

TIP41

Rev. H Oct.-2018

/ Descriptions

TO-220 NPN Silicon NPN transistor in a TO-220 Plastic Package.

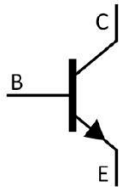
/ Features

TIP42
Complement to TIP42.

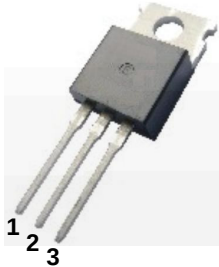
/ Applications

Medium power linear switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

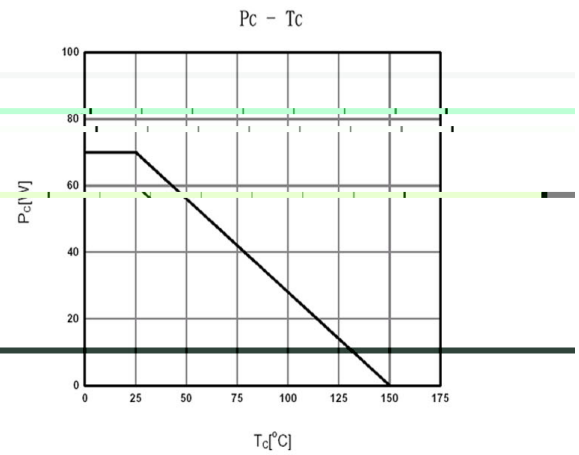
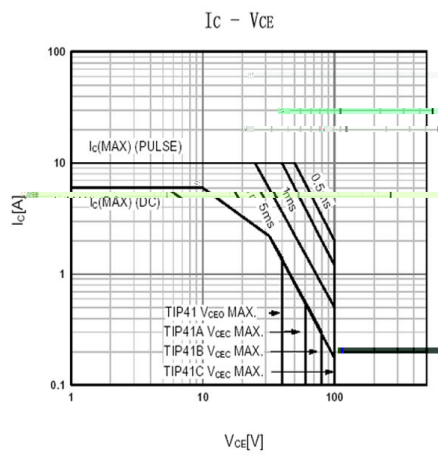
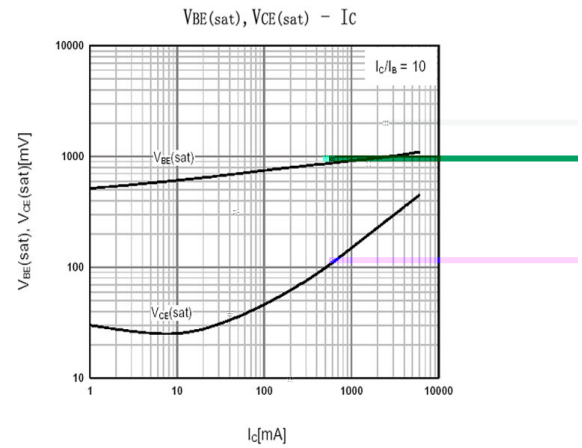
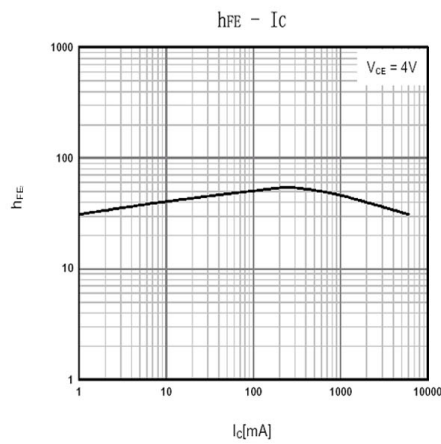
/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating				Unit
		TIP41	TIP41A	TIP41B	TIP41C	
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				V
Collector Current - Continuous	I_C	6				A
Peak Collector Current	I_{CP}	10				A
Base Current - Continuous	I_B	2				A
Collector Power Dissipation	P_C	2				W
Collector Power Dissipation	P_C ($T_c=25$)	65				W
Junction Temperature	T_j	150				
Storage Temperature Range	T_{sag}	-55 150				

