

**2SC3942**  
Rev.F Mar.-2016

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

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	300	V
Collector to Emitter Voltage	$V_{CEO}$	300	V
Emitter to Base Voltage	$V_{EBO}$	7.0	V
Collector Current - Continuous	$I_C$	100	mA
Collector Current – Continuous(Pulse)	$I_{CP}$	200	mA
Collector Power Dissipation	$P_C$	2.0	W
	$P_C(T_c=25^{\circ}C)$	10	W
Junction Temperature	$T_j$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-55~150	$^{\circ}C$

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

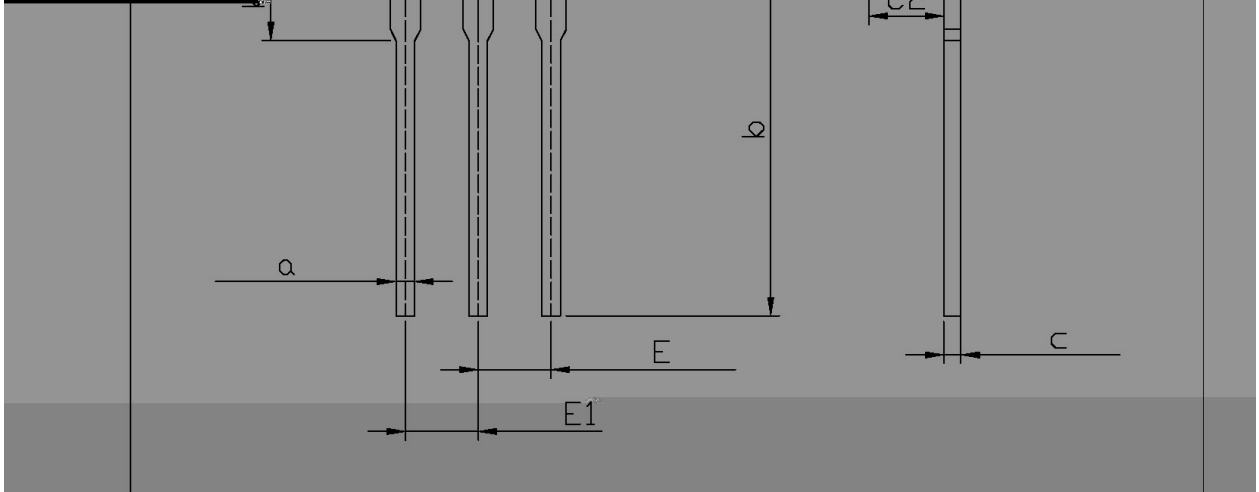
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	$V_{CBO}$	$I_C=10\text{ A}$ $I_E=0$	300			V
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=1.0\text{mA}$ $I_B=0$	300			V
Emitter to Base Breakdown Voltage	$V_{EBO}$	$I_E=10\text{ A}$ $I_C=0$	7.0			V
Collector Cut-Off Current	$I_{CEO}$	$V_{CE}=200\text{V}$ $I_B=0$			10	A
DC Current Gain	$h_{FE}$	$V_{CE}=50\text{V}$ $I_C=5.0\text{mA}$	50		250	
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=30\text{mA}$ $I_B=3.0\text{mA}$			1.5	V
Base to Emitter Voltage	$V_{BE}$	$V_{CE}=10\text{V}$ $I_C=30\text{mA}$			1.2	V
Transition Frequency	$f_T$	$V_{CE}=30\text{V}$ $f=10\text{MHz}$ $I_C=20\text{mA}$	70	140		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=30\text{V}$ $f=1.0\text{MHz}$ $I_E=0$		2.7		pF

