

/ Descriptions

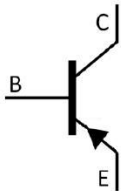
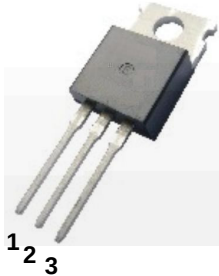
Silicon PNP transistor in a TO-220 Plastic Package.

/ Features

Complement to TIP41.

/ Applications

Medium power linear switching applications.

/ Equivalent Circuit**/ Pinning**

PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

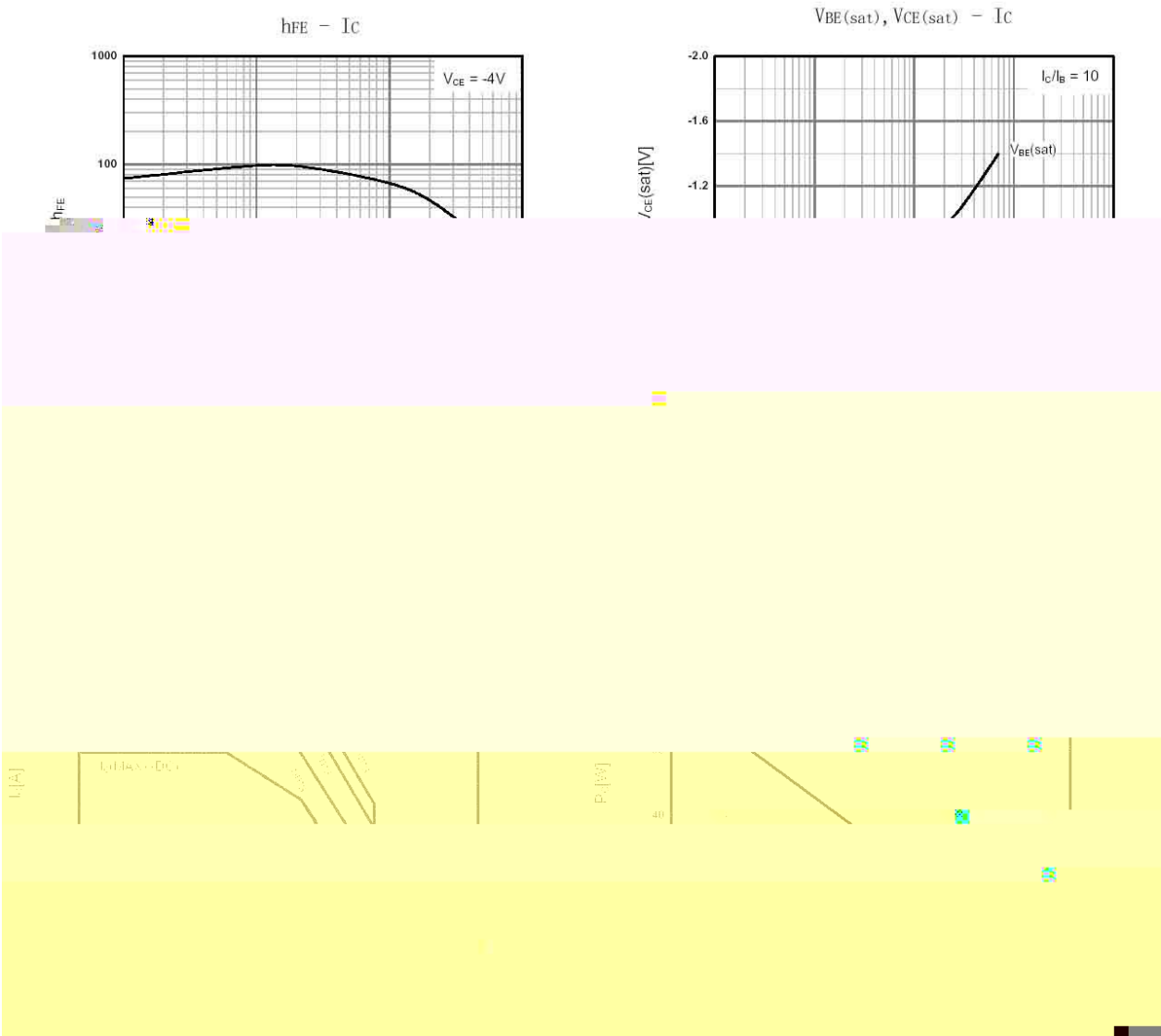
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating				Unit
		TIP42	TIP42A	TIP42B	TIP42C	
Collector to Base Voltage	V_{CBO}	-40	-60	-80	-100	V
Collector to Emitter Voltage	V_{CEO}	-40	-60	-80	-100	V
Emitter to Base Voltage	V_{EBO}	-5.0				V
Collector Current - Continuous	I_C	-6.0				A
Peak Collector Current	I_{CP}	-10				A
Base Current - Continuous	I_B	-2.0				A
Collector Power Dissipation	P_C	2.0				W
Collector Power Dissipation	$P_C(T_C=25^{\circ}\text{C})$	65				W
Junction Temperature	T_j	150				$^{\circ}\text{C}$
Storage Temperature Range	T_{sag}	-55~150				$^{\circ}\text{C}$

