

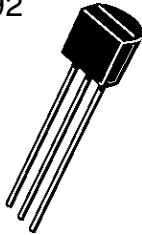


Description

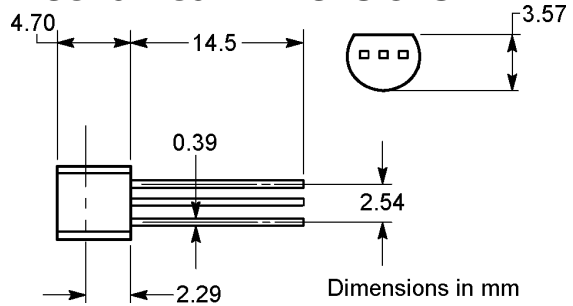
NPN Epitaxial Planar Transistor

FA8050

TO-92



Mechanical Dimensions



Dimensions in mm

Maximum Ratings

Ratings	Symbol	Value	Units
Collector - Emitter Voltage	V_{CE0}	25	V
Collector - Base Voltage	V_{CB0}	40	V
Emitter - Base Voltage	V_{EB0}	6.0	V
Collector Current (Continuous)	I_C	1.5	A
Base Current	I_B	500	mA
Total Device Dissipation $T_A = 25^\circ\text{C}$	P_D	1.0	W
Junction and Storage Temperature	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$

Electrical Characteristics @ 25°C

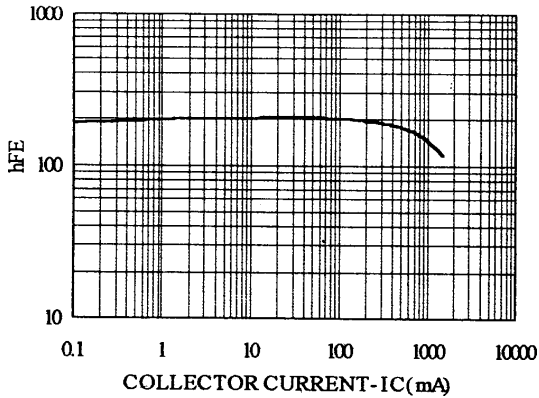
Characteristic	Symbol	Min	Max	Unit
Collector - Emitter Breakdown Voltage ($I_C = 2.0\text{mA}$)	$V_{BR(CEO)}$	25	---	V
Collector - Base Breakdown Voltage ($I_C = 100\mu\text{A}$)	$V_{BR(CBO)}$	40	---	V
Emitter - Base Breakdown Voltage ($I_E = 100\mu\text{A}$)	$V_{BR(EBO)}$	6.0	---	V
Collector Cutoff Current ($V_{CB} = 35\text{V}$)	I_{CBO}	---	0.1	μA
Emitter Cutoff Current ($V_{EB} = 6.0\text{V}$)	I_{EBO}	---	0.1	μA
DC Current Gain ($I_C = 5.0\text{mA}, V_{CE} = 1.0\text{V}$) ($I_C = 100\text{mA}, V_{CE} = 1.0\text{V}$) ($I_C = 800\text{mA}, V_{CE} = 1.0\text{V}$)	H_{FE}	45 85 40	---	---
Collector - Emitter Saturation Voltage ($I_C = 0.8\text{A}, I_B = 80\text{mA}$)	$V_{CE(sat)}$	---	0.5	V
Base - Emitter Saturation Voltage ($I_C = 0.8\text{A}, I_B = 80\text{mA}$)	$V_{BE(sat)}$	---	1.2	V
Base - Emitter On Voltage ($V_{CE} = 1.0\text{V}, I_C = 10\text{mA}$)	$V_{BE(ON)}$	---	1.0	V
Current - Gain - Bandwidth Product ($I_C = 50\text{mA}, V_{CE} = 10\text{V}$)	f_T	100	---	MHz

Classification of h_{FE2}

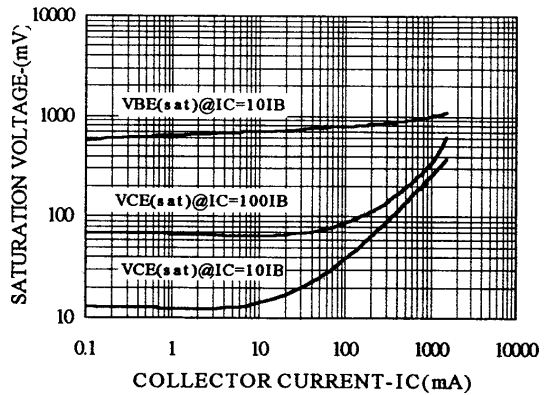
Rank	B	C	D	E
Range	85-160	120-200	160-300	250-500

FA8050 NPN Epitaxial Planar Transistor

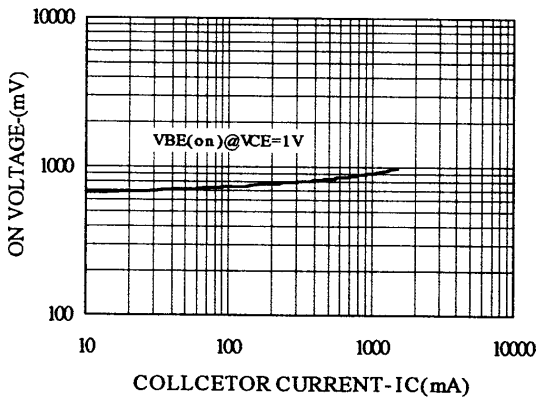
CURRENT GAIN VS. COLLECTOR CURRENT



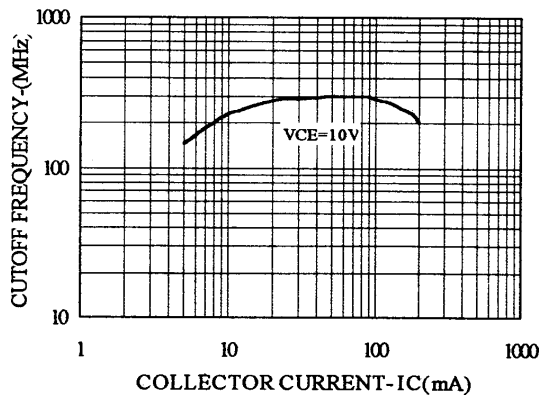
SATURATION VOLTAGE VS. COLLECTOR CURRENT



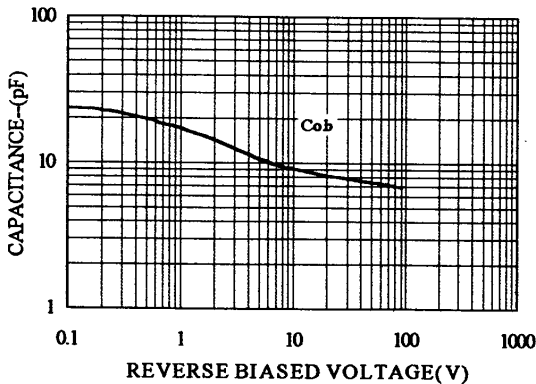
ON VOLTAGE VS. COLLECTOR CURRENT



CUTOFF FREQUENCY VS. COLLECTOR CURRENT



CAPACITANCE VS. REVERSE-BIASED VOLTAGE



SAFE OPERATING AREA

