
2SC4628

Silicon NPN Planar

HITACHI

ADE-208-1114 (Z)

1st. Edition

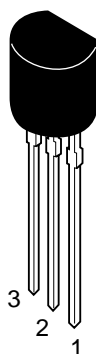
Mar. 2001

Application

High frequency amplifier

Outline

TO-92 (2)



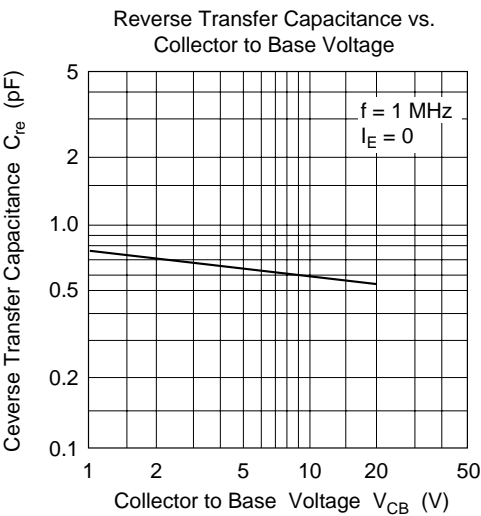
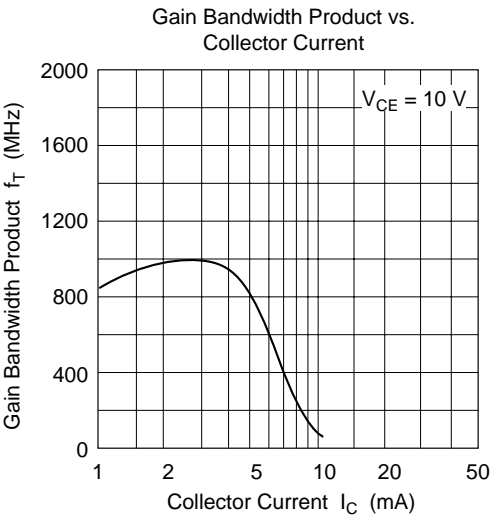
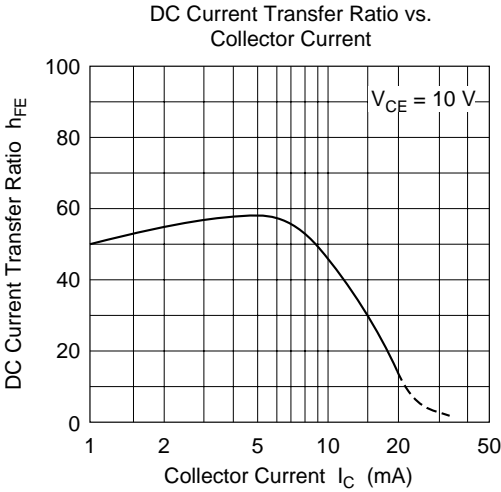
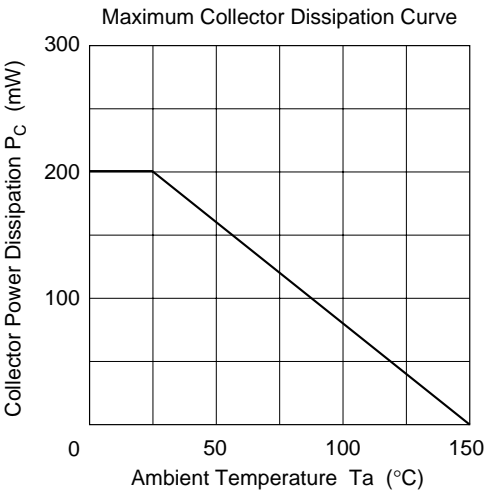
- 1. Emitter
- 2. Collector
- 3. Base

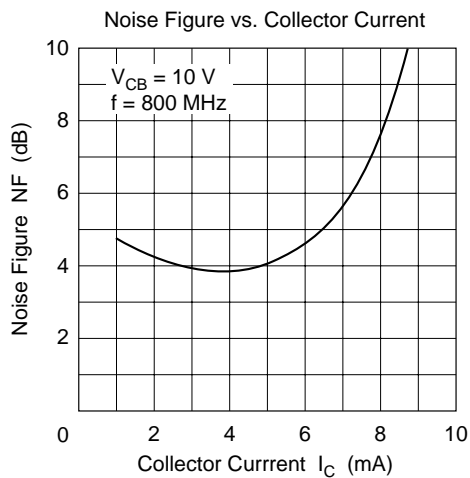
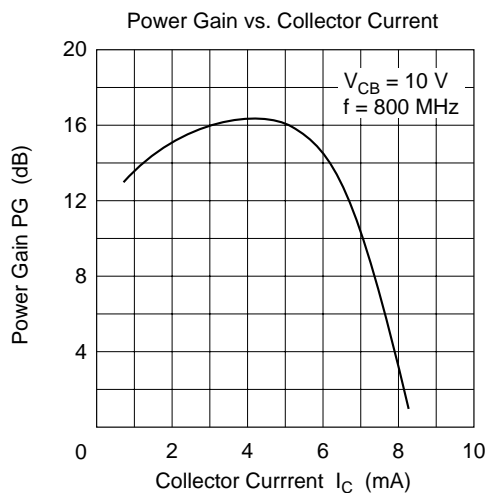
Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

