

2SC4628

Silicon NPN Planar

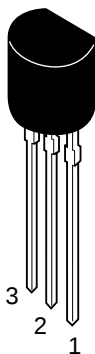
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Application

High frequency amplifier

Outline

TO-92 (2)



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

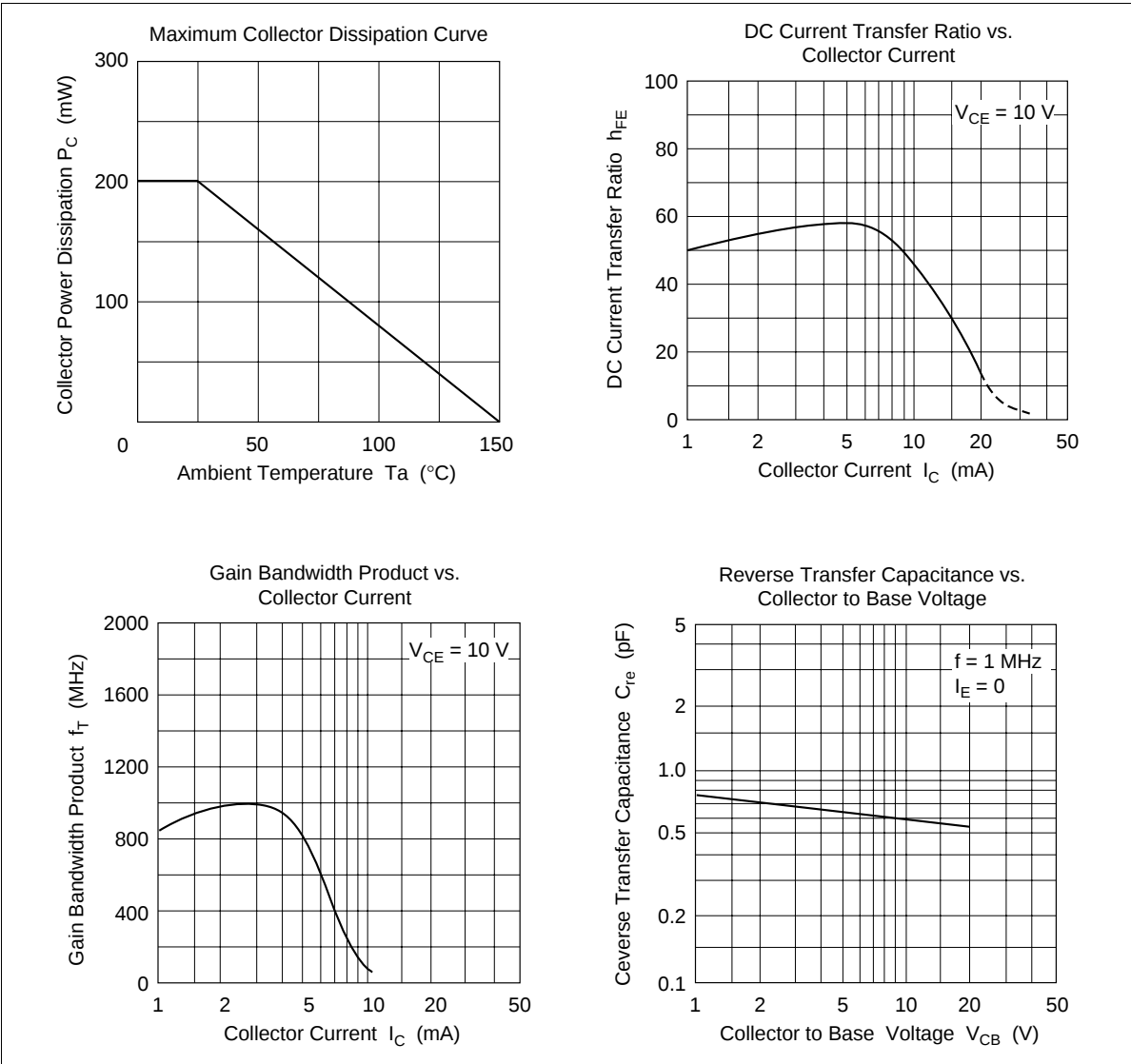
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Absolute Maximum Ratings (Ta = 25°C)

