

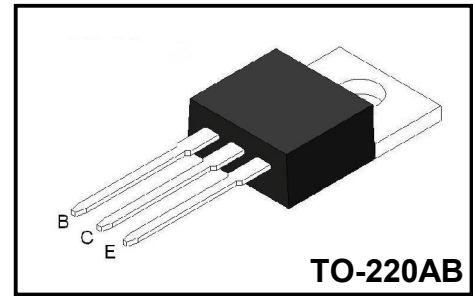
PNP Plastic-Encapsulate Transistors

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-220AB	YFW TIP42C XXXXX	1000PCS/box

Absolute Maximum Rating (Ta=25°C)

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	P_C	Ta =25 °C	2	W
		Tc =25 °C	65	
Junction Temperature	T_j	150	°C	
Storage Temperature	T_{stg}	-65~150	°C	

Electrical Characteristics (Ta=25°C)

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

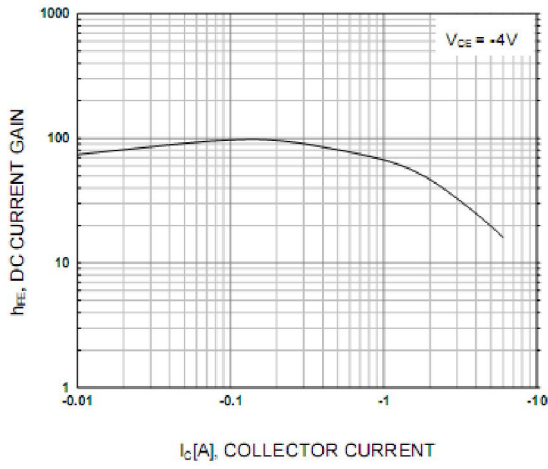


Figure 1. DC current Gain

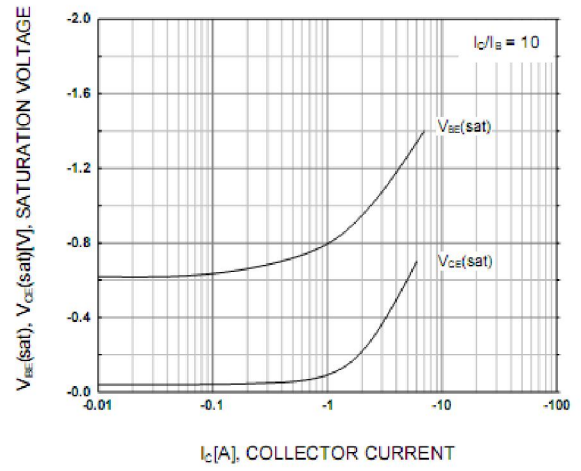


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

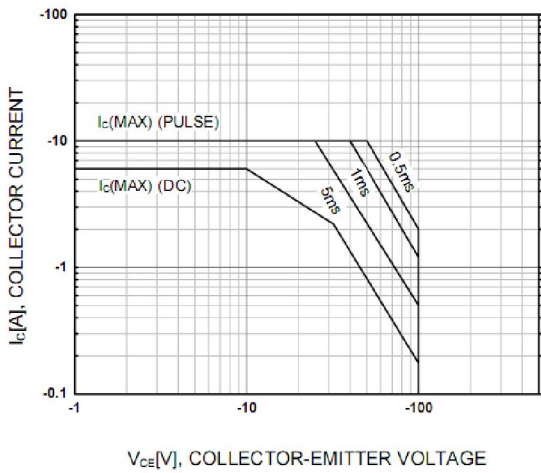


Figure 3. Safe Operating Area

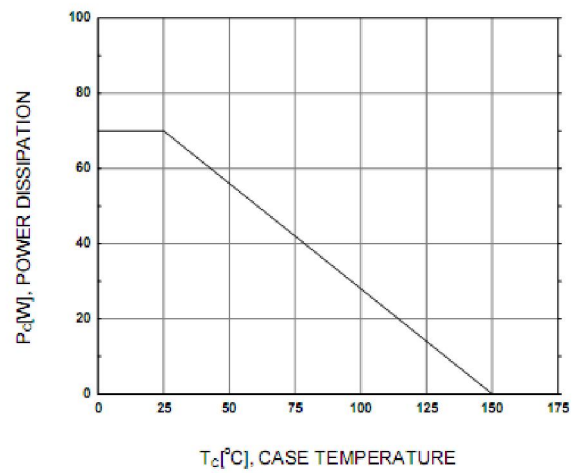
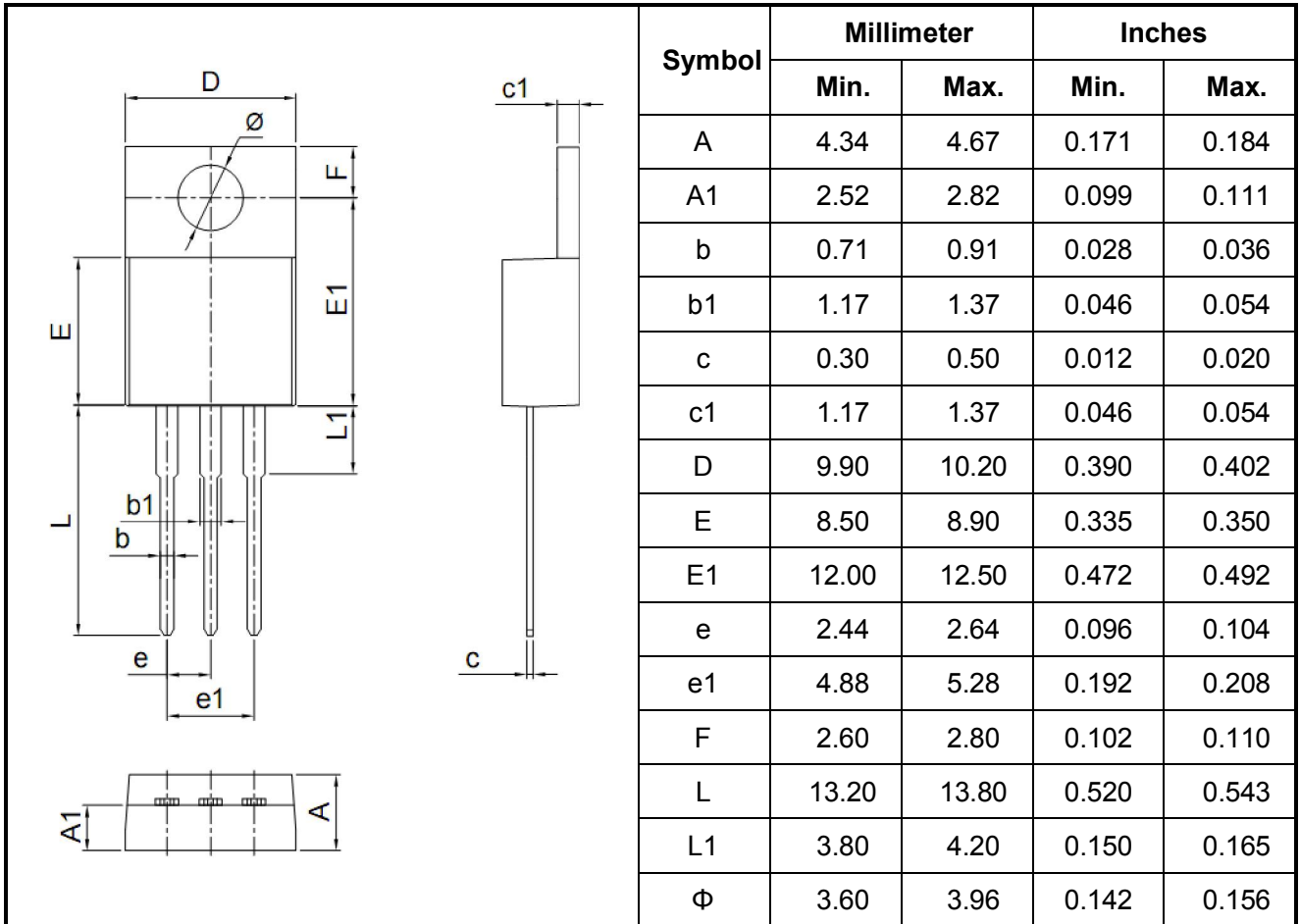


Figure 4. Power derating

Package Dimensions

TO-220AB



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