

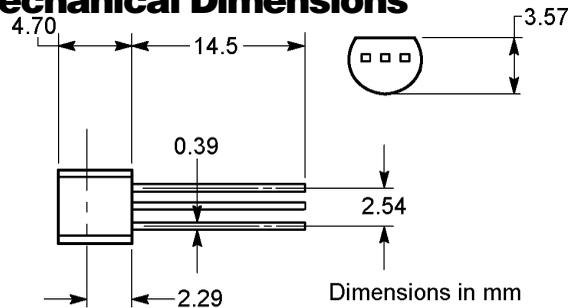
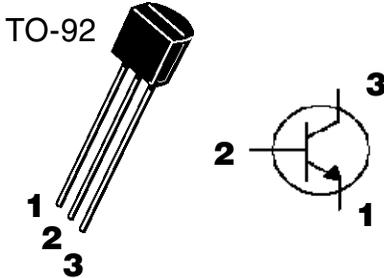


Description

NPN General Purpose Transistor

Mechanical Dimensions

2N2222A



Maximum Ratings

Ratings	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	40	V
Collector - Base Voltage	V_{CBO}	75	V
Emitter - Base Voltage	V_{EBO}	6.0	V
Collector Current (Continuous)	I_C	600	mA
Total Device Dissipation $T_A = 25^\circ\text{C}$	P_D	625	mW
Junction and Storage Temperature	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$

Electrical Characteristics

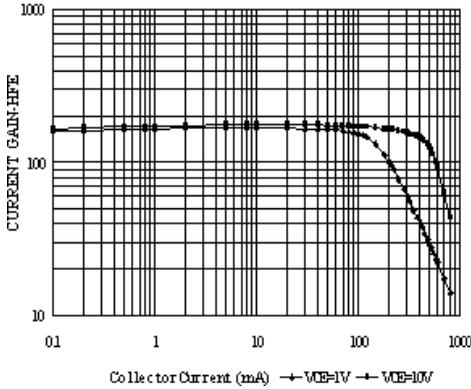
Characteristic	Symbol	Min	Max	Unit
Collector - Emitter Breakdown Voltage (Note 3) ($I_C = 10\text{mA}$)	$V_{BR(CEO)}$	40	---	V
Collector - Base Breakdown Voltage ($I_C = 10\mu\text{A}$)	$V_{BR(CBO)}$	75	---	V
Emitter - Base Breakdown Voltage ($I_E = 10\mu\text{A}$)	$V_{BR(EBO)}$	6.0	---	V
Base Cutoff Current ($V_{CB} = 60\text{V}$)	I_{CBO}	---	10	nA
Collector Cutoff Current ($V_{CE} = 60\text{V}, V_{EB(OFF)} = 3.0\text{V}$)	I_{CEX}	---	10	nA
Emitter Cutoff Current ($V_{EB} = 3.0\text{V}$)	I_{EBO}	---	10	nA
DC Current Gain ($I_C = 0.1\text{mA}, V_{CE} = 10\text{V}$) ($I_C = 1.0\text{mA}, V_{CE} = 10\text{V}$) ($I_C = 10\text{mA}, V_{CE} = 10\text{V}$) ($I_C = 150\text{mA}, V_{CE} = 10\text{V}$) ($I_C = 500\text{mA}, V_{CE} = 10\text{V}$)	H_{FE}	35 50 75 100 40	---	---
Collector - Emitter Saturation Voltage ($I_C = 150\text{mA}, I_B = 15\text{mA}$) ($I_C = 500\text{mA}, I_B = 50\text{mA}$)	$V_{CE(sat)}$	---	0.3 1.0	V
Base - Emitter Saturation Voltage ($I_C = 150\text{mA}, I_B = 15\text{mA}$) ($I_C = 500\text{mA}, I_B = 50\text{mA}$)	$V_{BE(sat)}$	---	1.2 2.0	V
Current - Gain - Bandwidth Product (Note 4) ($I_C = 20\text{mA}, V_{CB} = 20\text{V}, f = 100\text{MHz}$)	f_T	300	---	MHz

Classification of h_{FE4}

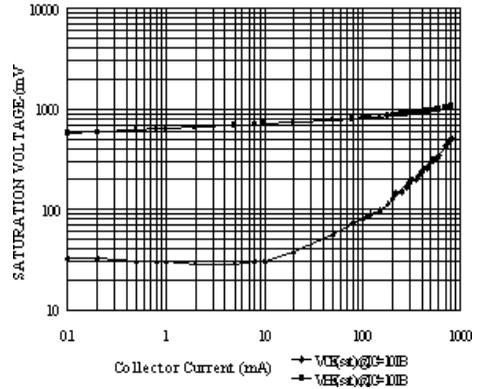
Rank	A	B
Range	100-210	190-300

2N2222A NPN General Purpose Transistor

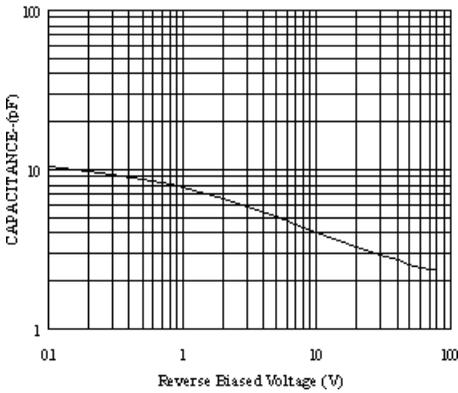
CURRENT GAIN VS. COLLECTOR CURRENT



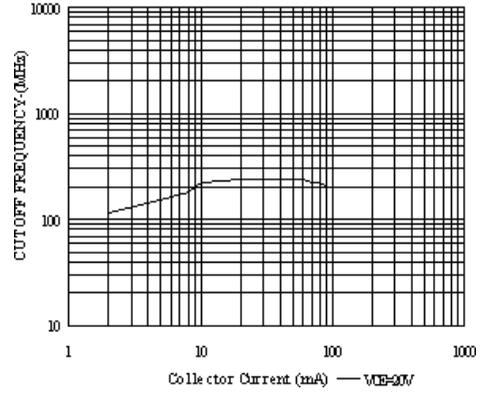
SATURATION VOLTAGE VS. COLLECTOR CURRENT



CAPACITANCE VS. REVERSE BIASED VOLTAGE



CUTOFF FREQUENCY VS. COLLECTOR CURRENT



SAFE OPERATING AREA

