



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2N5401

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

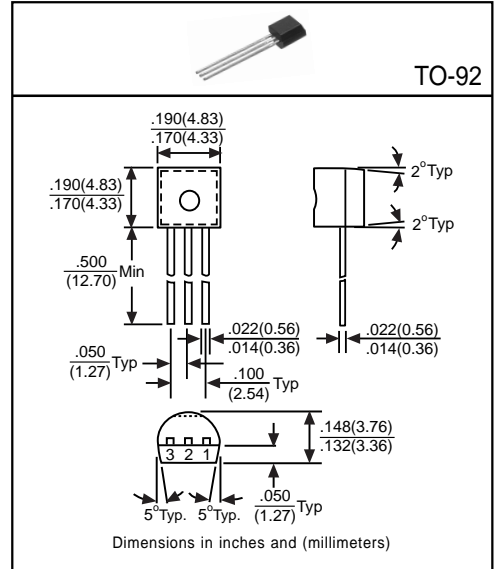
Designed for general purpose amplifier applications.

Pinning

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

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	-160	V
Collector-Emitter Voltage	V _{CE0}	-150	V
Emitter-Base Voltage	V _{EB0}	-5	V
Collector Current	I _C	-600	mA
Total Power Dissipation	P _D	625	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-Base Breakdown Voltage	BV _{CB0}	-160	-	-	V	I _C =-100μA, I _E =0
Collector-Emitter Breakdown Voltage	BV _{CE0}	-150	-	-	V	I _C =-1mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EB0}	-5	-	-	V	I _E =-10μA, I _C =0
Collector Cutoff Current	I _{CBO}	-	-	-50	nA	V _{CB} =-120V, I _E =0
Emitter Cutoff Current	I _{EBO}	-	-	-50	nA	V _{EB} =-3V, I _C =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)1}	-	-	-0.2	V	I _C =-10mA, I _B =-1mA
	V _{CE(sat)2}	-	-	-0.5	V	I _C =-50mA, I _B =-5mA
Base-Emitter Saturation Voltage ⁽¹⁾	V _{BE(sat)1}	-	-	-1	V	I _C =-10mA, I _B =-1mA
	V _{BE(sat)2}	-	-	-1	V	I _C =-50mA, I _B =-5mA
DC Current Gain ⁽¹⁾	h _{FE1}	50	-	-	-	I _C =-1mA, V _{CE} =-5V
	h _{FE2}	80	-	400	-	I _C =-10mA, V _{CE} =-5V
	h _{FE3}	50	-	-	-	I _C =-50mA, V _{CE} =-5V
Transition Frequency	f _T	100	-	300	MHz	I _C =-10mA, V _{CE} =-10V, f=100MHz
Output Capacitance	C _{ob}	-	-	6	pF	V _{CB} =-10V, f=1MHz, I _E =0

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

Classification of h_{FE2}

Rank	A	B	C
Range	80~200	100~240	160~400