



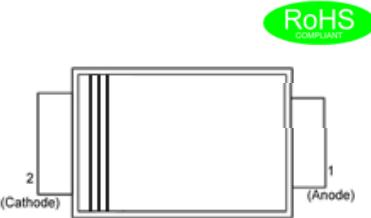
## JSPX540A

## 5A Schottky Barrier Rectifier

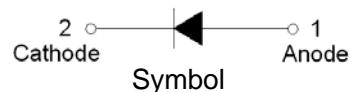
Rev.1.2

## 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



DO-214AC (SMA)



## MECHANICAL DATA

- ✧ Case: SMA 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	JSPX540A	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	V
Maximum RMS voltage	$V_{RMS}$	28	V
Maximum DC blocking voltage	$V_{DC}$	40	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 +125	°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	$I_F=5A$	$V_F$		0.55	V
Reverse current at rated DC blocking voltage	$T_A=25^\circ C$	$I_R$		0.1	mA
	$T_A=100^\circ C$			15	
Junction capacitance	$V_R=4.0V, f=1MHz$	$C_J$	350		pF

## THERMAL RESISTANCES

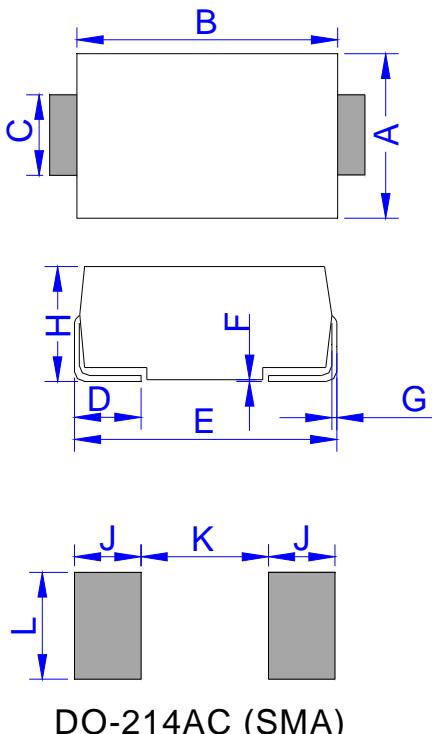
Symbol	Parameter	JSPX540A	Unit
R <sub>th(j-a)</sub>	Thermal resistances from junction to ambient	65	°C/W

## MARKING



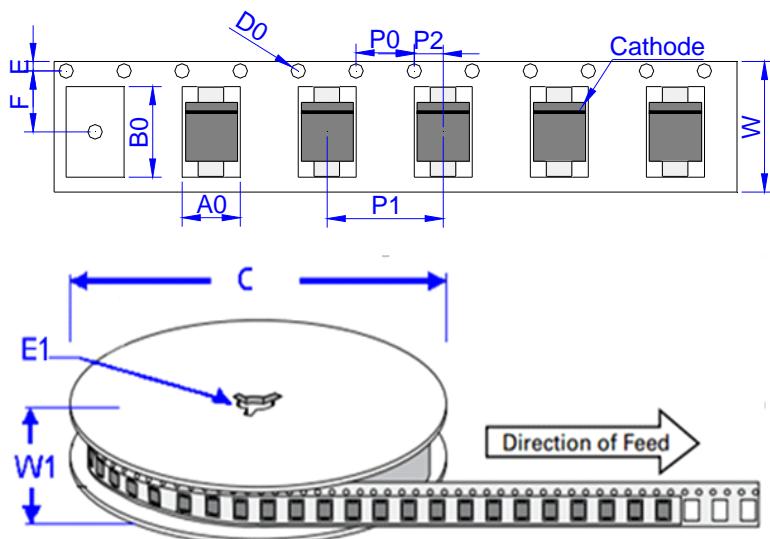
The first **	Date code
The second **	
The third **	Batch code
The fourth **	
The fifth **	
X	Package: SMA
5	I <sub>F(AV)</sub> :5A
4	V <sub>RRM</sub> :40V

## PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	4.15	4.65	0.163	0.183
C	1.25	1.65	0.049	0.065
D	0.95	1.52	0.037	0.060
E	4.90	5.30	0.193	0.209
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.00	2.44	0.079	0.096
J	2.00		0.079	
K		2.30		0.091
L	1.80		0.071	

