



## JSPJ5100A

### 5A Schottky Barrier Rectifier

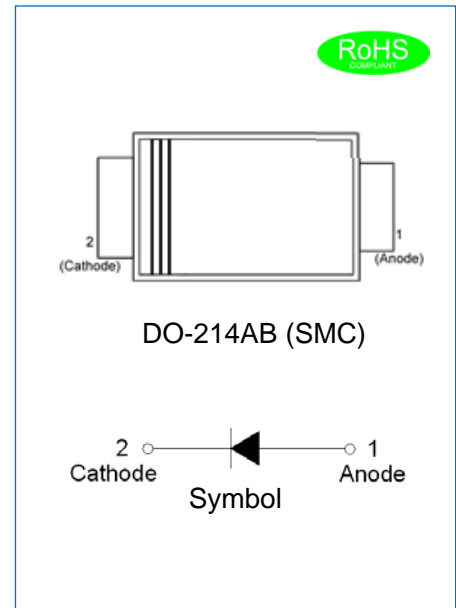
Rev.1.2

#### 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: SMC 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	JSPJ5100A	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	$I_{F(AV)}$	5.0	A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	120	A
Operating junction temperature range	$T_j$	-55 to +150	°C
Storage temperature range	$T_{stg}$	-55 to +150	°C

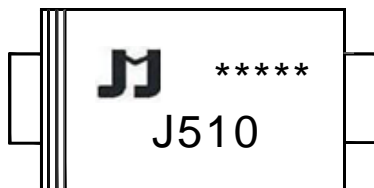
#### ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F=5A$			0.85	V
Reverse current at rated DC blocking voltage	$T_A=25^\circ C$			0.1	mA
	$T_A=100^\circ C$			15	
Junction capacitance	$V_R=4.0V, f=1MHz$		200		pF

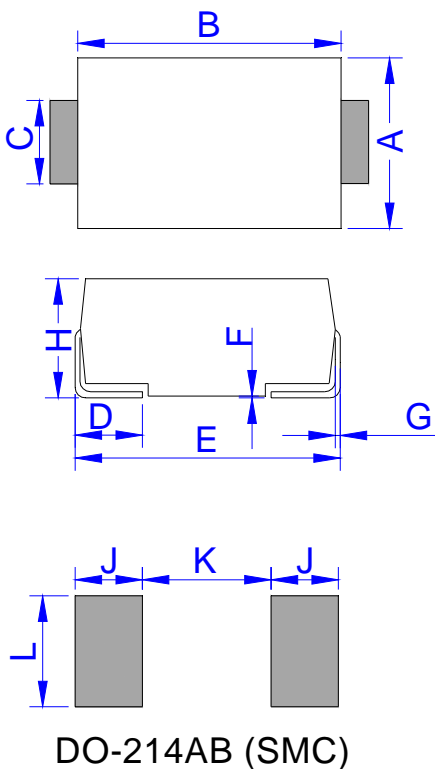
**THERMAL RESISTANCES**

Symbol	Parameter	JSPJ5100A	Unit
$R_{th(j-a)}$	Thermal resistance from junction to ambient (note1)	35	°C/W

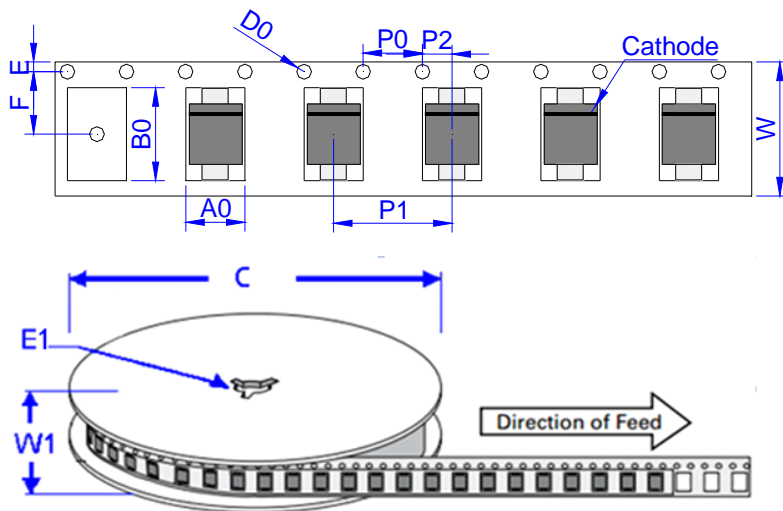
Note1: Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B mounted