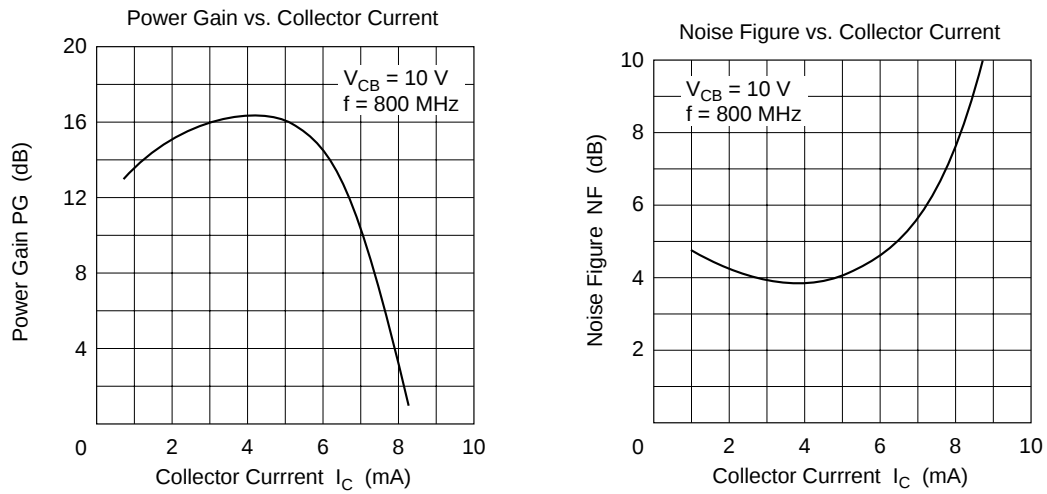
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3	V
Collector current	I_C	20	mA
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	°C
Storage temperature	Tstg	-55 to +150	°C

Electrical Characteristics (Ta = 25°C)

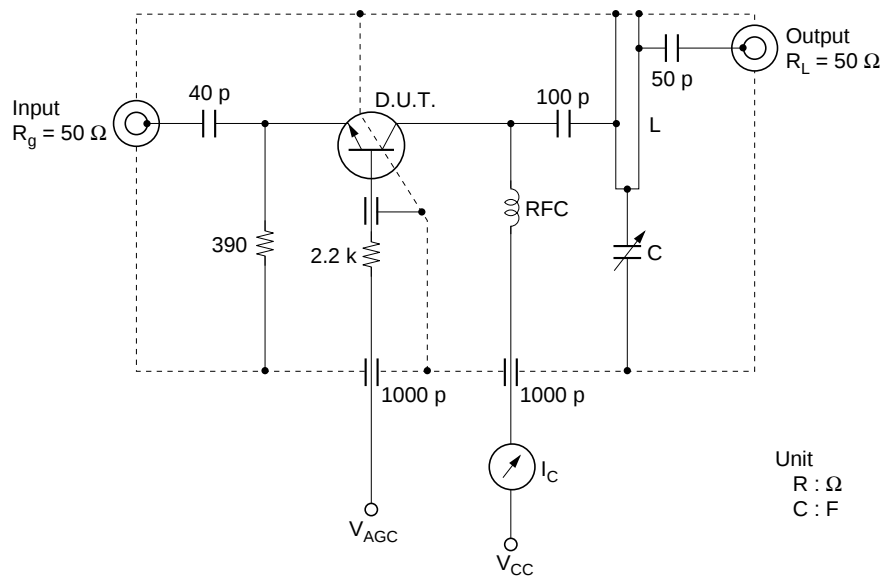
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	20	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	20	—	—	V	$I_C = 1 \text{ mA}, R_{BE} = \infty$
Emitter cutoff current	I_{EBO}	—	—	10	μA	$V_{EB} = 3 \text{ V}, I_C = 0$
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	Cre	—	—	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	



