



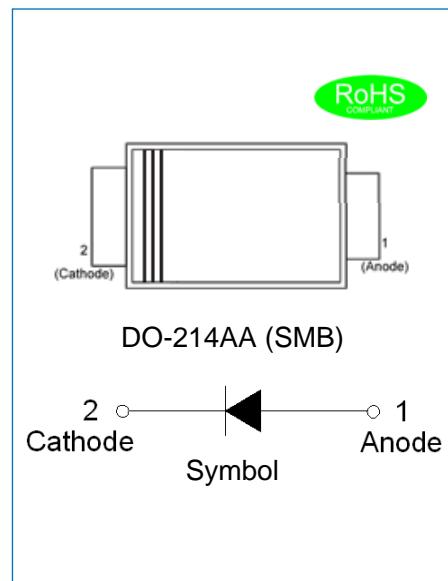
## JSPG3100A

## 3A Schottky Barrier Rectifier

Rev.1.2

## DESCRIPTION

- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ For surface mounted applications in order to optimize board space
- ✧ Lead free in compliance with EU RoHS 2011/65/EU directive
- ✧ Ultra low forward voltage drop
- ✧ Low power losses, high efficiency operation
- ✧ High current capability and surge capability
- ✧ Low thermal resistance package



## MECHANICAL DATA

- ✧ Case: SMB molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end

## ABSOLUTE MAXIMUM RATING (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	JSPG3100A		Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	100		V
Maximum RMS voltage	$V_{RMS}$	70		V
Maximum DC blocking voltage	$V_{DC}$	100		V
Maximum average forward current	$I_{F(AV)}$	3.0		A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	80		A
Operating junction temperature range	$T_j$	-55 to +150		°C
Storage temperature range	$T_{stg}$	-55 to +150		°C

## ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

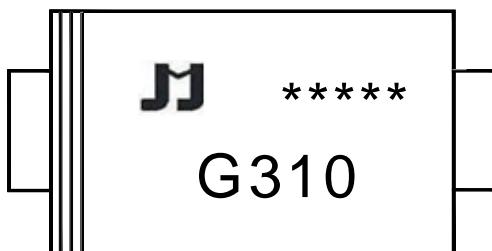
Parameter	Symbol	Min	Typ	Max	Unit
Forward voltage $I_F=3A$	$V_F$			0.85	V
Reverse current at rated DC blocking voltage $T_A=25^\circ C$	$I_R$			0.1	mA
$T_A=100^\circ C$				8	
Junction capacitance $V_R=4.0V, f=1MHz$	$C_J$		90		pF

## THERMAL RESISTANCES

Symbol	Parameter	JSPG3100A	Unit
R <sub>th(j-a)</sub>	Thermal resistance from junction to ambient (note1)	60	°C/W

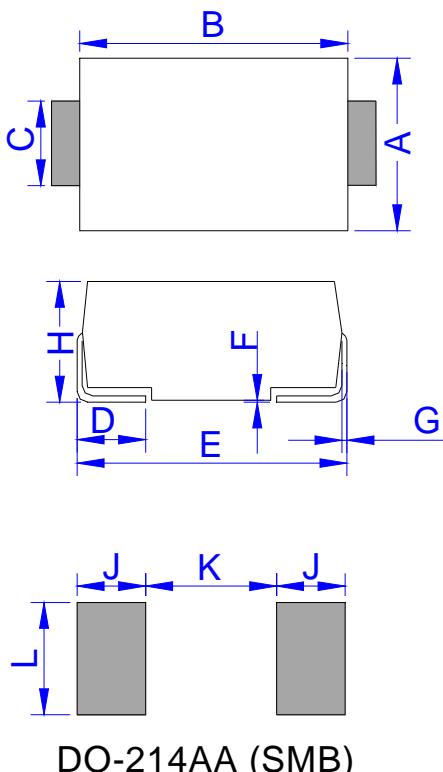
Note1: Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B mounted

