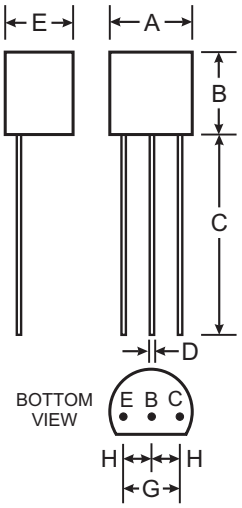
BC337

NPN EPITAXIAL PLANAR TRANSISTOR

Features

- Suitable for AF Driver and Low Power Output Stage Applications
- Available in Sub-Groups Graded by DC Current Gain
- 625mW Power Dissipation



TO-92		
Dim	**Min**	**Max**
A	4.45	4.70
B	4.46	4.70
C	12.7	—
D	0.41	0.63
E	3.43	3.68
G	2.42	2.67
H	1.14	1.40
All Dimensions in mm		

Mechanical Data

- Case: TO-92, Plastic
- Leads: Solderable per MIL-STD-202, Method 208
- Pin Connections: See Diagram
- Weight: 0.18 grams (approx.)

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	800	mA
Peak Collector Current	I_{CM}	1.0	A
Base Current	I_B	100	mA
Power Dissipation (Note 1)	P_d	625	mW
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Electrical Characteristics 25°C unless otherwise specified

Characteristic		Symbol	Min	Typ	Max	Unit	Test Condition
DC Current Gain	Current Gain Group 16 25 40 Current Gain Group 16 25 40	h_{FE}	100 160 250 60 100 170	160 250 400 130 200 320	250 400 630 — — —	—	V_{CE} = 1.0V, I_C = 100mA V_{CE} = 1.0V, I_C = 300mA
Thermal Resistance, Junction to Ambient Air		$R_{\theta JA}$	—	—	200	K/W	Note 1
Collector-Emitter Cutoff Current		I_{CES}	—	2.0 —	100 10	nA µA	V_{CE} = 45V V_{CE} = 45V, T_A = 125°C
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$ $V_{(BR)CES}$	45 50	—	—	V	I_C = 10mA I_C = 0.1mA
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	5.0	—	—	V	I_E = 0.1mA
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	—	—	0.7	V	I_C = 500mA, I_B = 50mA
Base-Emitter Voltage		V_{BE}	—	—	1.2	V	V_{CE} = 1.0V, I_C = 300mA
Gain Bandwidth Product		f_T	—	100	—	MHz	V_{CE} = 5V, I_C = 10mA, f = 50MHz
Collector-Base Capacitance		C_{CBO}	—	12	—	pF	V_{CB} = 10V, f = 1.0MHz

Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 2.0mm from case.

