



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2SA1015

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

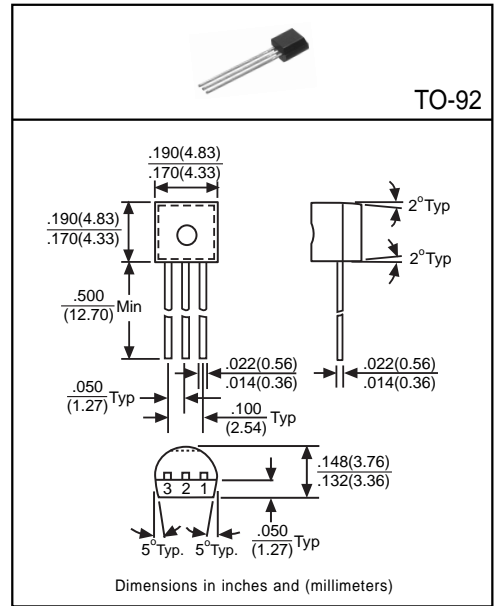
Designed for use in driver stage of AF amplifier general purpose amplification.

Pinning

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

Absolute Maximum Ratings (T<sub>A</sub>=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	-50	V
Collector-Emitter Voltage	V <sub>CE0</sub>	-50	V
Emitter-Base Voltage	V <sub>EB0</sub>	-5	V
Collector Current	I <sub>C</sub>	-150	mA
Total Power Dissipation	P <sub>D</sub>	400	mW
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-Base Breakdown Voltage	BV <sub>CB0</sub>	-50	-	-	V	I <sub>C</sub> =-100μA, I <sub>E</sub> =0
Collector-Emitter Breakdown Voltage	BV <sub>CE0</sub>	-50	-	-	V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>EB0</sub>	-5	-	-	V	I <sub>E</sub> =-10μA, I <sub>C</sub> =0
Collector Cutoff Current	I <sub>CB0</sub>	-	-	-0.1	μA	V <sub>CB</sub> =-50V, I <sub>E</sub> =0
Emitter Cutoff Current	I <sub>EB0</sub>	-	-	-0.1	μA	V <sub>EB</sub> =-5V, I <sub>C</sub> =0
Collector-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>CE(sat)</sub>	-	-	-0.3	V	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA
Base-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>BE(sat)</sub>	-	-	-1.1	V	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA
DC Current Gain <sup>(1)</sup>	h <sub>FE1</sub>	70	-	700	-	I <sub>C</sub> =-2mA, V <sub>CE</sub> =-6V
	h <sub>FE2</sub>	25	-	-	-	I <sub>C</sub> =-150mA, V <sub>CE</sub> =-6V
Transition Frequency	f <sub>T</sub>	80	-	-	MHz	I <sub>C</sub> =-1mA, V <sub>CE</sub> =-10V, f=100MHz
Output Capacitance	C <sub>ob</sub>	-	-	7	pF	V <sub>CB</sub> =-10V, f=1MHz, I <sub>E</sub> =0

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

Classification of h<sub>FE1</sub>

Rank	O	Y	GR	BL
Range	70~140	120~240	200~400	350~700