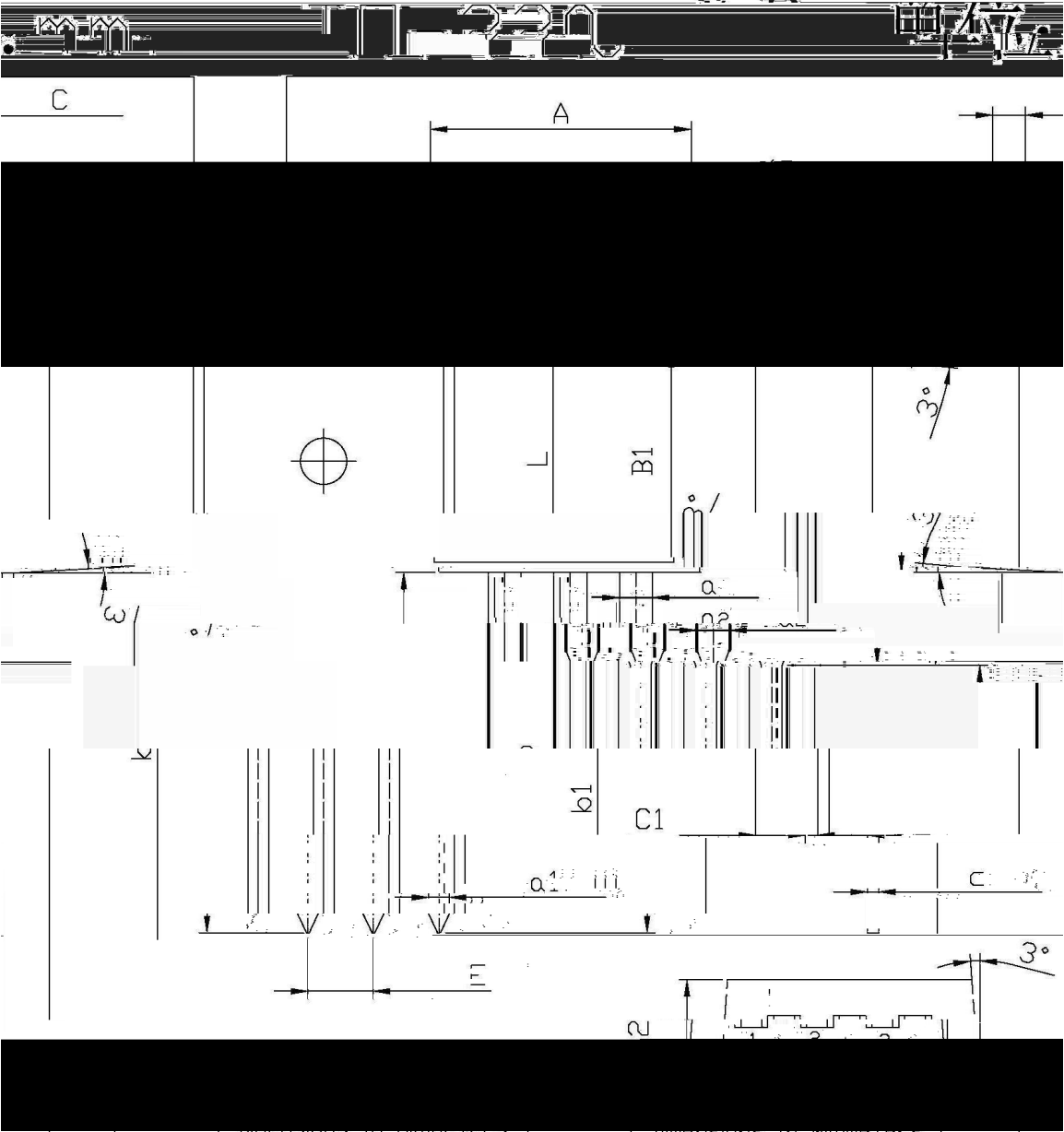
/ Electrical Characteristics(Ta=25)

