

TO-220 Plastic-Encapsulated Transistors

TIP42A/42B/42C TRANSISTOR (PNP)

FEATURES

Power dissipation

$$P_{CM}: \quad 2 \quad \text{W (Tamb=25°C)}$$

Collector current

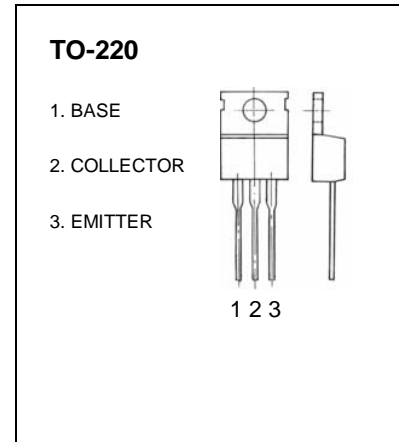
$$I_{CM}: \quad -6 \quad \text{A}$$

Collector-base voltage

$$V_{(BR)CBO}: \quad \begin{array}{ll} \text{TIP42A:} & -60 \quad \text{V} \\ \text{TIP42B:} & -80 \quad \text{V} \\ \text{TIP42C:} & -100 \quad \text{V} \end{array}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: \quad -55^\circ\text{C to } +150^\circ\text{C}$$



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	42A	$I_C = -1\text{mA}, I_E = 0$	-60		V
	42B		-80		
	42C		-100		
Collector-emitter breakdown voltage	42A	$I_C = -30\text{mA}, I_B = 0$	-60		V
	42B		-80		
	42C		-100		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1\text{mA}, I_C = 0$	-5		V
Collector cut-off current	42A	$V_{CB} = -60\text{V}, I_E = 0$ $V_{CB} = -80\text{V}, I_E = 0$ $V_{CB} = -100\text{V}, I_E = 0$		-0.4	mA
	42B				
	42C				
Collector cut-off current	42A	$V_{CE} = -30\text{V}, I_B = 0$ $V_{CE} = -30\text{V}, I_B = 0$ $V_{CE} = -60\text{V}, I_B = 0$		-0.7	mA
	42B				
	42C				
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$		-1	mA
DC current gain	$h_{FE(1)}$	$V_{CE} = -4\text{V}, I_C = -0.3\text{A}$	30		
	$h_{FE(2)}$	$V_{CE} = -4\text{V}, I_C = -3\text{A}$	15	75	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -6\text{A}, I_B = -0.6\text{A}$		-1.5	V
Base-emitter voltage	$V_{BE(on)}$	$V_{CE} = -4\text{V}, I_C = -6\text{A}$		-2	V
Transition frequency	f_T	$V_{CE} = -10\text{V}, I_C = -0.5\text{A}$ $f = 1\text{MHz}$	3		MHz