



# 2SC2411K

## NPN GENERAL PURPOSE SWITCHING TRANSISTOR

<b>VOLTAGE</b>	<b>32 Volts</b>	<b>POWER</b>	<b>225mW</b>
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**SOT-23** Unit : inch(mm)

### FEATURES

- NPN epitaxial silicon, planar design
- Collector-emitter voltage  $V_{CE}=32V$
- Collector current  $I_C=500mA$
- Lead free in comply with EU RoHS 2011/65/EU directives.
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

Case : SOT-23 plastic  
 Terminals : Solderable per MIL-STD-750, Method 2026  
 Approx Weight : 0.0003 ounces, 0.0084 grams  
 Marking : 241

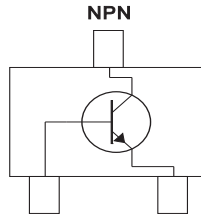
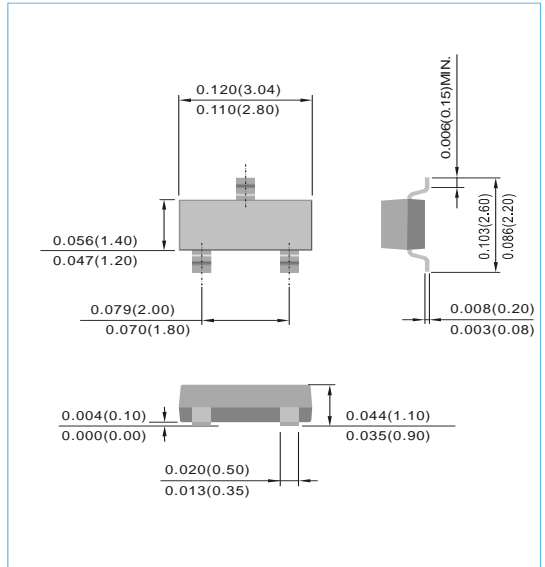


Fig.34



### ABSOLUTE RATINGS ( $T_A=25^{\circ}C$ )

Parameter	Symbol	Value	Units
Collector-Emitter Voltage	$V_{CEO}$	32	V
Collector-Base Voltage	$V_{CBO}$	40	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current Continuous	$I_C$	500	mA

### THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Max. Power Dissipation (Note 1)	$P_{TOT}$	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}C/W$
Junction Temperature	$T_J$	-55 to +150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}C$

NOTE : 1. Transistor mounted on FR-4 board 70 x 60 x 1mm



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### ELECTRICAL CHARACTERISTICS(T<sub>A</sub>=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100 μA	40	-	-	V
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =1mA	32	-	-	V
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA	5	-	-	V
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> =20V	-	-	1	μA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> =4V	-	-	1	μA
DC Current Gain (Note 2)	h <sub>FE</sub>	V <sub>CE</sub> =3V, I <sub>C</sub> =100mA	120	-	390	-
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA	-	-	0.6	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =5V, I <sub>E</sub> =-200mA, f=100MHz	-	250	-	MHz
Collector-Base Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0A, f=1MHz	-	6.5	-	pF

NOTE : 2.Pulse Test : Pulse width < 300μs, duty cycle < 2.0%



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## ELECTRICAL CHARACTERISTICS CURVE