**MARKING**


The first '*'	Date code
The second '*'	
The third '*'	Batch code
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J	Package: SMC
5	$I_{F(AV)}$ :5A
10	$V_{RRM}$ :100V

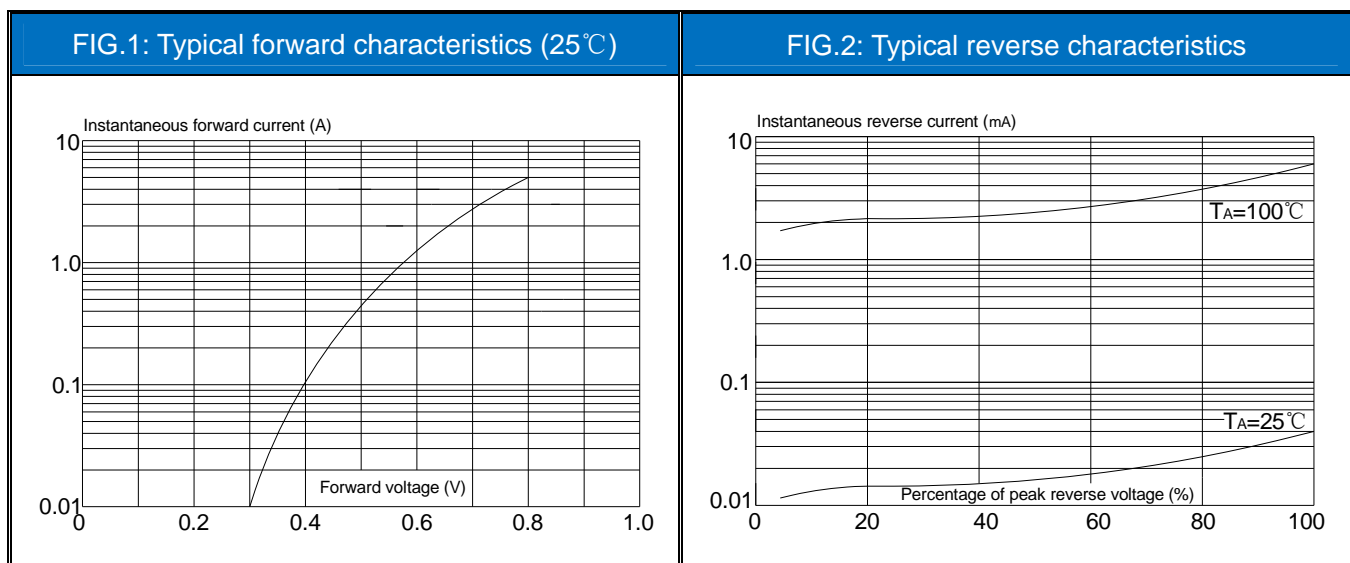
**PACKAGE MECHANICAL DATA**


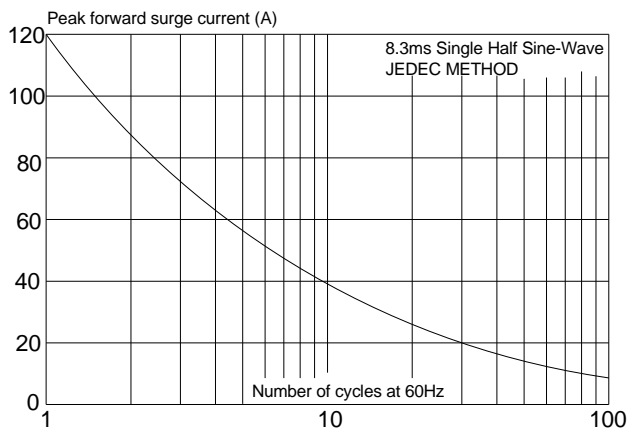
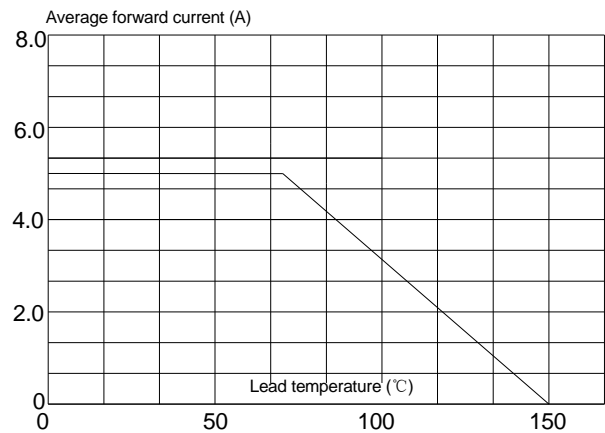
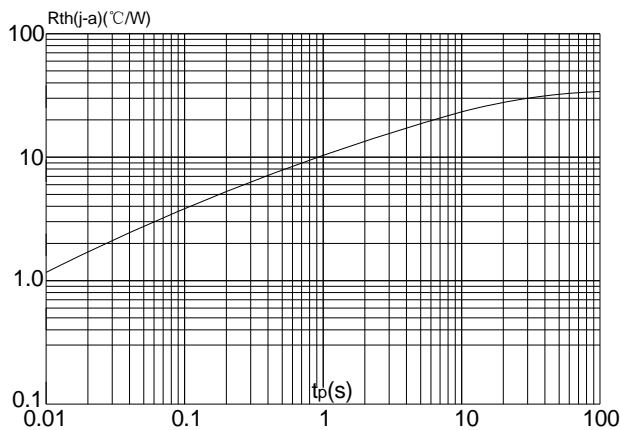
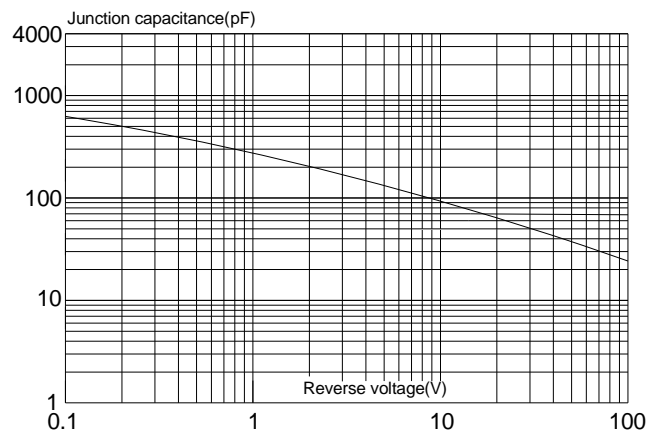
Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.75	6.25	0.226	0.246
B	6.90	7.40	0.272	0.291
C	2.75	3.25	0.108	0.128
D	0.95	1.52	0.037	0.060
E	7.70	8.20	0.303	0.323
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.15	2.62	0.085	0.103
J	2.40		0.094	
K		4.20		0.165
L	3.30		0.130	

**TAPE AND REEL SPECIFICATION-SMC**


Ref.	Dimensions	
	Millimeters	Inches
A0	6.05 ± 0.3	0.238 ± 0.012
B0	8.31 ± 0.3	0.327 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	7.50 ± 0.2	0.295 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	8.00 ± 0.2	0.3145 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	16.0 ± 0.2	0.630 ± 0.008
W1	19.7 ± 2.0	0.776 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	0.26	3,000	48,000	330

**CHARACTERISTICS CURVE**


**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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