



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

BU407

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

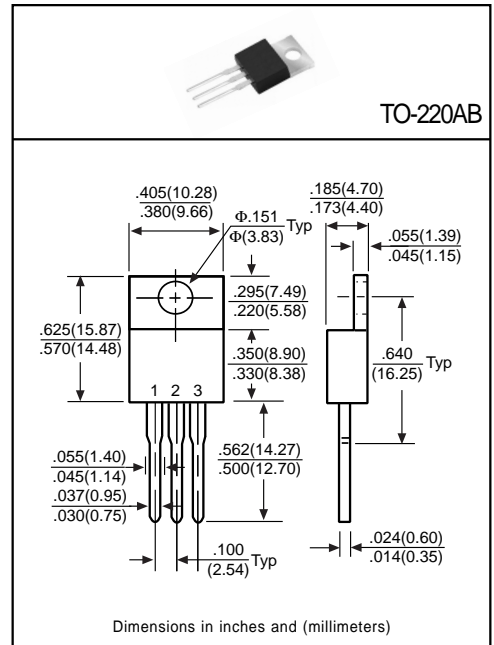
Designed for use in TV horizontal output and switching applications.

Pinning

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

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V <sub>CEO</sub>	150	V
Emitter-Base Voltage	V <sub>EBO</sub>	6	V
Collector Current	I <sub>C</sub>	7	A
Base Current	I <sub>B</sub>	4	A
Total Power Dissipation (T <sub>C</sub> =25°C)	P <sub>D</sub>	60	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-Emitter Breakdown Voltage	BV <sub>CEO</sub>	150	-	-	V	I <sub>C</sub> =100mA, I <sub>B</sub> =0
Collector Cutoff Current	I <sub>CES</sub>	-	-	5	mA	V <sub>CE</sub> =400V
Emitter Cutoff Current	I <sub>EBO</sub>	-	-	1	mA	V <sub>EB</sub> =6V, I <sub>C</sub> =0
Collector-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>CE(sat)</sub>	-	-	1	V	I <sub>C</sub> =5A, I <sub>B</sub> =0.5A
Base-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>BE(sat)</sub>	-	-	1.2	V	I <sub>C</sub> =5A, I <sub>B</sub> =0.5A
DC Current Gain <sup>(1)</sup>	h <sub>FE1</sub>	25	-	-	-	I <sub>C</sub> =0.5A, V <sub>CE</sub> =5V
	h <sub>FE2</sub>	35	-	200	-	I <sub>C</sub> =2A, V <sub>CE</sub> =5V
	h <sub>FE3</sub>	10	-	-	-	I <sub>C</sub> =2A, V <sub>CE</sub> =5V
Transition Frequency	f <sub>T</sub>	10	-	-	MHz	I <sub>C</sub> =0.5A, V <sub>CE</sub> =10V, f=1MHz

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

Classification of h<sub>FE2</sub>

Rank	B	C	D
Range	35~85	75~125	115~200