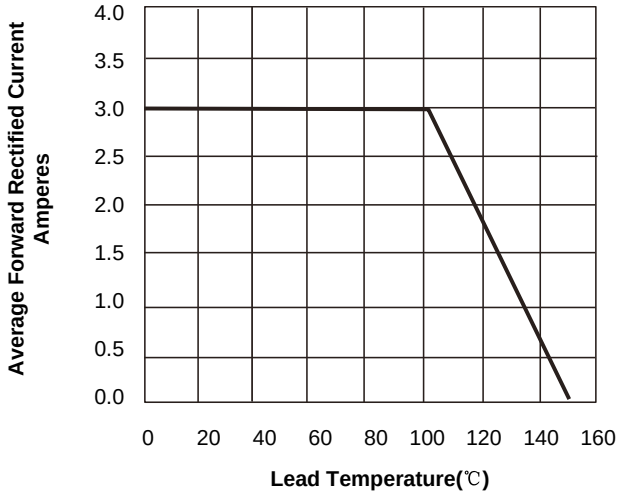


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD

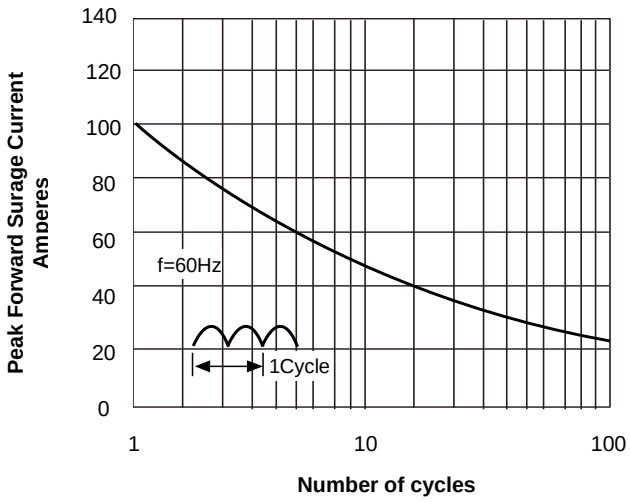


FIG.3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

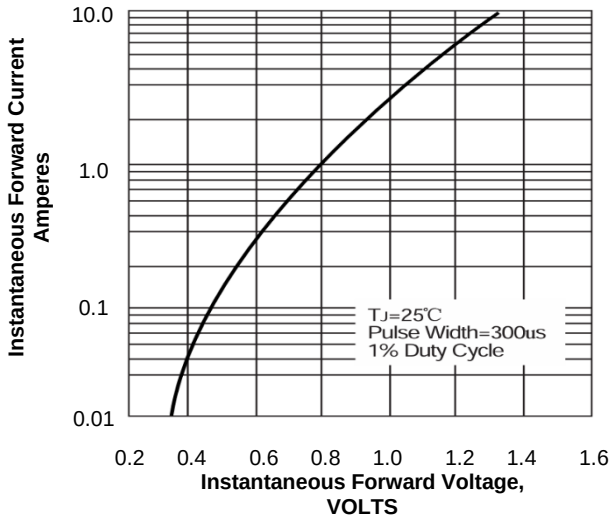
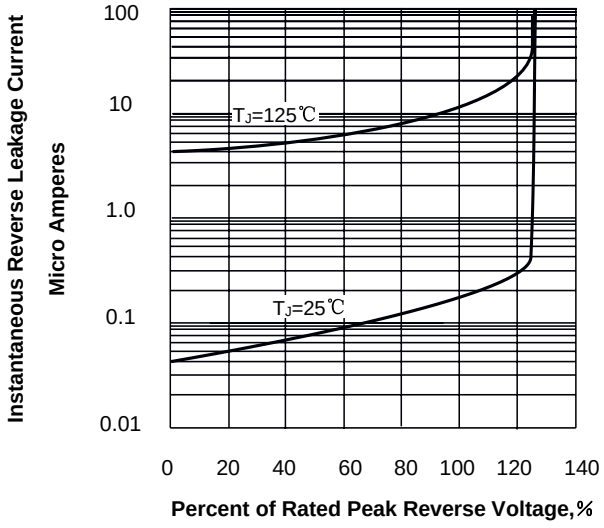
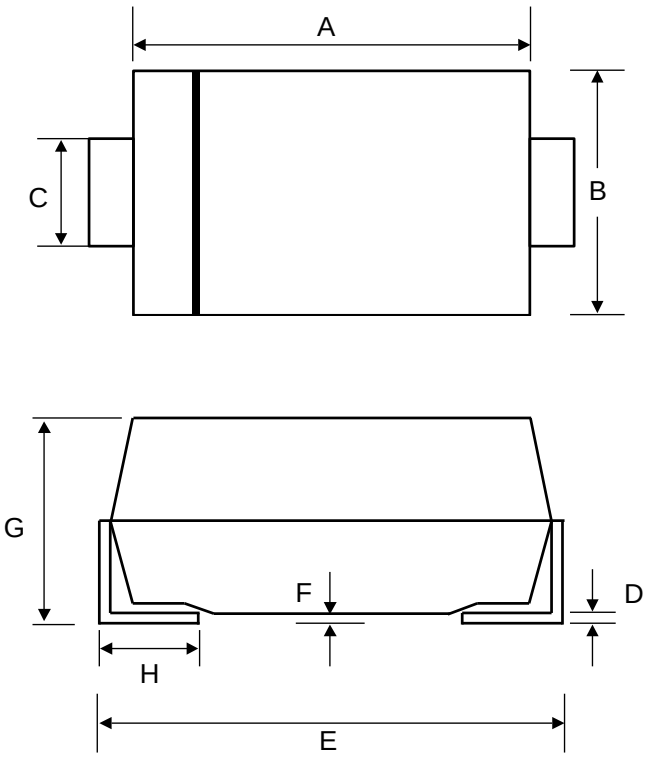


FIG.4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

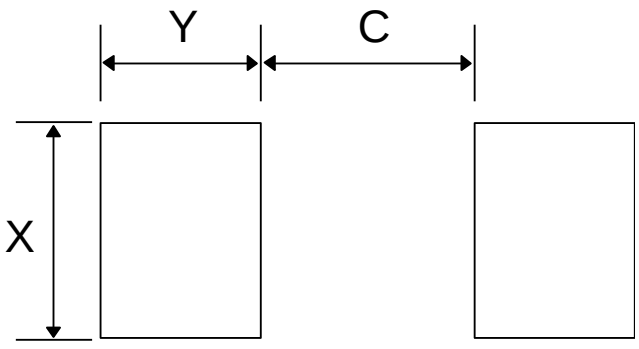


SMC Package Outline Drawing



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	6.60	7.11	0.260	0.280
B	5.59	6.22	0.220	0.245
C	2.90	3.20	0.114	0.126
D	-	0.20	-	0.008
E	7.75	8.13	0.305	0.320
F	----	0.20	----	0.008
G	2.06	2.62	0.079	0.103
H	0.76	1.52	0.030	0.060

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	3.30	0.130
Y	2.50	0.098
C	4.40	0.173

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