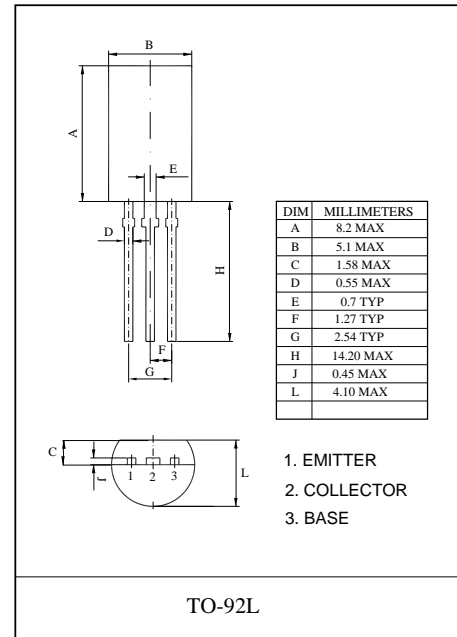


**FTC2330** TRANSISTOR (NPN)

**FEATURES**

- High Collector-Emitter Breakdown Voltage
- Low Transition Frequency



**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	300	V
V <sub>CEO</sub>	Collector-Emitter Voltage	300	V
V <sub>EBO</sub>	Emitter-Base Voltage	7	V
I <sub>C</sub>	Collector Current	0.1	A
P <sub>C</sub>	Collector Power Dissipation	0.75	W
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	167	°C/W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	300			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =5mA, I <sub>B</sub> =0	300			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =100μA, I <sub>C</sub> =0	7			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =200V, I <sub>E</sub> =0			0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =6V, I <sub>C</sub> =0			0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA	40		240	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA			0.5	V
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		4		pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =30V, I <sub>C</sub> =10mA		50		MHz

**CLASSIFICATION OF h<sub>FE</sub>**

RANK	R	O	Y
RANGE	40-80	70-140	120-240

## Typical Characteristics

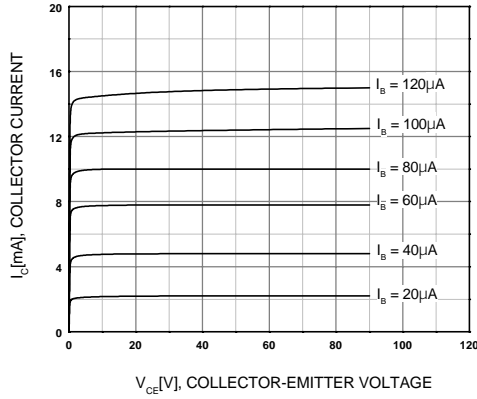


Figure 1. Static Characteristic

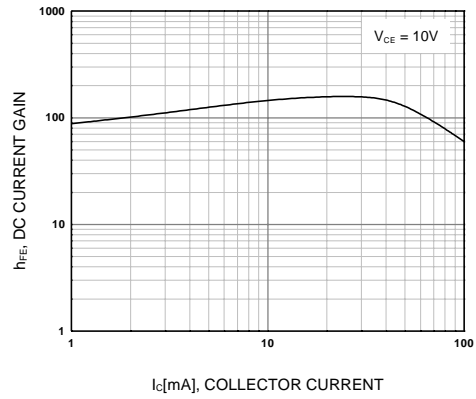


Figure 2. DC current Gain

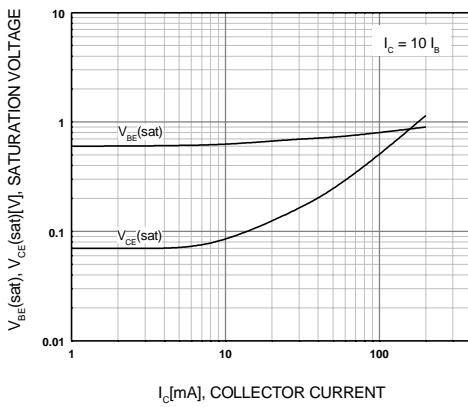


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

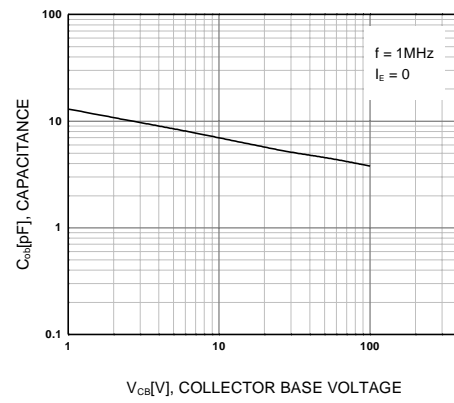


Figure 4. Collector Output Capacitance

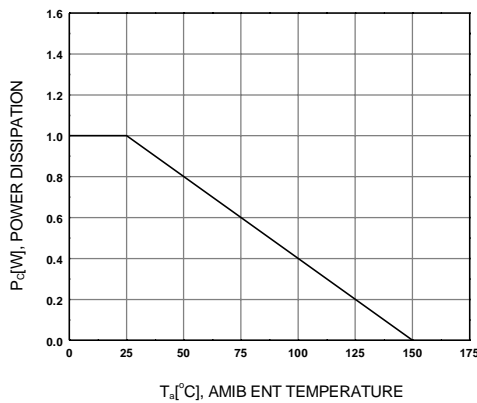


Figure 5. Power Derating