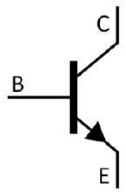
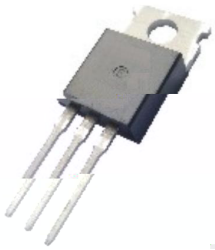
TO-220 NPN Silicon NPN transistor in a TO-220 Plastic Package.

TIP42

Complement to TIP42.

Medium power linear switching applications.



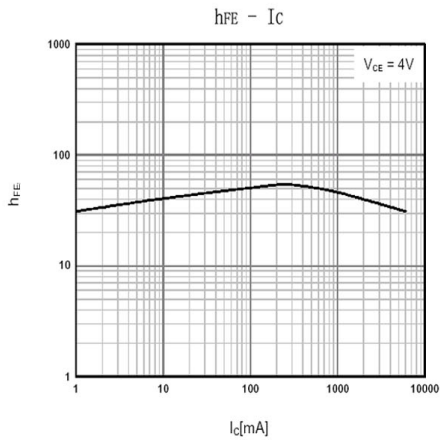


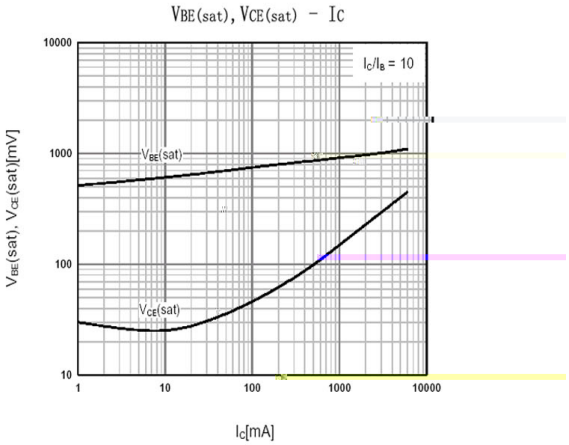
PIN1 Base PIN 2 Collector PIN 3 Emitter

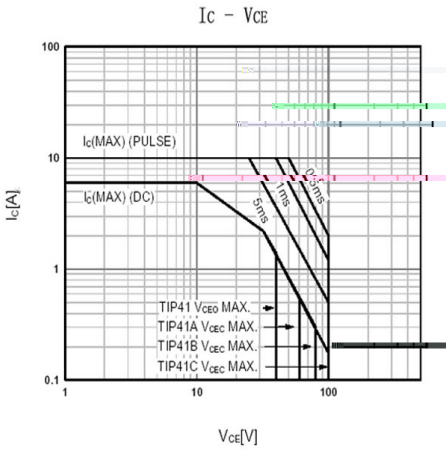
See Marking Instructions.

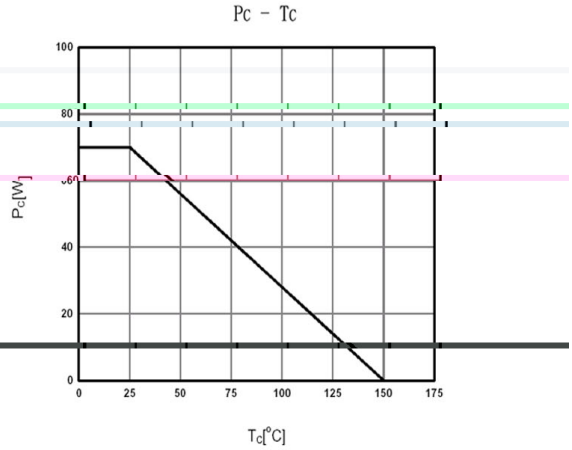
Parameter	Symbol	Rating				Unit
		TIP41	TIP41A	TIP41B	TIP41C	
Collector to Base Voltage	V_{CBO}	40	60	80	100	V
Collector to Emitter Voltage	V_{CEO}	40	60	80	100	V
Emitter to Base Voltage	V_{EBO}	5				V
Collector Current - Continuous	I_C	6				A
Peak Collector Current	I_{CP}	10				A
Base Current - Continuous	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				

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


hFE - Ic
VCE = 4V
hFE
1000
100
10
1
1
10
100
1000
10000
IC[mA]

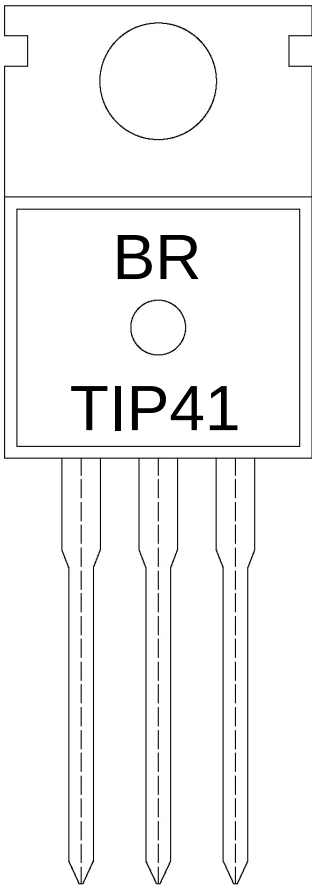

VBE(sat), VCE(sat) - Ic
IC/IB = 10
VBE(sat)
VCE(sat)
VBE(sat), VCE(sat)[mV]
10000
1000
100
10
1
10
100
1000
10000
IC[mA]


Ic - VCE
IC(MAX) (PULSE)
IC(MAX) (DC)
0.5ms
1ms
5ms
TIP41 VCEO MAX.
TIP41A VCEC MAX.
TIP41B VCEC MAX.
TIP41C VCEC MAX.
IC[A]
100
10
1
0.1
1
10
100
VCE[V]


Pc - Tc
PC[W]
100
80
60
40
20
0
0
25
50
75
100
125
150
175
TC[°C]

单位：mm

TO-220



BR

TIP41

****

Note:

BR:	Company Code
TIP41:	Product Type.
****:	Lot No. Code, code change with Lot No.

1	25 150	60 90sec;	Note: 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.

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

/ BULK

Package Type	Units					Dimension		(unit mm^3)

/ TUBE

Package Type	Units					Dimension		(unit mm^3)