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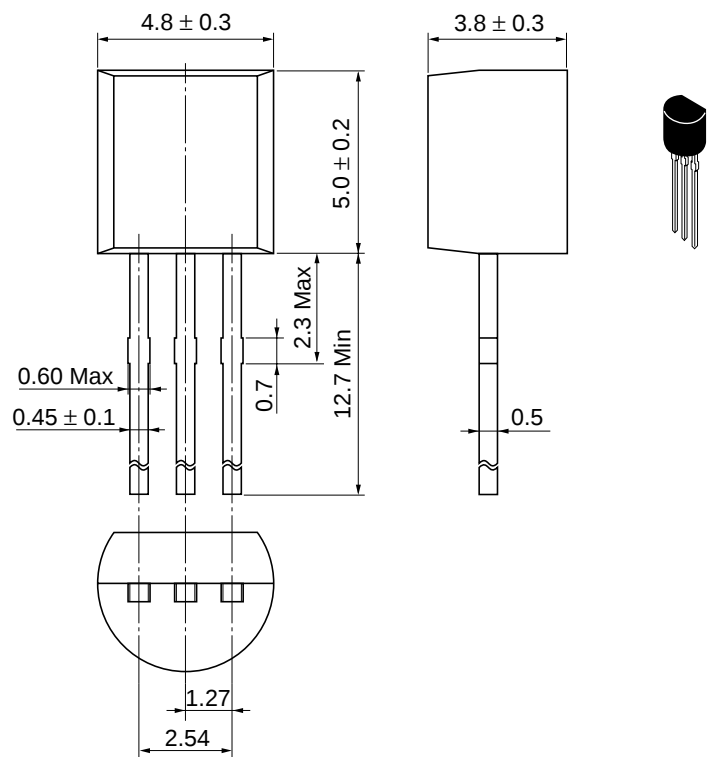


800 MHz Power Gain and Noise Figure Test Circuit



- 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

Unit: mm



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

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Hitachi, Ltd.

Semiconductor & Integrated Circuits.
Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100-0004, Japan
Tel: Tokyo (03) 3270-2111 Fax: (03) 3270-5109

URL North America : <http://semiconductor.hitachi.com/>
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For further information write to:

Hitachi Semiconductor
(America) Inc.
179 East Tasman Drive,
San Jose, CA 95134
Tel: <1> (408) 433-1990
Fax: <1> (408) 433-0223

Hitachi Europe GmbH
Electronic components Group
Dornacher StraÙe 3
D-85622 Feldkirchen, Munich
Germany
Tel: <49> (89) 9 9180-0
Fax: <49> (89) 9 29 30 00

Hitachi Europe Ltd.
Electronic Components Group.
Whitebrook Park
Lower Cookham Road
Maidenhead
Berkshire SL6 8YA, United Kingdom
Tel: <44> (1628) 585000
Fax: <44> (1628) 778322

Hitachi Asia Pte. Ltd.
16 Collyer Quay #20-00
Hitachi Tower
Singapore 049318
Tel: 535-2100
Fax: 535-1533

Hitachi Asia Ltd.
Taipei Branch Office
3F, Hung Kuo Building, No.167,
Tun-Hwa North Road, Taipei (105)
Tel: <886> (2) 2718-3666
Fax: <886> (2) 2718-8180

Hitachi Asia (Hong Kong) Ltd.
Group III (Electronic Components)
7/F., North Tower, World Finance Centre,
Harbour City, Canton Road, Tsim Sha Tsui,
Kowloon, Hong Kong
Tel: <852> (2) 735 9218
Fax: <852> (2) 730 0281
Telex: 40815 HITEC HX

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