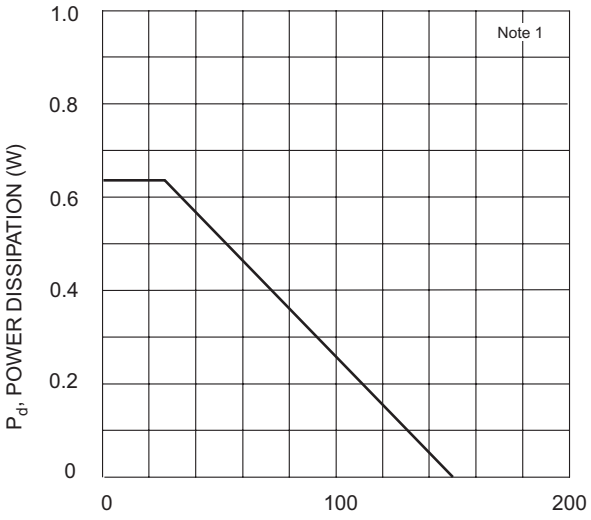


Fig. 1, Power Dissipation Derating

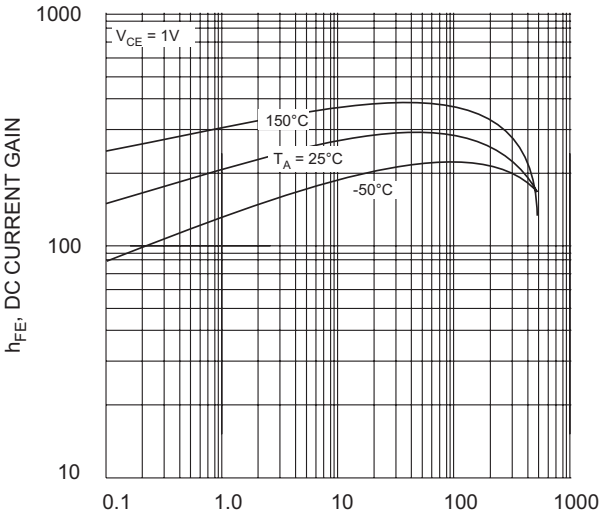


Fig. 2, DC Current Gain vs Collector Current

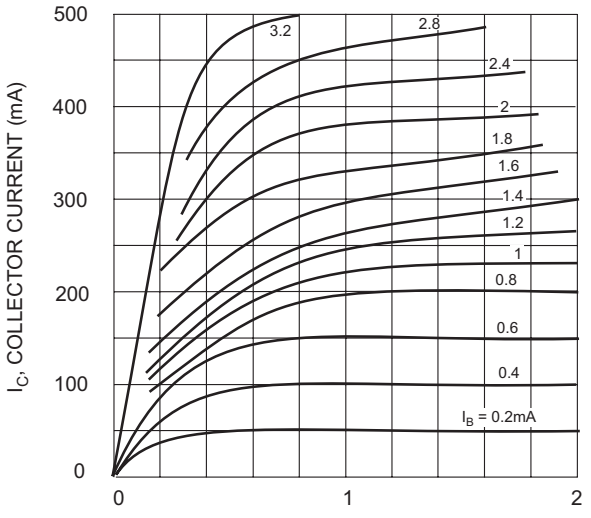


Fig. 3, Typical Emitter-Collector Characteristics

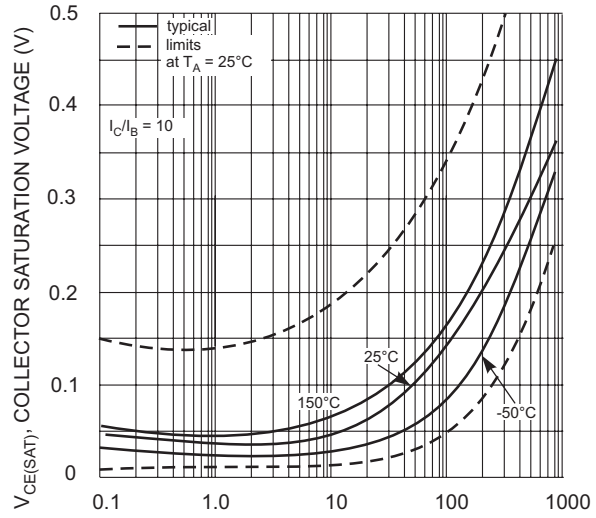


Fig. 4, Collector Sat. Voltage vs Collector Current

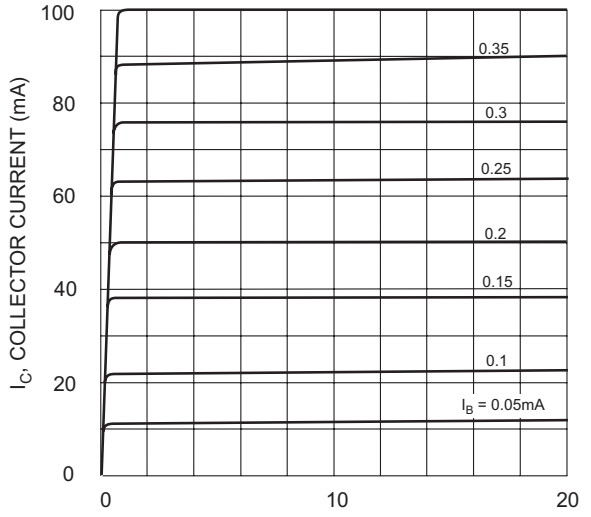


Fig. 5, Typical Emitter-Collector Characteristics

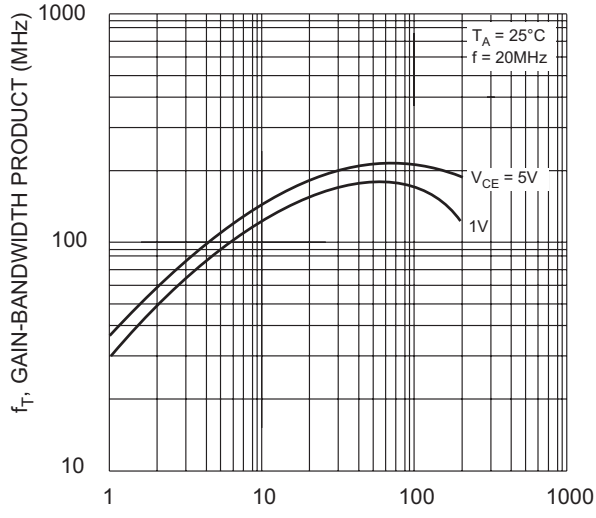


Fig. 6, Gain-Bandwidth Product vs Collector Current