# 2SC4261

## Silicon NPN Epitaxial

# HITACHI

#### **Application**

UHF Local oscillator

#### Outline

CMPAK



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



## 2SC4261

### **Absolute Maximum Ratings** ( $Ta = 25^{\circ}C$ )

Item	Symbol	Ratings	Unit
Collector to base voltage	$V_{CBO}$	25	V
Collector to emitter voltage	$V_{\text{CEO}}$	15	V
Emitter to base voltage	$V_{EBO}$	3	V
Collector current	I <sub>c</sub>	50	mA
Collector power dissipation	P <sub>c</sub>	100	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

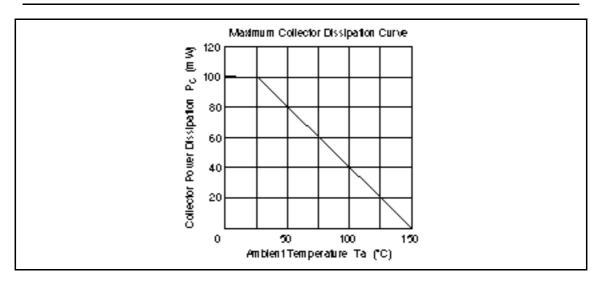
## **Electrical Characteristics** ( $Ta = 25^{\circ}C$ )

Item	Symbol	Min	Тур	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	25	_	_	V	$I_{\rm C} = 10 \ \mu A, \ I_{\rm E} = 0$
Collector cutoff current	I <sub>CBO</sub>		_	0.3	μΑ	$V_{CB} = 15 \text{ V}, I_{E} = 0$
_	I <sub>CEO</sub>	_	_	10	μΑ	$V_{CE} = 15 \text{ V}, R_{BE} =$
Emitter cutoff current	I <sub>EBO</sub>	_	_	1.0	μΑ	$V_{EB} = 3 \text{ V}, I_{C} = 0$
Collector to emitter saturation voltage	$V_{\text{CE}(\text{sat})}$	_	_	0.3	V	$I_C = 20 \text{ mA}, I_B = 4 \text{ mA}$
DC current transfer ratio	h <sub>FE</sub>	50	_	180		$V_{CE} = 5 \text{ V}, I_{C} = 5 \text{ mA}$
Collector output capacitance	Cob		0.7	1.0	pF	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1 \text{MHz}$
Gain bandwidth product	f <sub>T</sub>	1.8	2.4	_	GHz	$V_{CE} = 5 \text{ V}, I_{C} = 20 \text{ mA}$
Oscillating output voltage	V <sub>osc</sub>	_	200	_	mV	$V_{CC} = 5 \text{ V}, I_{C} = 5 \text{ mA},$ f = 930 MHz

Note: Marking is "QI-".

See characteristic curves of 2SC4196.

2SC4261



When using this document, keep the following in mind:

- 1. This document may, wholly or partially, be subject to change without notice.
- 2. All rights are reserved: No one is permitted to reproduce or duplicate, in any form, the whole or part of this document without Hitachi's permission.
- 3. Hitachi will not be held responsible for any damage to the user that may result from accidents or any other reasons during operation of the user's unit according to this document.
- 4. Circuitry and other examples described herein are meant merely to indicate the characteristics and performance of Hitachi's semiconductor products. Hitachi assumes no responsibility for any intellectual property claims or other problems that may result from applications based on the examples described herein.
- 5. No license is granted by implication or otherwise under any patents or other rights of any third party or Hitachi, Ltd.
- 6. MEDICAL APPLICATIONS: Hitachi's products are not authorized for use in MEDICAL APPLICATIONS without the written consent of the appropriate officer of Hitachi's sales company. Such use includes, but is not limited to, use in life support systems. Buyers of Hitachi's products are requested to notify the relevant Hitachi sales offices when planning to use the products in MEDICAL APPLICATIONS.

# HITACHI

Histochi, Ltd.
Semiconductor & IC Div.
Nippon Bidg., 2-6-2, Ohte-medii, Chiyode-ku, Tokyo 100, Jepen
Tet Tokyo (03, 3270-2111
Fex. (03, 3270-5109

For further in formation write to: Histori America, Utd. Semiconductor & IC Dv. 2000 Sierra Point Perkway Briebene, CA. 94005-4835

Tet +15-589-8300 Fax +15-583-4207 Hitechi Burope GmbH
Bedronic Componente Group
Continentel Burope
Dornecher Streife 3
D-85622 Feldkirchen
München
Tet 089-9 94 80-0
Fex: 089-9 29 30 00

Hischi Burope Ltd.
Bedronic Components Dv.
Northern Burope Hesidquerters
Whitebrook Ferk
Lower Cook ham Road
Maidenheed
Berkshire SL68YA
Urited Kingdom
Tet 0628-885000
Fex 0628-778222

Hitachi Asia Pta, Ltd 45 Collyer Quay \$20-00 Hitachi Tower Snappore 0404 Tet 535-2400 Fex: 535-4533

Hischi Asia (Hong Kong) Ltd. Unit 705, North Towar, World Finance Centre, Harbour City, Centon Road Taim She Taul, Kowloon Hong Kong Tet 27:350218 Fax: 27:30607 f