

**2SC1213(A)**  
Rev.E Mar.-2016

Silicon NPN transistor in a TO-92 Plastic Package.

**/ Absolute Maximum Ratings(Ta=25 )**

Parameter	Symbol	Rating	Unit	
Collector to Base Voltage	V <sub>CBO</sub>	2SC1213	35	V
		2SC1213A	50	
Collector to Emitter Voltage	V <sub>CEO</sub>	2SC1213	35	V
		2SC1213A	50	
Emitter to Base Voltage	V <sub>EBO</sub>	4.0	V	
Collector Current - Continuous	I <sub>C</sub>	500	mA	
Collector Power Dissipation	P <sub>C</sub>	400	mW	
Junction Temperature	T <sub>j</sub>	150		
Storage Temperature Range	T <sub>stg</sub>	-55 150		

**/ Electrical Characteristics(Ta=25 )**

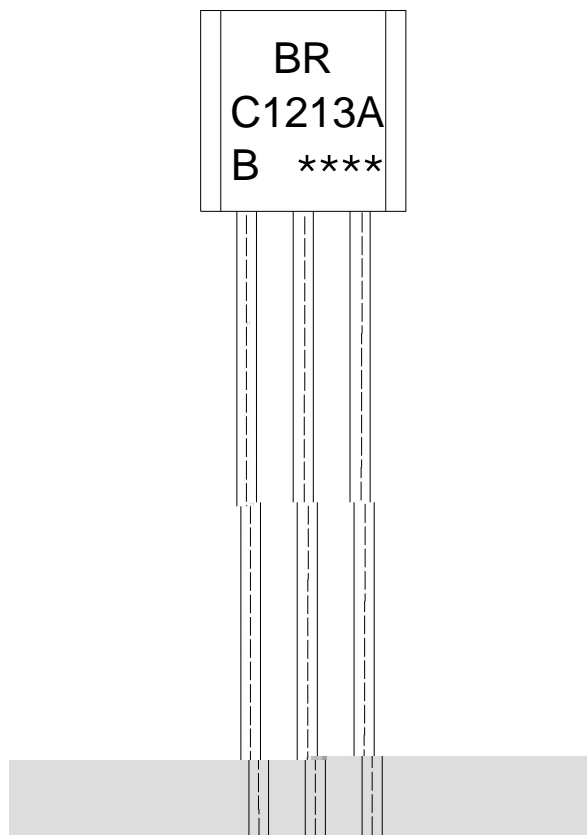
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V <sub>CBO</sub>	I <sub>C</sub> =10μA I <sub>C</sub> =1.0mA	35			V
			50			
Collector to Emitter Breakdown Voltage	V <sub>CEO</sub>	I <sub>C</sub> =1.0mA I <sub>B</sub> =0	35			V
			50			
Emitter to Base Breakdown Voltage	V <sub>EBO</sub>	I <sub>E</sub> =10μA I <sub>C</sub> =0	4.0			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =20V I <sub>E</sub> =0			0.5	μA
DC Current Gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =3.0V I <sub>C</sub> =10mA	60		320	
	h <sub>FE(2)</sub>	V <sub>CE</sub> =3.0V I <sub>C</sub> =500mA	10			
Collector to Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =150mA I <sub>B</sub> =15mA		0.2	0.6	V
Base to Emitter Voltage	V <sub>BE</sub>	V <sub>CE</sub> =3.0V I <sub>C</sub> =10mA		0.64		V

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**/ Package Dimensions**

/ Marking Instructions



Note:

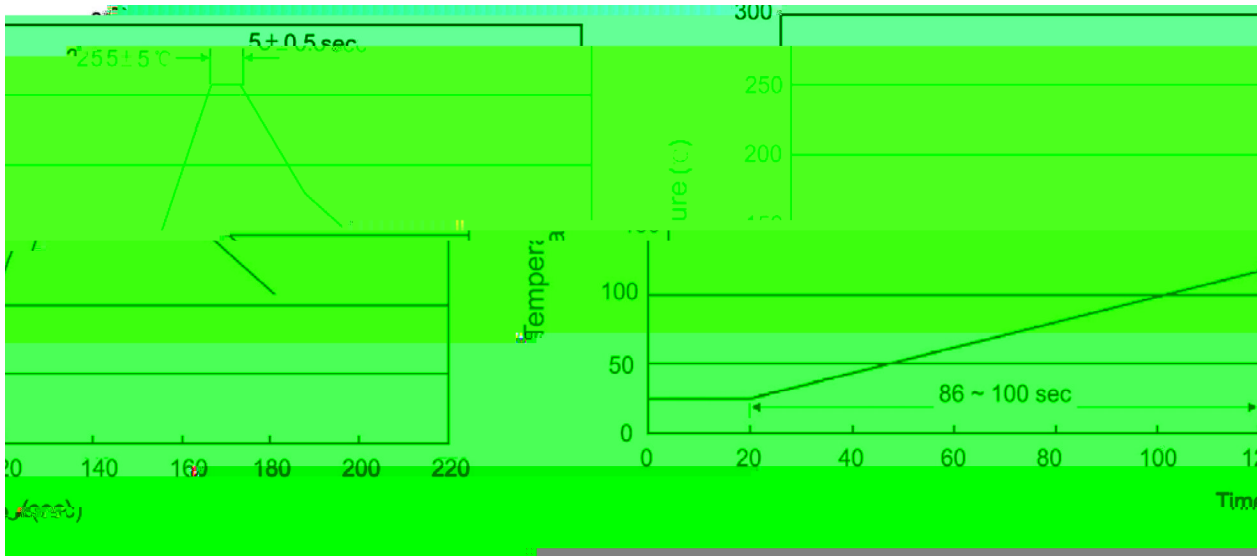
BR: Company Code.

C1213A: Product Type.

B:  $h_{FE}$  Classifications Symbol

\*\*\*\*: Lot No. Code, code change with Lot No.

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |     |     |    |          |   |
|---|-----|-----|----|----------|---|
| 1 | 25  | 150 | 60 | 90sec;   | 1.Preheating:25~150 , Time:60~90sec.    |
| 2 | 255 | 5   | 5  | 0.5sec;  | 2.Peak Temp.:255 5 , Duration:5 0.5sec. |
| 3 |     |     | 2  | 10 /sec. | 3. Cooling Speed: 2~10 /sec.            |

/ Resistance to Soldering Heat Test Conditions

270 ± 5                      10 ± 1 sec.                      Temp:270±5                      Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-92	1,000	10	10,000	5	50,000	135×190	237×172×102	560×245×195
	1,000	10	10,000	10	100,000	135×190	237×172×102	560×245×375

/ AMMO

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm3)	
	Units/tape 只/纸带	Tape/Inner Box 纸带/盒	Rows/Inner Box 纸带层/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Inner Box 盒	Outer Box 箱
TO-92	3,000	1	120	10	30,000	328×230×42	小箱 480×346×235, 大箱 547×407×268

/ Notices