



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

DC8050

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

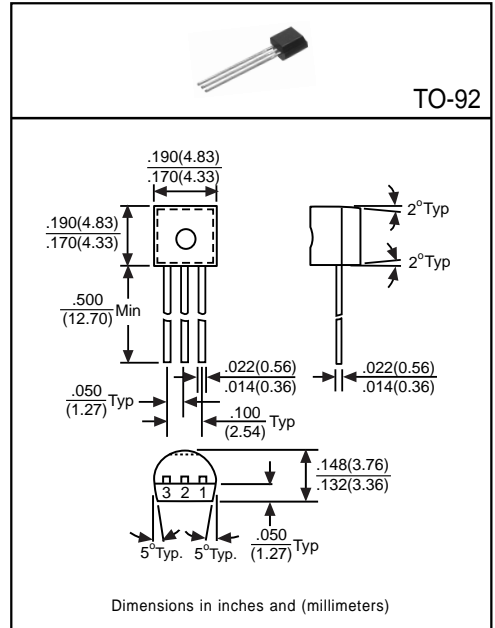
Designed for use in 2W output amplifier of portable radios in class B push-pull operation.

Pinning

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

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

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	25	V
Emitter-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current	I <sub>C</sub>	1.5	A
Base Current	I <sub>B</sub>	500	mA
Total Power Dissipation	P <sub>D</sub>	1	W
Total Power Dissipation(T <sub>C</sub> =25°C)	P <sub>D</sub>	2	W
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-Base Breakdown Voltage	BV <sub>CB0</sub>	40	-	-	V	I <sub>C</sub> =100μA
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	25	-	-	V	I <sub>C</sub> =2mA
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	6	-	-	V	I <sub>E</sub> =100μA
Collector Cutoff Current	I <sub>CBO</sub>	-	-	0.1	μA	V <sub>CB</sub> =35V
Emitter Cutoff Current	I <sub>EBO</sub>	-	-	0.1	μA	V <sub>EB</sub> =6V
Collector-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>CE(sat)</sub>	-	-	0.5	V	I <sub>C</sub> =0.8A, I <sub>B</sub> =80mA
Base-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>BE(sat)</sub>	-	-	1.2	V	I <sub>C</sub> =0.8A, I <sub>B</sub> =80mA
Base-Emitter On Voltage <sup>(1)</sup>	V <sub>BE(on)</sub>	-	-	1	V	I <sub>C</sub> =10mA, V <sub>CE</sub> =1V
DC Current Gain <sup>(1)</sup>	hFE1	45	-	-	-	I <sub>C</sub> =5mA, V <sub>CE</sub> =1V
	hFE2	85	-	500	-	I <sub>C</sub> =100mA, V <sub>CE</sub> =1V
	hFE3	40	-	-	-	I <sub>C</sub> =800mA, V <sub>CE</sub> =1V
Transition Frequency	f <sub>T</sub>	100	-	-	MHz	I <sub>C</sub> =50mA, V <sub>CE</sub> =10V

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

Classification of hFE2

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