Parameter	Symbol		Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	TIP42	$I_C=-30\text{mA}$ $I_B=0$	-40			V
		TIP42A		-60			
		TIP42B		-80			
		TIP42C		-100			
Collector Cut-Off Current	I_{CEO}	TIP42 TIP42A	$V_{CE}=-30\text{V}$ $I_B=0$			-0.7	mA
		TIP42B TIP42C	$V_{CE}=-60\text{V}$ $I_B=0$				
Collector Cut-Off Current	I_{CES}	TIP42	$V_{CE}=-40\text{V}$ $V_{EB}=0$			-400	A
		TIP42A	$V_{CE}=-60\text{V}$ $V_{EB}=0$				
		TIP42B	$V_{CE}=-80\text{V}$ $V_{EB}=0$				
		TIP42C	$V_{CE}=-100\text{V}$ $V_{EB}=0$				
Emitter Cut-Off Current	I_{EBO}		$V_{EB}=-5.0\text{V}$ $I_C=0$			-1.0	mA
DC Current Gain	$h_{FE(1)}$		$V_{CE}=-4.0\text{V}$ $I_C=-3.0\text{A}$	15		75	
	$h_{FE(2)}$		$V_{CE}=-4.0\text{V}$ $I_C=-0.3\text{A}$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$		$I_C=-6.0\text{A}$ $I_B=-0.6\text{A}$			-1.5	V
Base to Emitter Voltage	V_{BE}		$I_C=-6.0\text{A}$ $V_{CE}=-4.0\text{V}$			-2.0	V
Transition Frequency	f_T		$V_{CE}=-10\text{V}$ $I_C=-500\text{mA}$	3.0			MHz

/ Electrical Characteristic Curve

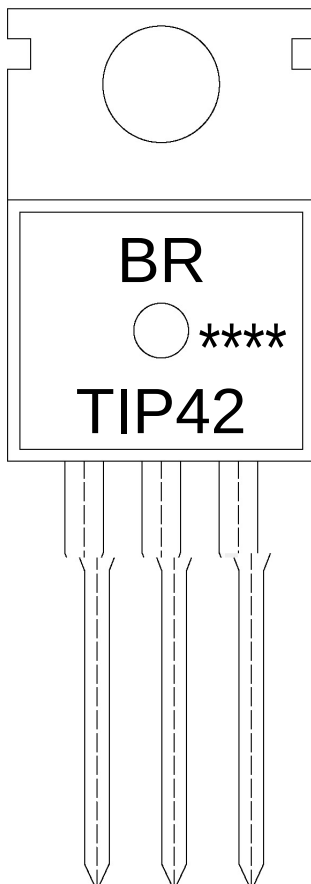


/ Package Dimensions



Dimensions in Millimeters			Dimensions in Millimeters		
Symbol	Min	Max	Symbol	Min	Max
	14.4	15.7		9.8	10.2
	1.4	1.6		1.2	1.4
	2.2	2.6		15.7	16.1
	10.2	10.6		9.0	9.4

/ Marking Instructions



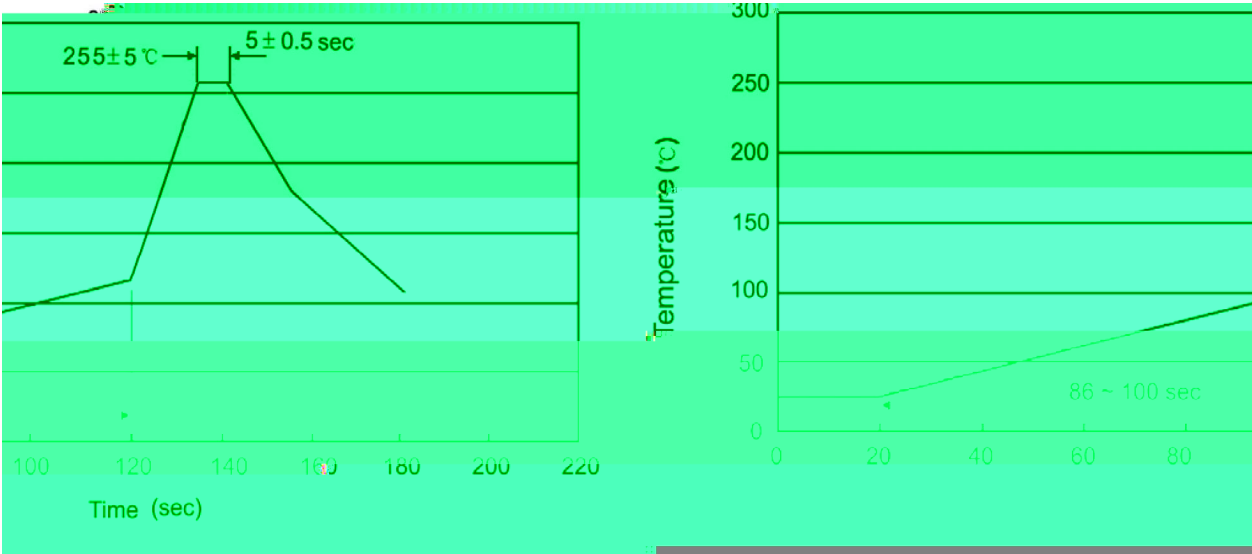
Note:

BR: Company Code

TIP42: Product Type.

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

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



- 1

25 150

60 90sec;
- 2

255 5

5 0.5sec;
- 3

2 10

/sec.

- Note:
- 1.Preheating:25~150

Time:60~90sec.
- 2.Peak Temp.:255 5

Duration:5 0.5sec.
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

Units