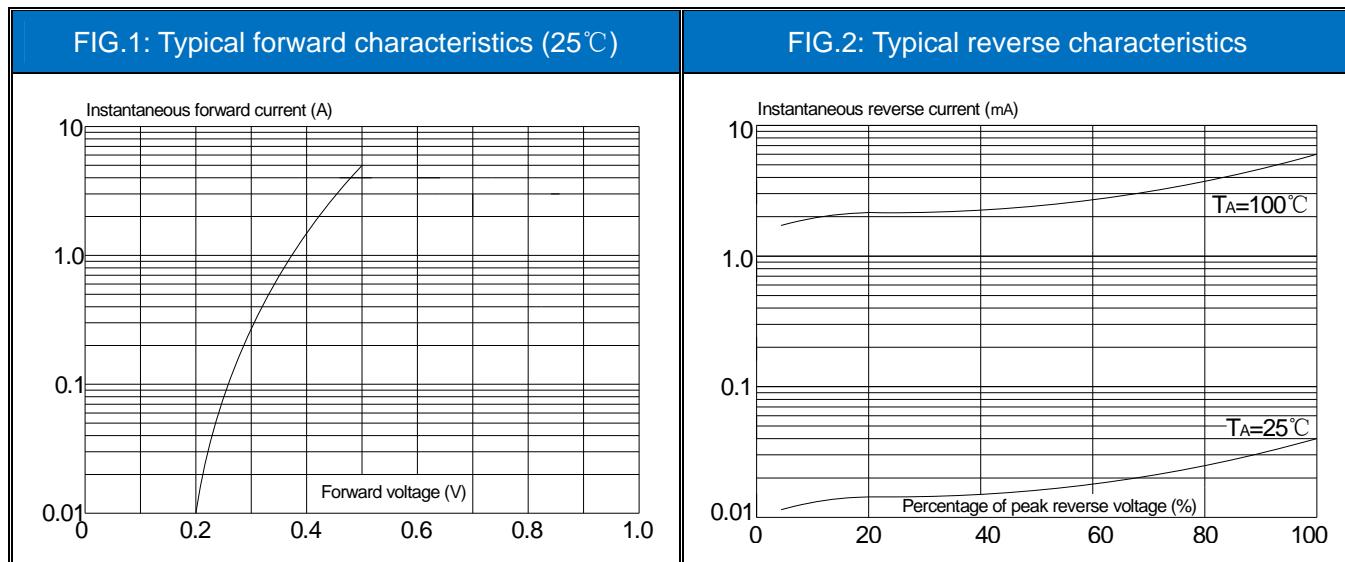
## TAPE AND REEL SPECIFICATION-SMA



Ref.	Dimensions	
	Millimeters	Inches
A0	2.79 ± 0.3	0.110 ± 0.012
B0	5.33 ± 0.3	0.210 ± 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	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
TAPING	0.0673	7,500	120,000	330

## CHARACTERISTICS CURVE



## CHARACTERISTICS CURVE

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

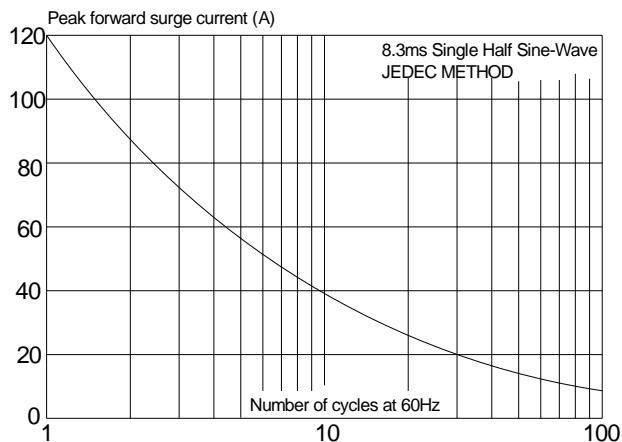


FIG.4: Forward current derating curve

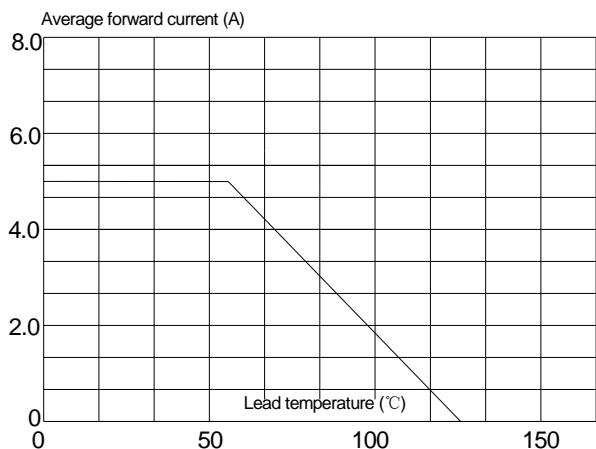


FIG.5: Maximum transient thermal impedance

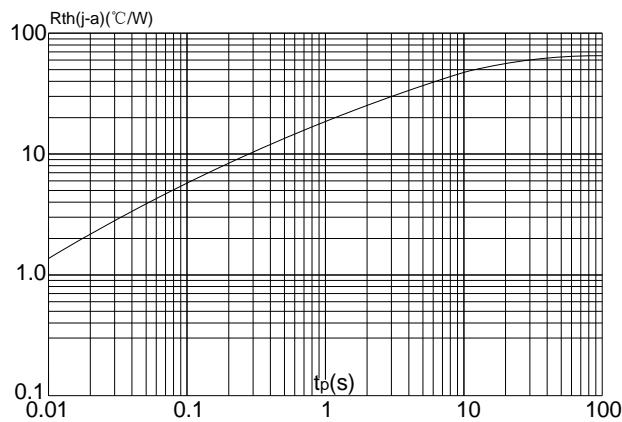
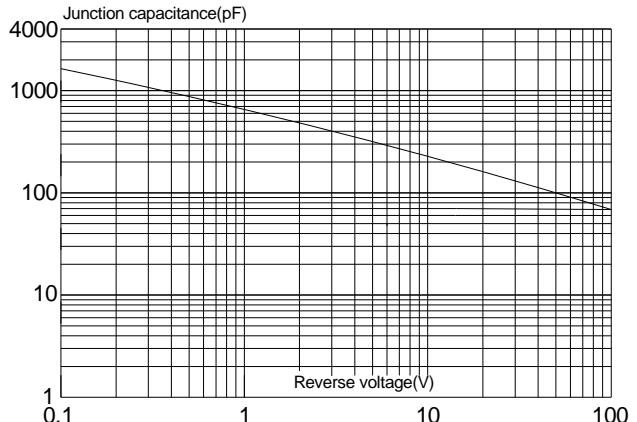


FIG.6: Typical junction capacitance



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