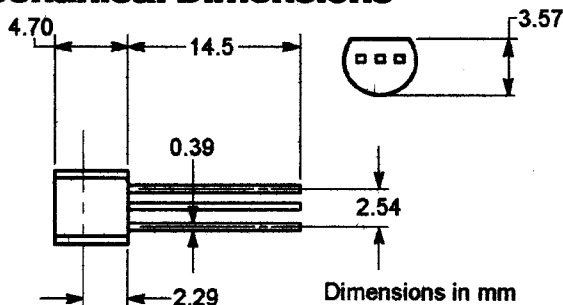
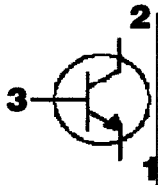
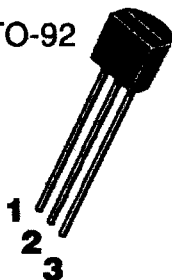




2SC1815

TO-92



Dimensions in mm

Maximum Ratings

Rating	Symbol	Value	Units
Collector - Emitter Voltage	V_{CE0}	50	V
Collector - Base Voltage	V_{CBO}	50	V
Emitter - Base Voltage	V_{EBO}	5.0	V
Collector Current (Continuous)	I_C	150	mA
Total Device Dissipation FR-5 Board (Note1) $T_A = 25^\circ\text{C}$	P_D	400	mW
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 ($I_C = 1.0\text{mA}$)	$V_{BR(CEO)}$	50	---	V
Collector - Base Breakdown Voltage ($I_C = 0.1\text{mA}$)	$V_{BR(CBO)}$	50	---	V
Emitter - Base Breakdown Voltage ($I_E = 0.01\text{mA}$)	$V_{BR(EBO)}$	5.0	---	V
Collector Cutoff Current ($V_{CB} = 60\text{V}$)	I_{CBO}	---	0.1	μA
Emitter Cutoff Current ($V_{EB} = 5.0\text{V}$)	I_{EBO}	---	0.1	μA
DC Current Gain ($I_C = 2.0\text{mA}, V_{CE} = 6.0\text{V}$)* ($I_C = 150\text{mA}, V_{CE} = 6.0\text{V}$)	H_{FE}	120 25	700 ---	---
Collector - Emitter Saturation Voltage ($I_C = 100\text{mA}, I_B = 10\text{mA}$)	$V_{CE(sat)}$	---	0.25	Vdc
Base - Emitter Saturation Voltage ($I_C = 100\text{mA}, I_B = 10\text{mA}$)	$V_{BE(sat)}$	---	1.0	Vdc
Current - Gain - Bandwidth Product ($I_C = 1.0\text{mA}, V_{CE} = 10\text{V}, f = 100\text{MHz}$)	f_T	80	---	MHz
Output Capacitance ($V_{CB} = 10\text{V}, f = 1.0\text{MHz}$)	C_{ob}	---	3.5	pF

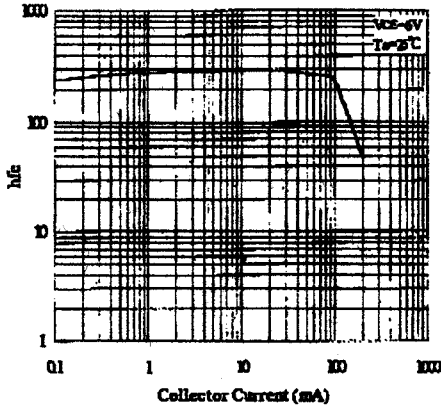
* Classification of h_{FE}

Rank	Y	GR	BL
Range	120-240	200-400	350-700

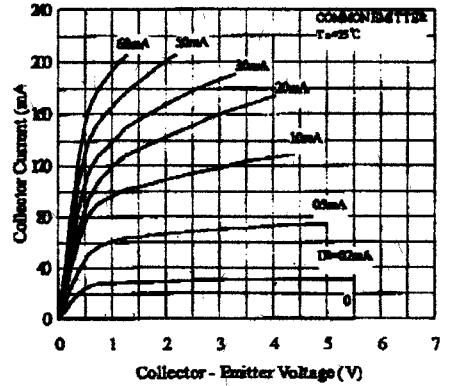


2SC1815 NPN Epitaxial Planar Transistor

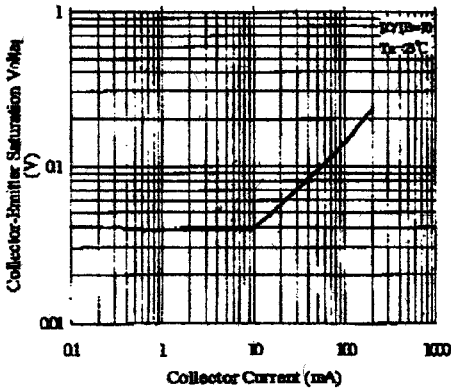
DC CURRENT GAIN



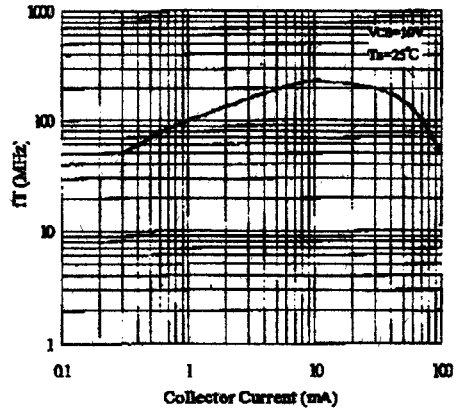
COLLECTOR - EMITTER VOLTAGE VS COLLECTOR CURRENT



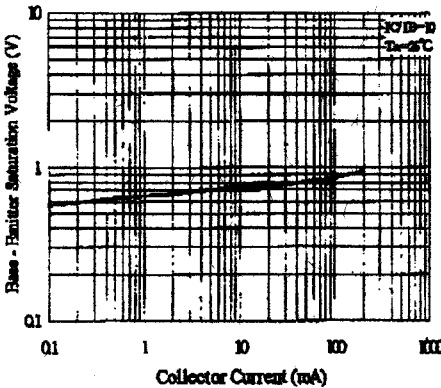
COLLECTOR - EMITTER SATURATION VOLTAGE VS COLLECTOR CURRENT



CURRENT GAIN-BANDWIDTH PRODUCT



BASE - EMITTER SATURATION VOLTAGE VS COLLECTOR CURRENT



COLLECTOR POWER DISSIPATION VS AMBIENT TEMPERATURE

