



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

BC307

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

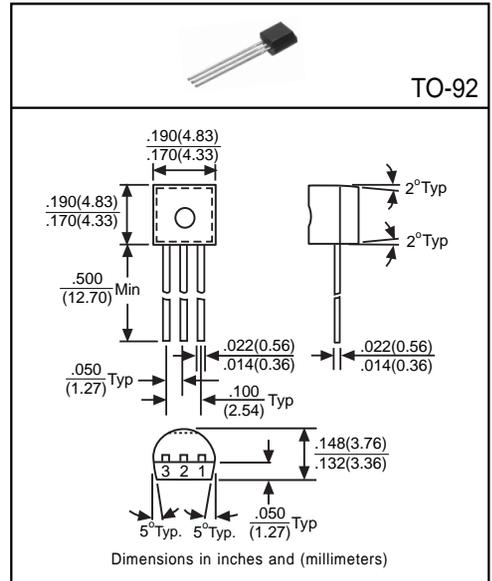
Designed for general purpose switching and amplifier applications.

Pinning

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

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V _{CES}	-50	V
	V _{CEO}	-45	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current	I _C	-100	mA
Total Power Dissipation	P _D	500	mW
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-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 _{CES}	-50	-	-	V	I _C =-10μA, V _{EB} =0
	BV _{CEO}	-45	-	-	V	I _C =-2mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EBO}	-5	-	-	V	I _E =-10μA, I _C =0
Collector Cutoff Current	I _{CES}	-	-2	-15	nA	V _{CE} =-45V, I _B =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)1}	-	-	-0.3	V	I _C =-10mA, I _B =-0.5mA
	V _{CE(sat)2}	-	-0.5	-0.6	V	I _C =-100mA, I _B =-5mA
Base-Emitter Saturation Voltage ⁽¹⁾	V _{BE(sat)1}	-	-0.7	-0.8	V	I _C =-10mA, I _B =-0.5mA
	V _{BE(sat)2}	-	-0.85	-1.1	V	I _C =-100mA, I _B =-5mA
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	-0.55	-0.62	-0.7	V	I _C =-2mA, V _{CE} =-5V
DC Current Gain ⁽¹⁾	h _{FE}	120	-	800	-	I _C =-2mA, V _{CE} =-5V
Transition Frequency	f _T	-	130	-	MHz	I _C =-10mA, V _{CE} =-5V, f=50MHz
Output Capacitance	C _{ob}	-	-	6	pF	V _{CB} =-10V, f=1MHz
Noise Figure	NF	-	-	10	dB	V _{CE} =-5V, I _C =-200μA, f=1KHz, R _S =2KΩ, B=200Hz

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

Classification of h_{FE}

Rank	A	B	C
Range	120~220	180~460	380~800