## MARKING



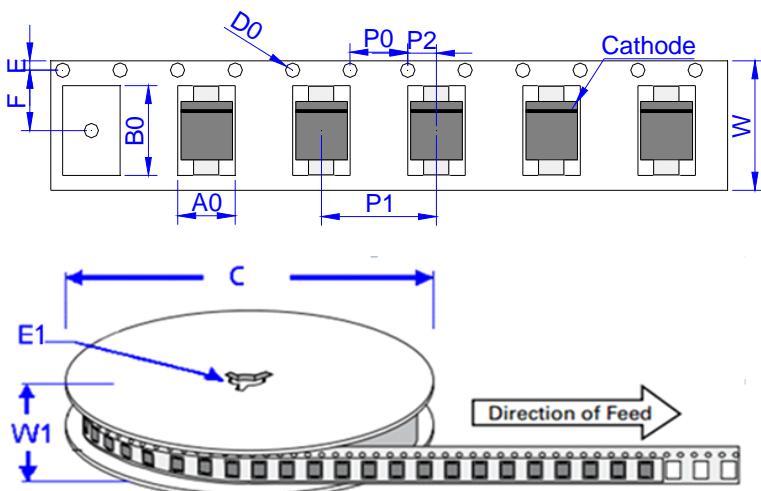
The first ''*	Date code
The second ''*	
The third ''*	
The fourth ''*	Batch code
The fifth ''*	
G	Package: SMB
3	I <sub>F(AV)</sub> :3A
10	V <sub>RRM</sub> :100V

## PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.30	4.80	0.169	0.189
C	1.90	2.20	0.075	0.087
D	0.95	1.52	0.037	0.060
E	5.20	5.60	0.205	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.10	2.40	0.083	0.094
J	2.20		0.087	
K		2.60		0.102
L	2.30		0.091	

## TAPE AND REEL SPECIFICATION-SMB



Ref.	Dimensions	
	Millimeters	Inches
A <sub>0</sub>	3.76 ± 0.3	0.148 ± 0.012
B <sub>0</sub>	5.69 ± 0.3	0.224 ± 0.012
C	330.0	13.0
D <sub>0</sub>	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E <sub>1</sub>	13.3 ± 0.3	0.524 ± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P <sub>0</sub>	4.00 ± 0.2	0.157 ± 0.008
P <sub>1</sub>	8.00 ± 0.2	0.3145 ± 0.008
P <sub>2</sub>	2.00 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W <sub>1</sub>	15.7 ± 2.0	0.618 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	0.1	3,000	48,000	330

## CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics (25°C)

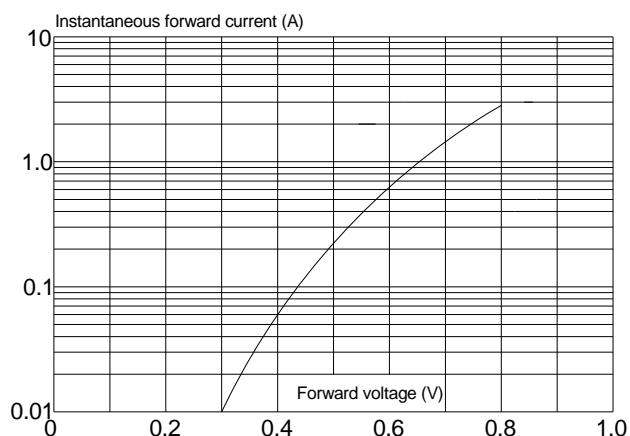
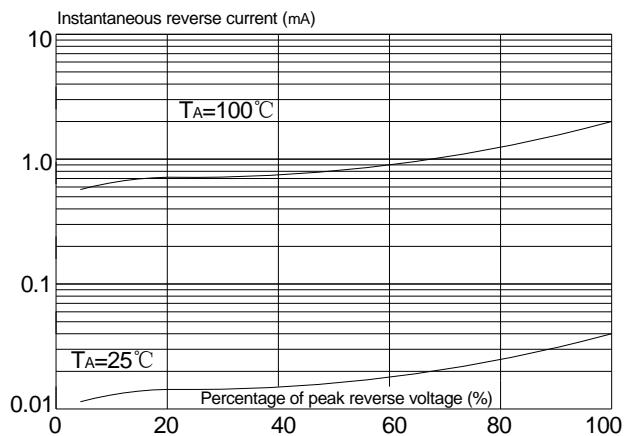


