



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2SC1674

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

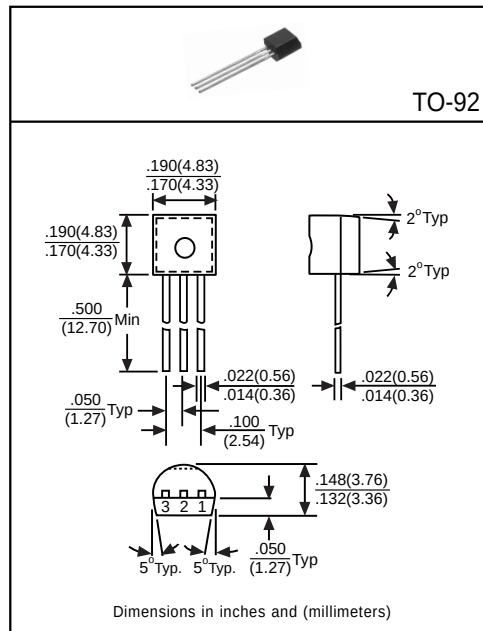
Designed for TV PIF, FM tuner RF amplifier, mixer, and oscillator applications.

Pinning

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

Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	30	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	20	mA
Total Power Dissipation	P_D	150	mW
Junction Temperature	T_J	+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$



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}	30	-	-	V	$I_C=10\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	BV_{CEO}	20	-	-	V	$I_C=5\text{mA}$, $I_B=0$
Emitter-Base Breakdown Voltage	BV_{EBO}	4	-	-	V	$I_E=10\mu\text{A}$, $I_C=0$
Collector Cutoff Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=30\text{V}$, $I_E=0$
Emitter Cutoff Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=4\text{V}$, $I_C=0$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)}$	-	0.1	0.3	V	$I_C=10\text{mA}$, $I_B=1\text{mA}$
Base-Emitter On Voltage ⁽¹⁾	$V_{BE(on)}$	-	0.72	-	V	$I_C=1\text{mA}$, $V_{CE}=6\text{V}$
DC Current Gain ⁽¹⁾	h_{FE}	40	-	240	-	$I_C=1\text{mA}$, $V_{CE}=6\text{V}$
Transition Frequency	f_T	400	600	-	MHz	$I_C=1\text{mA}$, $V_{CE}=6\text{V}$
Output Capacitance	C_{ob}	-	-	1.3	pF	$V_{CB}=6\text{V}$, $f=1\text{MHz}$, $I_E=0$

(1)Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

Classification of h_{FE}

Rank	R	O	Y
Range	40~80	70~140	120~240