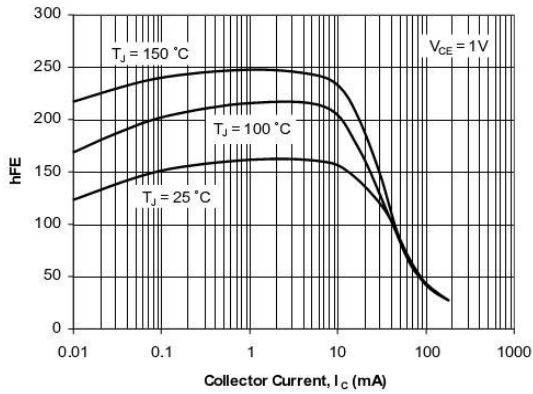


Fig. 1. Typical  $h_{FE}$  vs Collector Current

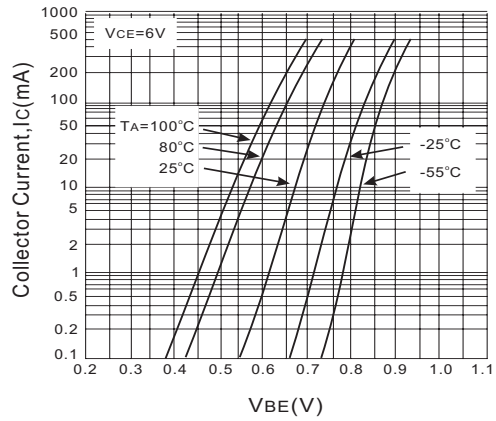


Fig.2. Typical  $V_{BE}$  vs Collector Current

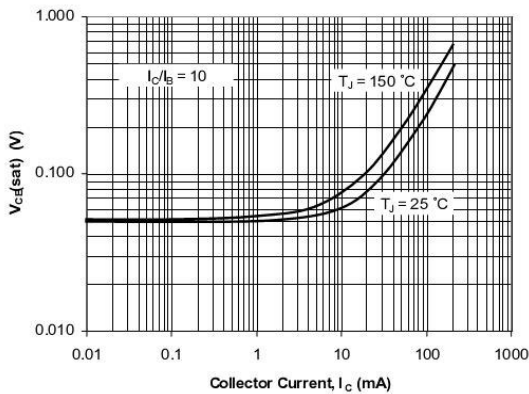


Fig. 3. Typical  $V_{CE(SAT)}$  vs Collector Current

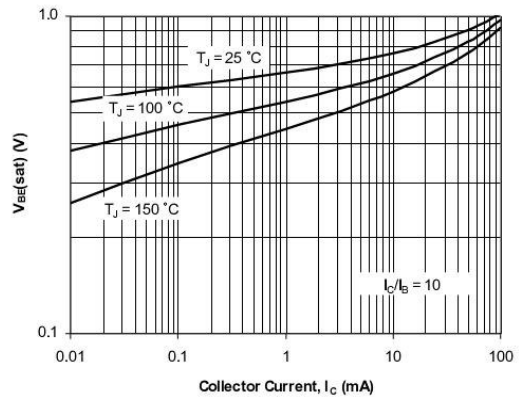


Fig. 4. Typical  $V_{BE(SAT)}$  vs Collector Current

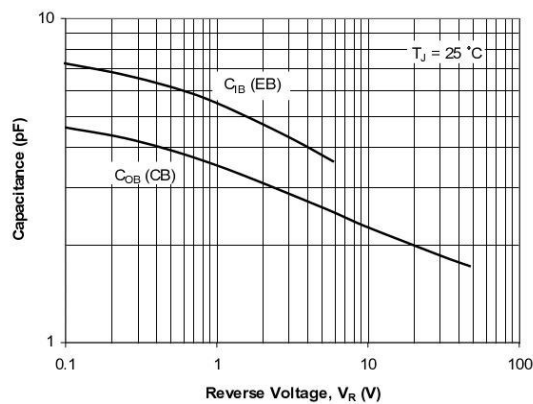


Fig. 5. Typical Capacitances vs Reverse Voltage

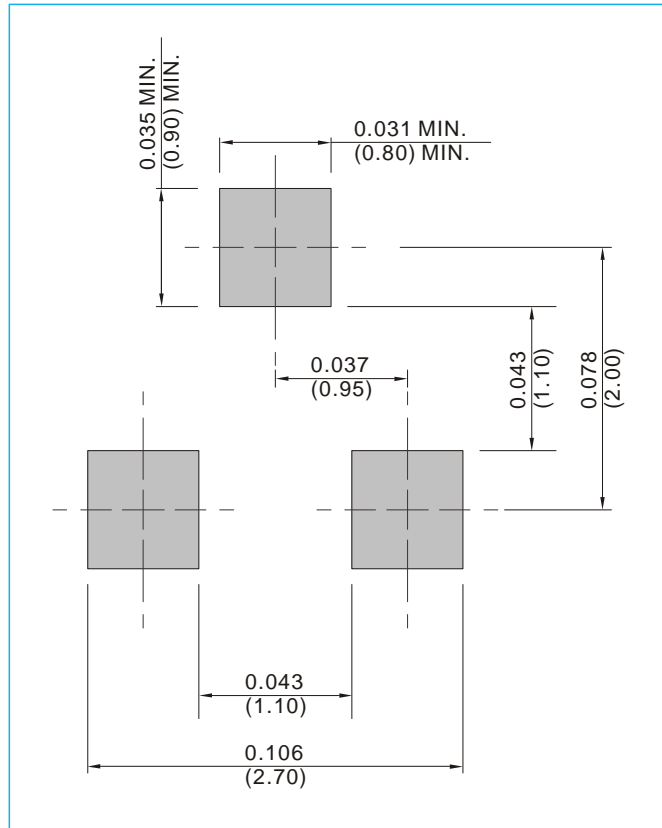


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## MOUNTING PAD LAYOUT

**SOT-23**

Unit : inch(mm)



## ORDER INFORMATION

- Packing information  
T/R - 12K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel



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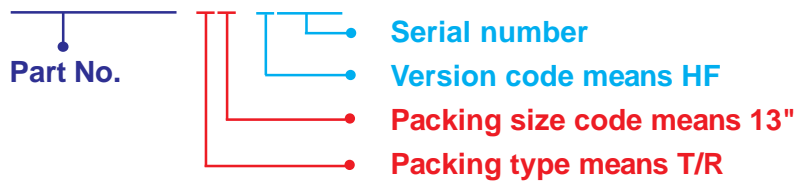
## Part No\_packing code\_Version

2SC2411K\_R1\_00001

2SC2411K\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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