



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2SC1959

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

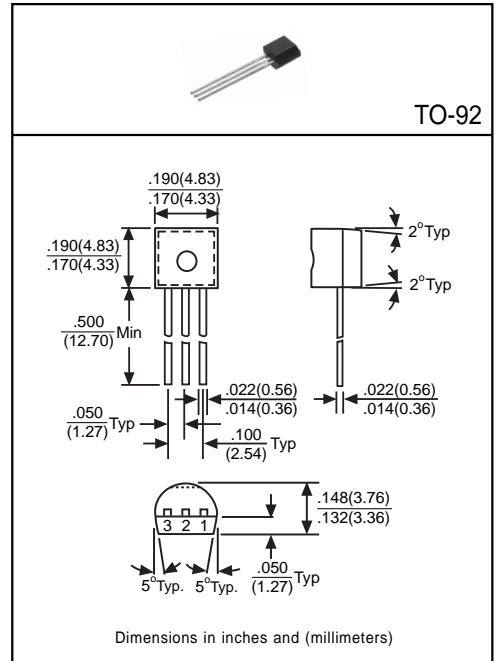
Designed for audio frequency low-power amplifier applications.

Pinning

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

Absolute Maximum Ratings (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	35	V
Collector-Emitter Voltage	V _{CE0}	30	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _C	500	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-Base Breakdown Voltage	BV _{CB0}	35	-	-	V	I _C =100μA, I _E =0
Collector-Emitter Breakdown Voltage	BV _{CE0}	30	-	-	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}	-	-	0.1	μA	V _{CB} =35V, I _E =0
Emitter Cutoff Current	I _{EBO}	-	-	0.1	μA	V _{EB} =5V, I _C =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	-	0.25	V	I _C =100mA, I _B =10mA
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	-	-	1	V	I _C =100mA, V _{CE} =1V
DC Current Gain ⁽¹⁾	h _{FE1}	120	-	240	-	I _C =100mA, V _{CE} =1V
	h _{FE2}	40	-	-	-	I _C =400mA, V _{CE} =6V
Transition Frequency	f _T	-	300	-	MHz	I _C =20mA, V _{CE} =6V
Output Capacitance	C _{ob}	-	7	-	pF	V _{CB} =6V, f=1MHz, I _E =0

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