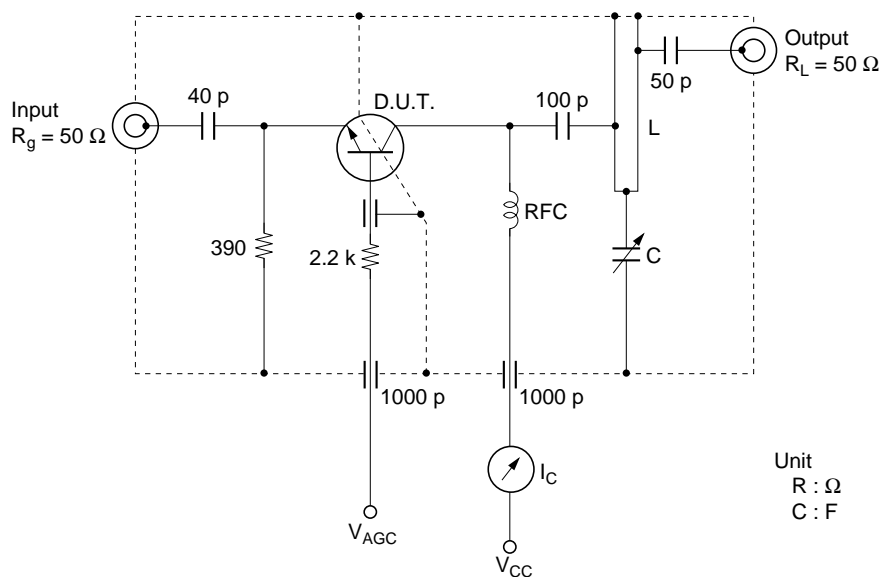
Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	20	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Emitter cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 3 \text{ V}, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	1	μA	$V_{CB} = 15 \text{ V}, I_E = 0$
DC current transfer ratio	h_{FE}	60	—	320		$V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$
Gain bandwidth product	f_T	600	—	—	MHz	$V_{CE} = 10 \text{ V}, I_C = 2 \text{ mA}$
Reverse transfer capacitance	C_{re}	—	—	0.9	pF	$V_{CB} = 10 \text{ V}, I_E = 0$, emitter common, $f = 1 \text{ MHz}$
Power gain	PG	10	—	—	dB	$V_{CB} = 10 \text{ V}, I_C = 2 \text{ mA}$, $f = 800 \text{ MHz}$
Noise figure	NF	—	—	7.0	dB	





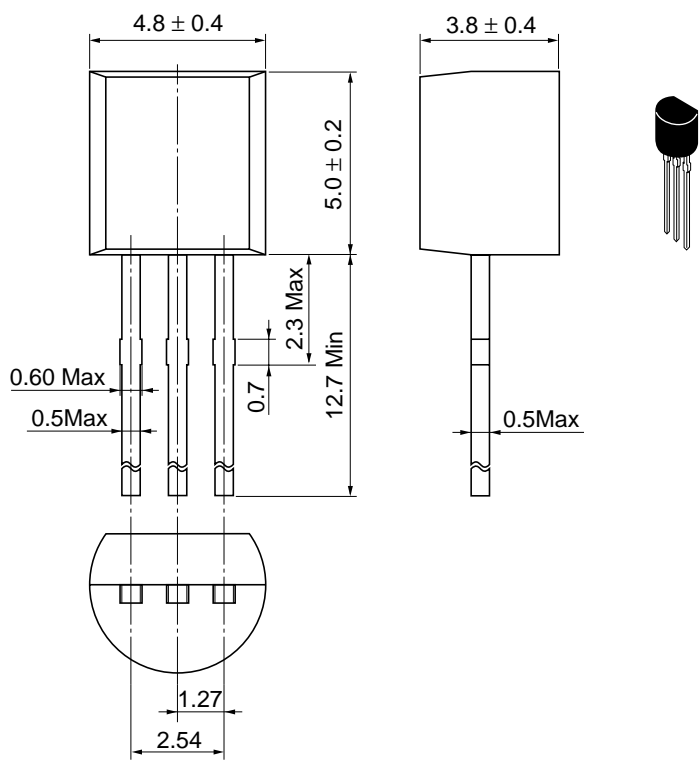
800 MHz Power Gain and Noise Figure Test Circuit



- C : 0.5 to 10 pF variable capacitance
 L : $\lambda/4$ silver plated copper $26 \times 3 \times 1$ (mm)
 Collector tap to ground distance: 7 mm
 Output tap to ground distance: 3 mm
 RFC : 0.17 mm copper wire, 2.4 mm inside dia, 16 turns
 -3 dB down bandwidth is 40 MHz

Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	TO-92 (2)
JEDEC	Conforms
EIAJ	Conforms
Mass (reference value)	0.25 g

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