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/ Package Dimensions

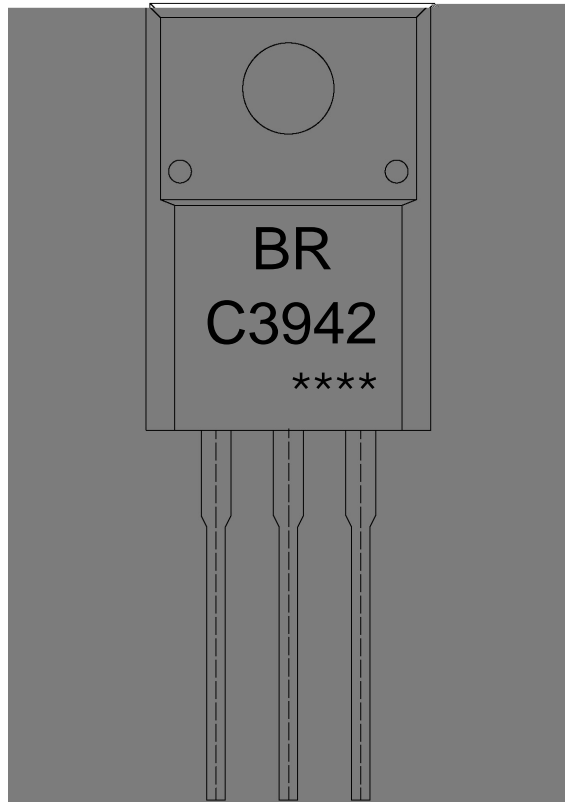
T0-220F

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
C	4.3	4.7	b1	2.9	3.9
A	9.7	10.3	a	0.5	0.75
D	1.7	1.8			

/ Marking Instructions



BR

C3942

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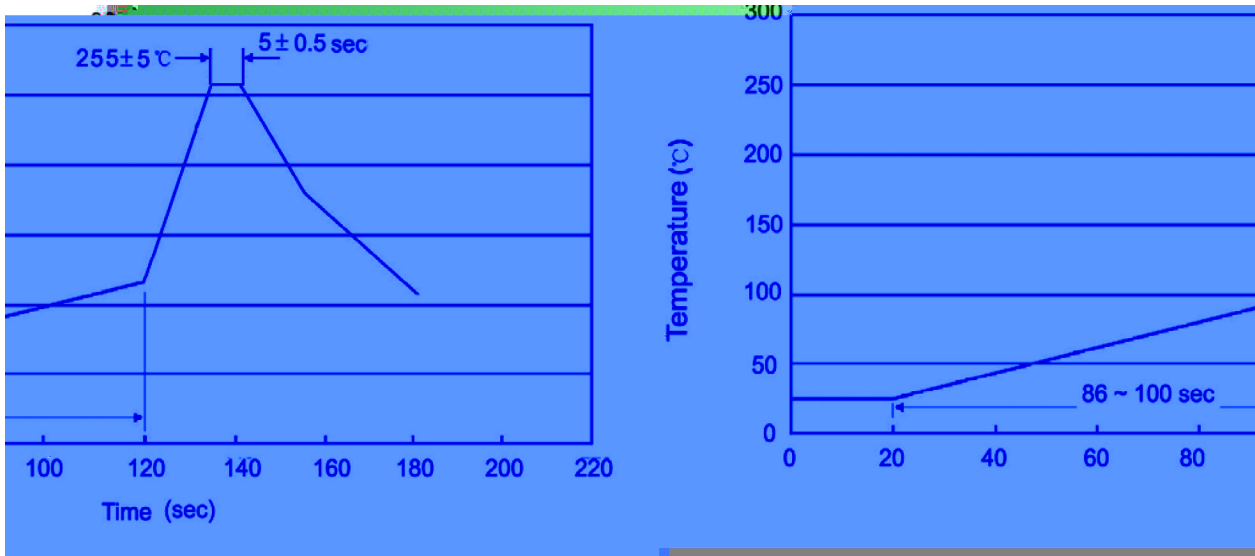
Note:

BR: Company Code.

C3942: Product Type.

\*\*\*\*: 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°C                      Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units 包装数量 Units/Inner Box 只/盒	Dimension 包装尺寸 (unit: mm <sup>3</sup> )
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