

TIP41

Rev. H Oct.-2018

/ Descriptions

TO-220

NPN

Silicon NPN transistor in a TO-220 Plastic Package.

/ Features

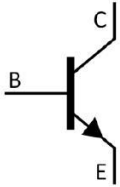
TIP42

Complement to TIP42.

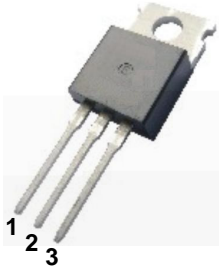
/ Applications

Medium power linear switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base

PIN 2 Collector

PIN 3 Emitter

/ h_{FE} Classifications & Marking

See Marking Instructions.

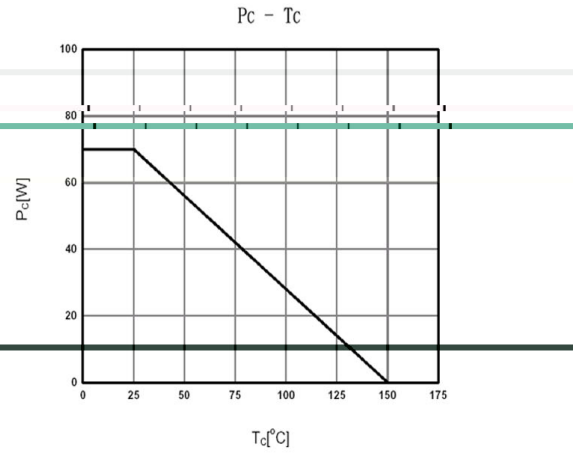
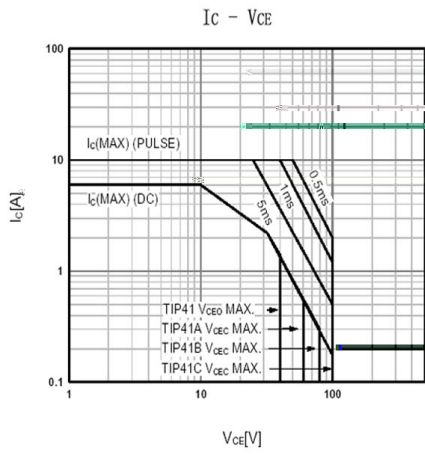
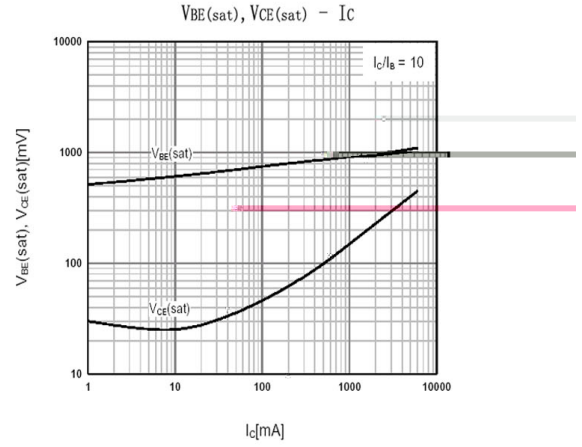
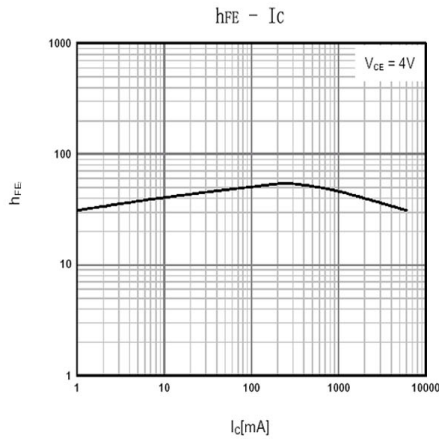
/ Absolute Maximum Ratings(Ta=25)

