



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

BC237

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

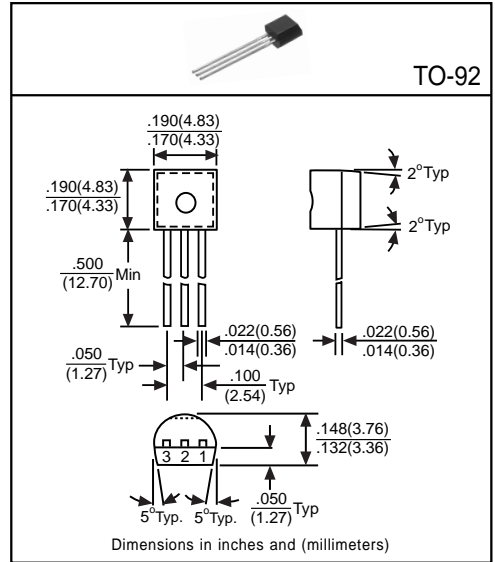
Designed for use in driver stage of audio amplifiers.

Pinning

- 1 = Collector
- 2 = Base
- 3 = Emitter

Absolute Maximum Ratings(T<sub>A</sub>=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V <sub>CES</sub>	50	V
	V <sub>CEO</sub>	45	V
Emitter-Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	I <sub>C</sub>	100	mA
Total Power Dissipation	P <sub>D</sub>	350	mW
Junction Temperature	T <sub>J</sub>	+150	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C



Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Emitter Breakdown Voltage	BV <sub>CES</sub>	50	-	-	V	I <sub>C</sub> =100μA, V <sub>EB</sub> =0
	BV <sub>CEO</sub>	45	-	-	V	I <sub>C</sub> =2mA, I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	6	-	-	V	I <sub>E</sub> =100μA, I <sub>C</sub> =0
Collector Cutoff Current	I <sub>CES</sub>	-	-	15	nA	V <sub>CB</sub> =50V, I <sub>E</sub> =0
Emitter Cutoff Current	I <sub>EBO</sub>	-	-	100	nA	V <sub>EB</sub> =4V, I <sub>C</sub> =0
Collector-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>CE(sat)1</sub>	-	-	0.2	V	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA
	V <sub>CE(sat)2</sub>	-	-	0.6	V	I <sub>C</sub> =100mA, I <sub>B</sub> =5mA
Base-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>BE(sat)1</sub>	-	-	1.05	V	I <sub>C</sub> =100mA, I <sub>B</sub> =5mA
	V <sub>BE(sat)2</sub>	-	-	0.83	V	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA
Base-Emitter On Voltage <sup>(1)</sup>	V <sub>BE(on)</sub>	0.55	-	0.7	V	I <sub>C</sub> =2mA, V <sub>CE</sub> =5V
DC Current Gain <sup>(1)</sup>	h <sub>FE1</sub>	50	-	-	-	I <sub>C</sub> =10μA, V <sub>CE</sub> =5V
	h <sub>FE2</sub>	120	-	800	-	I <sub>C</sub> =2mA, V <sub>CE</sub> =5V
	h <sub>FE3</sub>	60	-	-	-	I <sub>C</sub> =100mA, V <sub>CE</sub> =5V
Transition Frequency	f <sub>T</sub>	150	-	-	MHz	I <sub>C</sub> =10mA, V <sub>CE</sub> =5V, f=100MHz
Output Capacitance	C <sub>ob</sub>	-	-	4.5	pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz

(1)Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Classification of h<sub>FE2</sub>

Rank	A	B	C
Range	120~220	180~460	300~800