

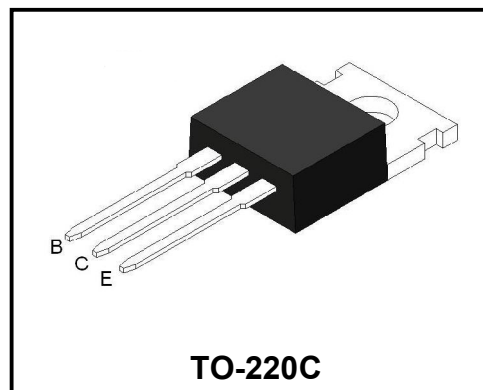
PNP Plastic-Encapsulate Transistors

Applications

- General purpose circuits
- Audio amplifier
- Power linear and switching

Features

- High switching speed
- Complementary to TIP41C



Product Specification Classification

Part Number	Package	Marking	Pack
TIP42C	TO-220C	YFW TIP42C XXXXX	1000PCS/box

Absolute Maximum Rating (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	-100	V
Collector-Emitter Voltage	BV_{CEO}	-100	V
Emitter-Base Voltage	BV_{EBO}	-5	V
Collector Current(DC)	I_C	-6	A
Collector peak current	I_{CM}	-10	A
Base Current	I_B	-2	A
Collector Dissipation	Ta =25 ℃	2	W
	Tc =25 ℃	65	
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-65~150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = -10mA, I_B = 0$	-100			V
Collector cut-off current	I_{CES}	$V_{CE} = -100V, I_E = 0$			-0.4	mA
Collector cut-off current	I_{CEO}	$V_{CB} = -60V, I_E = 0$			-0.7	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-1	mA
DC current gain*	h_{FE}	$V_{CE} = -4V, I_C = -0.3A$	30			
		$V_{CE} = -4V, I_C = -3A$	15		75	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = -6A, I_B = -0.6A$			-1.5	V
Base-emitter saturation voltage*	$V_{BE(sat)}$	$I_C = -6A, I_B = -0.6A$			-2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE} = -10V, I_C = -0.5A$	3.0			MHz

* Pulse Test : $PW \leq 300\mu s$, Duty cycle $\leq 2\%$

Electrical Characteristics

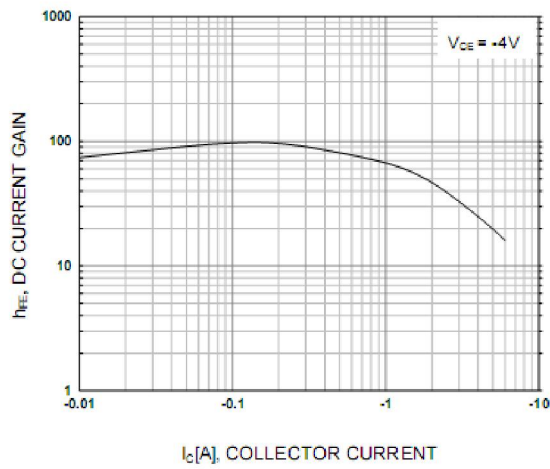


Figure 1. DC current Gain

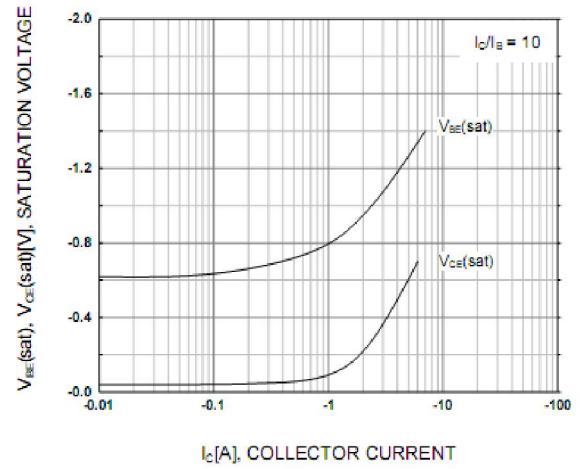


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

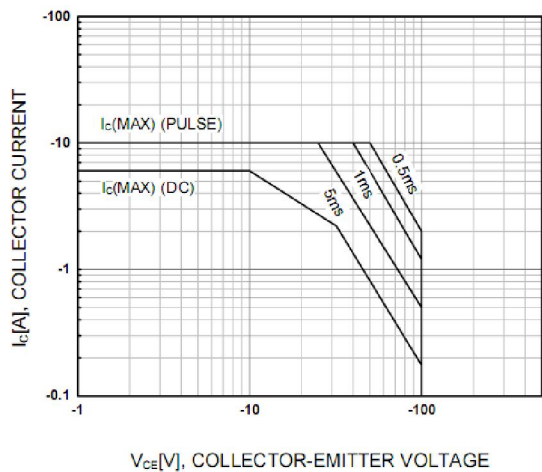


Figure 3. Safe Operating Area

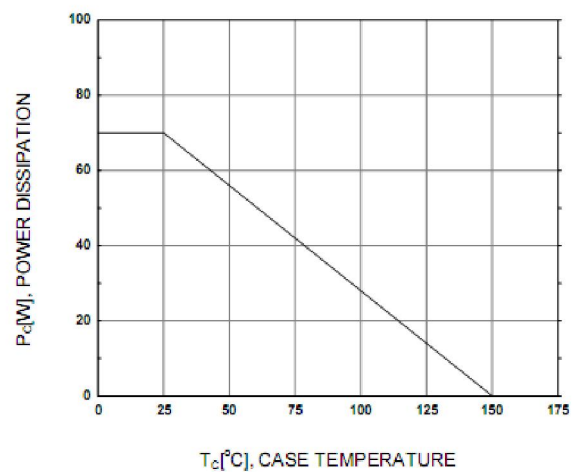


Figure 4. Power derating

Package Dimensions

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.34	4.67	0.171	0.184
A1	2.52	2.82	0.099	0.111
b	0.71	0.91	0.028	0.036
b1	1.17	1.37	0.046	0.054
c	0.30	0.50	0.012	0.020
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.50	8.90	0.335	0.350
E1	12.00	12.50	0.472	0.492
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	2.60	2.80	0.102	0.110
L	13.20	13.80	0.520	0.543
L1	3.80	4.20	0.150	0.165
Φ	3.60	3.96	0.142	0.156