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

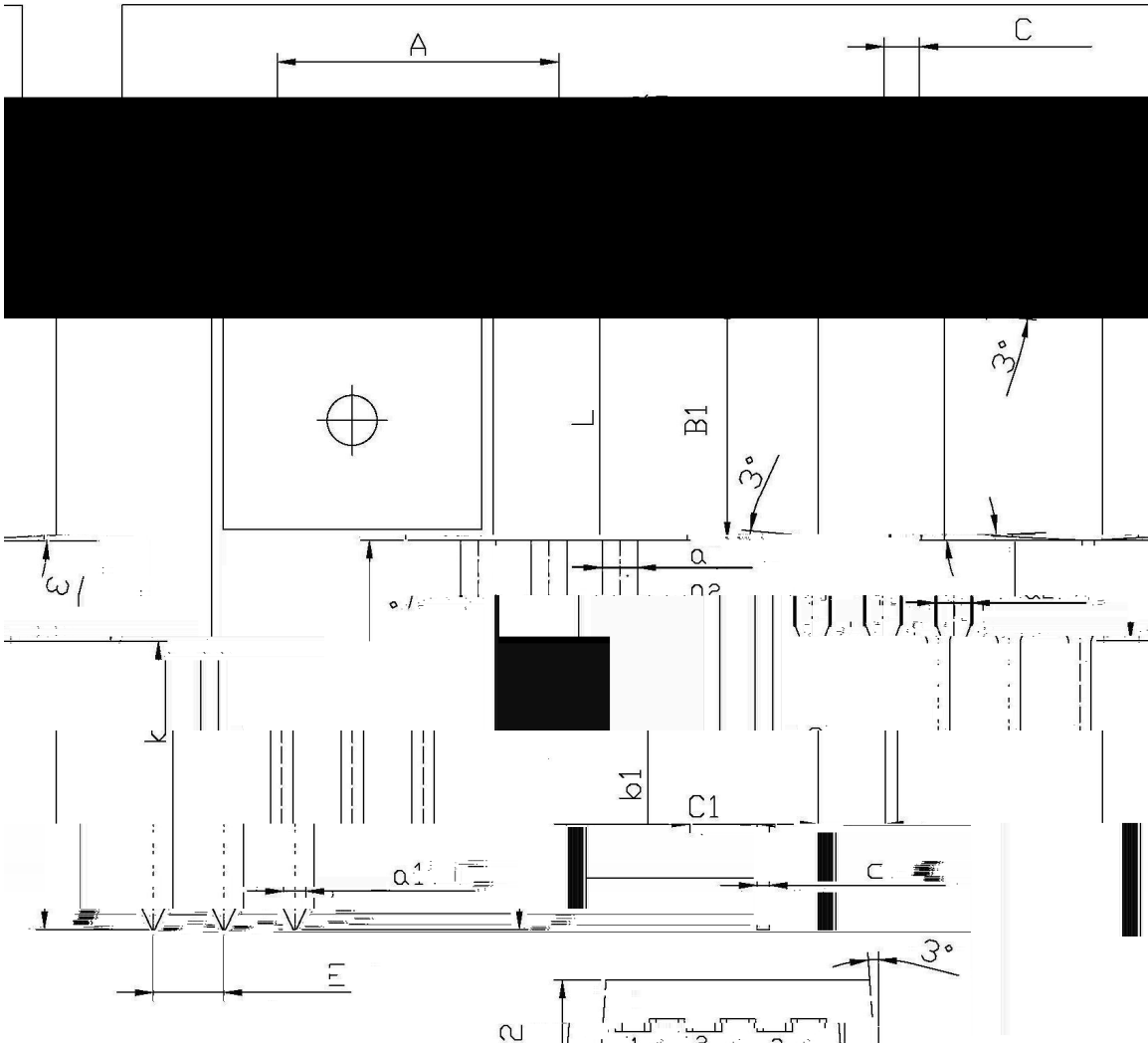
/ Electrical Characteristic Curve



/ Package Dimensions

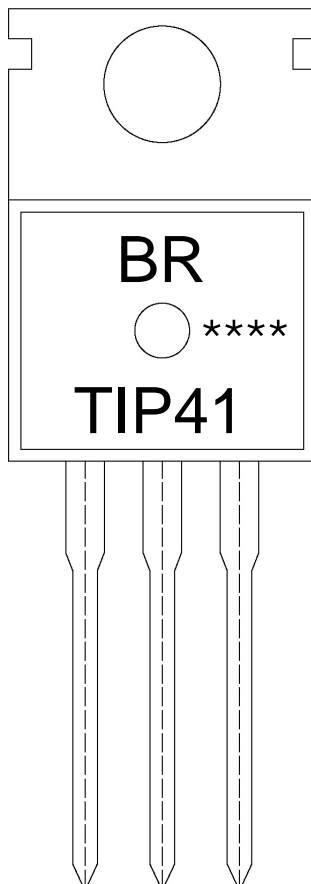
T0-220

单位: mm



Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeters	
	Min	Max		Min	Max
A	9.8	10.2	C	1.2	1.4
R	3.56	3.64	B	6.3	6.7
B	15.7	16.1	B1	13.6	14.0
a	1.22	1.32	a1	1.25	1.35
b1	12.6	13.6	c	0.4	0.6
c	0.4	0.6			
	1.45				

/ Marking Instructions



BR

TIP41

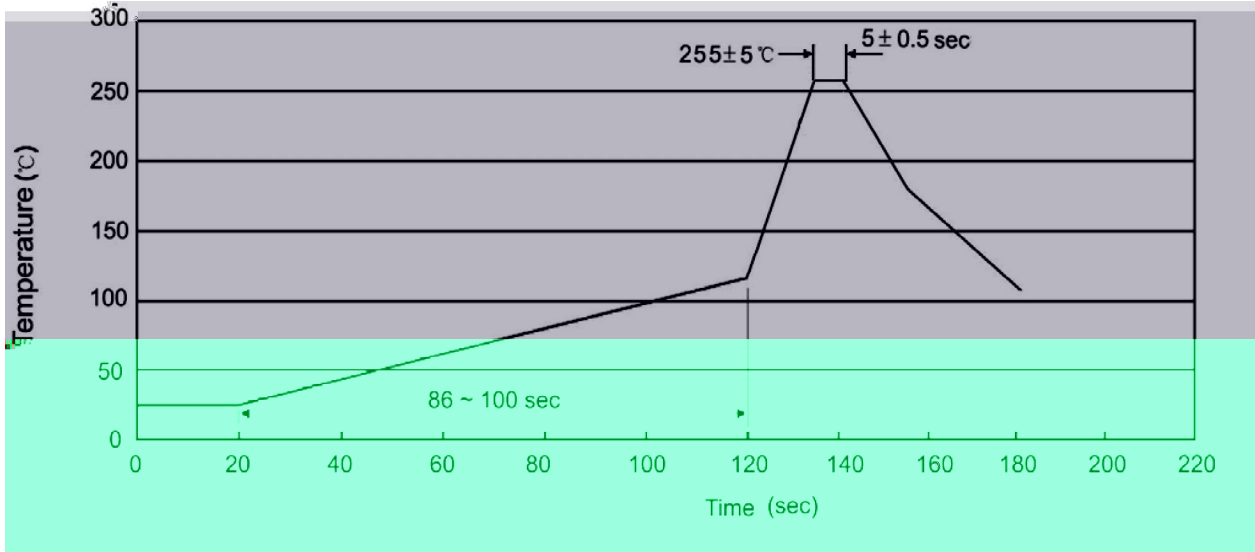
Note:

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; | 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	Units					Dimension (unit mm ³)		
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices