



DC COMPONENTS CO., LTD.  
DISCRETE SEMICONDUCTORS

2SA1300

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

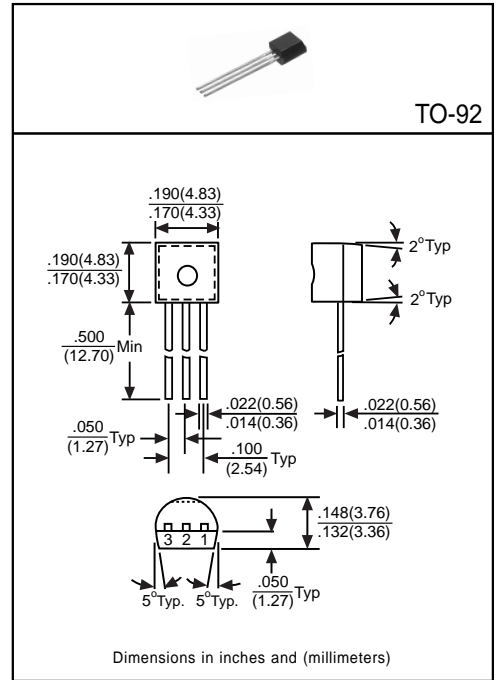
Designed for use Strobe flash and medium power amplifier applications.

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>	-20	V
Collector-Emitter Voltage	V <sub>CES</sub>	-20	V
	V <sub>CEO</sub>	-10	V
Emitter-Base Voltage	V <sub>EBO</sub>	-6	V
Collector Current (DC)	I <sub>C</sub>	-2	A
Collector Current (pulse)	I <sub>C</sub>	-5	A
Base Current	I <sub>B</sub>	-2	A
Total Power Dissipation	P <sub>D</sub>	750	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-Emitter Breakdown Voltage	BV <sub>CEO</sub>	-10	-	-	V	I <sub>C</sub> =-10mA, I <sub>B</sub> =0
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	-6	-	-	V	I <sub>E</sub> =-1mA, I <sub>C</sub> =0
Collector Cutoff Current	I <sub>CBO</sub>	-	-	-100	nA	V <sub>CE</sub> =-20V, I <sub>E</sub> =0
Emitter Cutoff Current	I <sub>EBO</sub>	-	-	-100	nA	V <sub>BE</sub> =-6V, I <sub>C</sub> =0
Collector-Emitter Saturation Voltage <sup>(1)</sup>	V <sub>CE(sat)</sub>	-	-0.3	-0.5	V	I <sub>C</sub> =-2A, I <sub>B</sub> =-50mA
Base-Emitter Voltage	V <sub>BE</sub>	-	-0.83	-1.5	V	I <sub>C</sub> =-2A, V <sub>CE</sub> =-1V
DC Current Gain <sup>(1)</sup>	h <sub>FE1</sub>	140	-	1000	-	I <sub>C</sub> =-0.5A, V <sub>CE</sub> =-1V
	h <sub>FE2</sub>	60	-	-	-	I <sub>C</sub> =-2A, V <sub>CE</sub> =-1V
Transition Frequency	f <sub>T</sub>	-	140	-	MHz	I <sub>C</sub> =-0.5A, V <sub>CE</sub> =-1V
Output Capacitance	C <sub>ob</sub>	-	50	-	pF	V <sub>CE</sub> =-10V, f=1KHz, I <sub>E</sub> =0

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

Classification of h<sub>FE1</sub>

Rank	Y	GR	BL	PE
Range	140~280	200~400	300~600	500~1000