FIG.2: Typical reverse characteristics



## CHARACTERISTICS CURVE

FIG.3: Maximum non-repetitive peak forward surge current

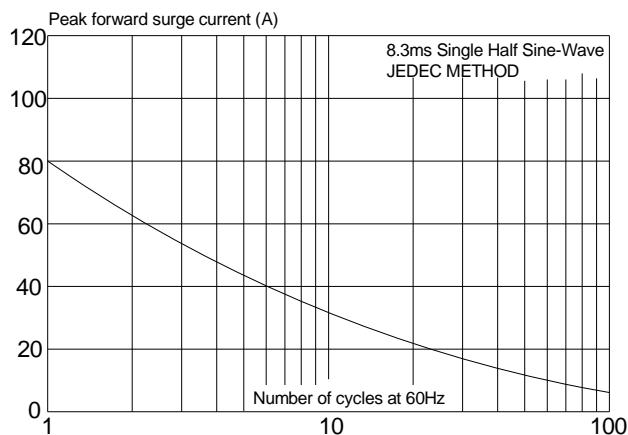


FIG.4: Forward current derating curve

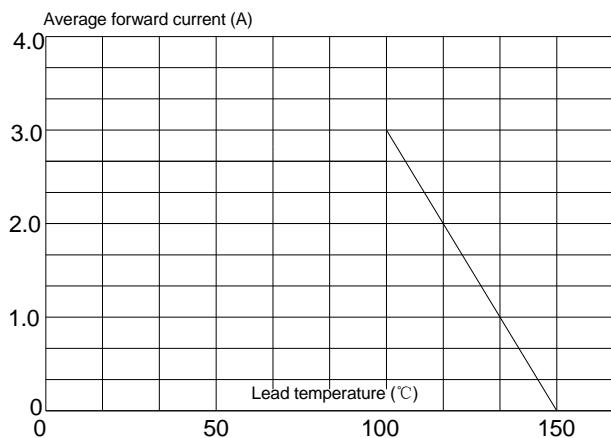


FIG.5: Maximum transient thermal impedance

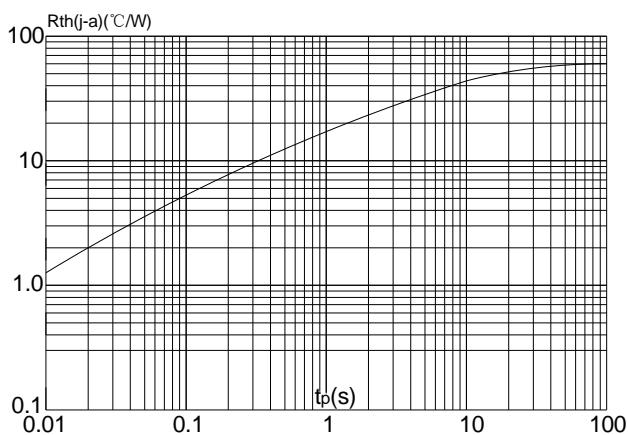
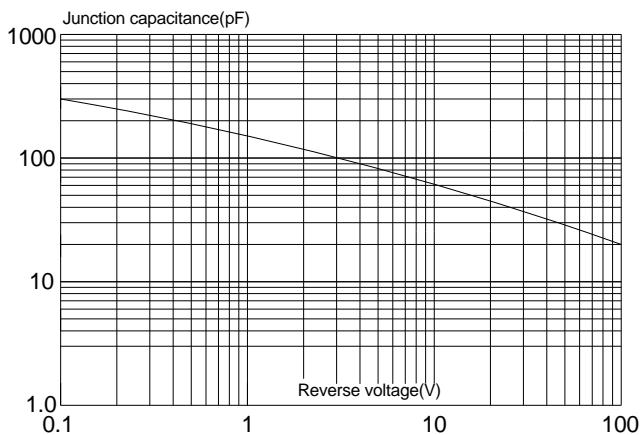


FIG.6: Typical junction capacitance



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