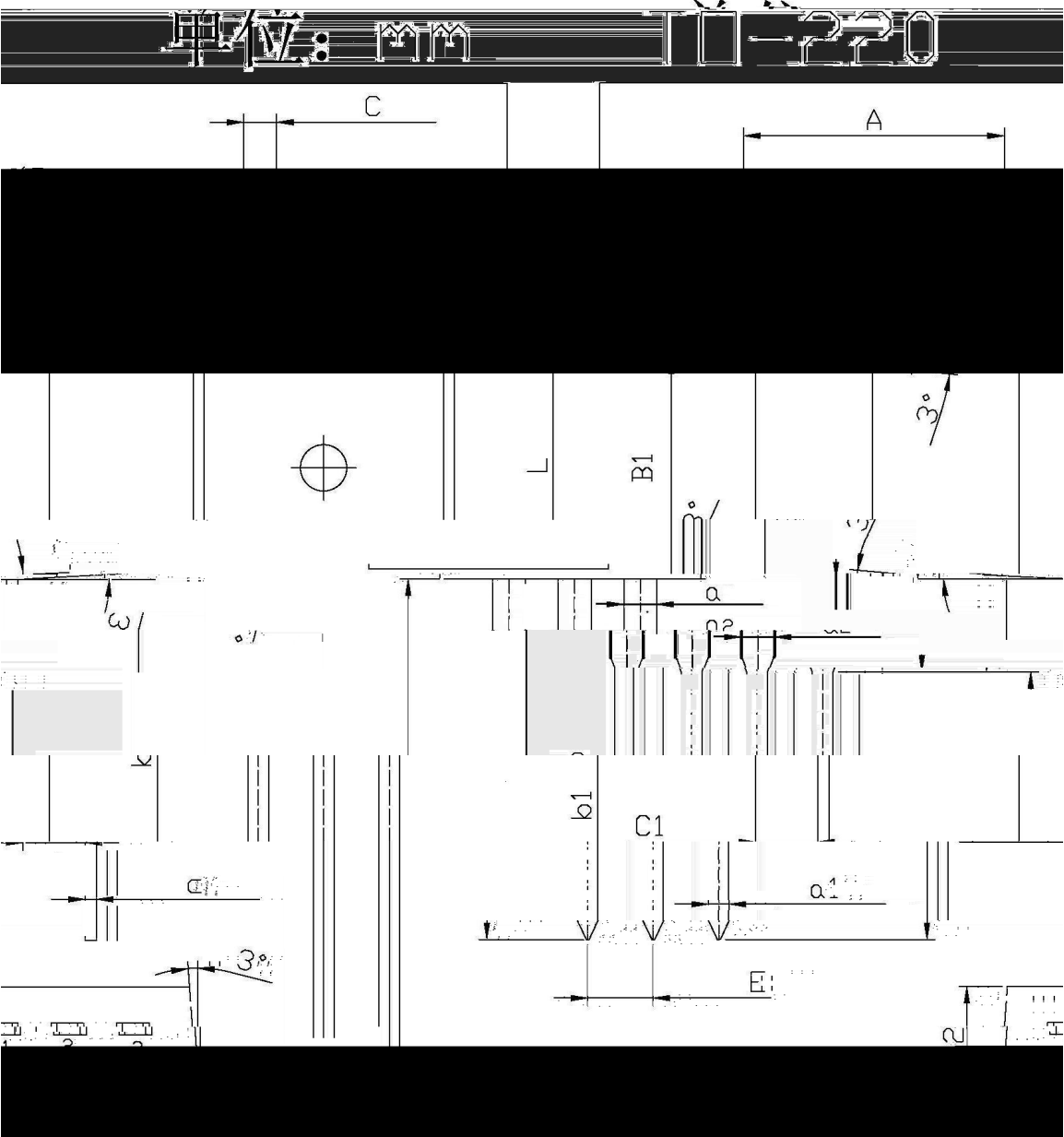
/ Electrical Characteristics(Ta=25)

Parameter	Symbol		Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	TIP41	$I_C=30mA$ $I_B=0$	40			V
		TIP41A		60			
		TIP41B		80			
		TIP41C		100			
Collector Cut-Off Current	I_{CEO}	TIP41 TIP41A	$V_{CE}=30V$ $I_B=0$			0.7	mA
		TIP41B TIP41C	$V_{CE}=60V$ $I_B=0$				
Collector Cut-Off Current	I_{CES}	TIP41	$V_{CE}=40V$ $V_{EB}=0$			400	μA
		TIP41A	$V_{CE}=60V$ $V_{EB}=0$				
		TIP41B	$V_{CE}=80V$ $V_{EB}=0$				
		TIP41C	$V_{CE}=100V$ $V_{EB}=0$				
Emitter Cut-Off Current	I_{EBO}		$V_{EB}=5V$ $I_C=0$			1	mA
DC Current Gain	$h_{FE(1)}$		$V_{CE}=4V$ $I_C=3A$	15		75	
	$h_{FE(2)}$		$V_{CE}=4V$ $I_C=0.3A$	30			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$		$I_C=6A$ $I_B=0.6A$			1.5	V
Base to Emitter Voltage	V_{BE}		$I_C=6A$ $V_{CE}=4V$			2	V
Transition Frequency	f_T		$V_{CE}=10V$ $I_C=500mA$	3			MHz

/ Electrical Characteristic Curve



/ Package Dimensions

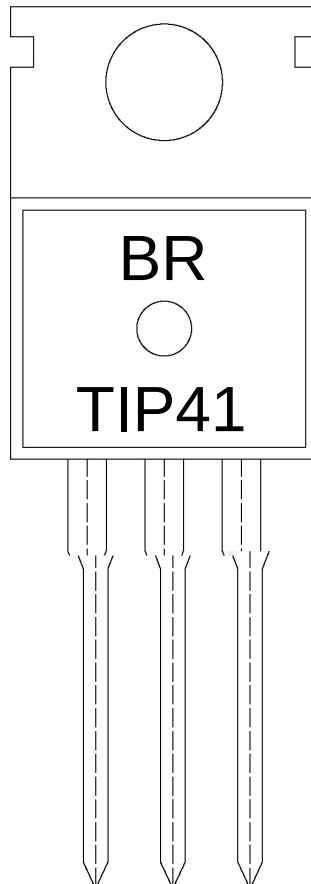


Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeters		
	Min	Max		Min	Max	
	9.4	10.2		1.2	1.4	
	15.7	16.1			9.0	

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/ Marking Instructions



BR

TIP41

Note:

BR: Company Code

TIP41: Product Type.

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

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


Note:

- 1 25 150 60 90sec;
- 2 255±5 5±0.5sec;
- 3 2 10 /sec.

- 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					Dimension		(unit mm ³)

/ TUBE

Package Type	Units					Dimension		(unit mm ³)

/ Notices