
2SB1027

Silicon PNP Epitaxial

HITACHI

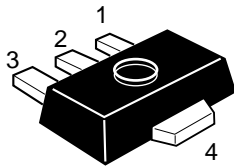
ADE-208-1038 (Z)
1st. Edition
Mar. 2001

Application

Low frequency amplifier

Outline

UPAK



1. Base
2. Collector
3. Emitter
4. Collector (Flange)

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-180	V
Collector to emitter voltage	V_{CEO}	-120	V
Emitter to base voltage	V_{EBO}	-5	V
Collector current	I_C	-1.5	A
Collector peak current	$i_{C(peak)}^{*1}$	-3	A
Collector power dissipation	P_C^{*2}	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

Notes: 1. $PW \leq 10$ ms, Duty cycle $\leq 20\%$

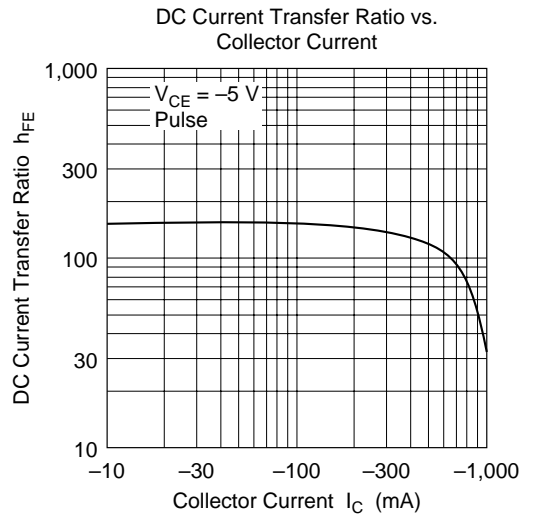
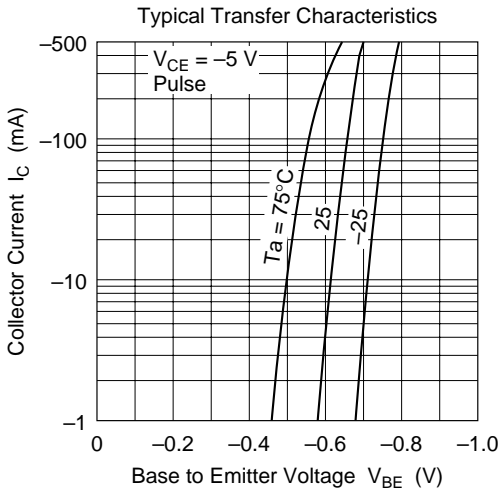
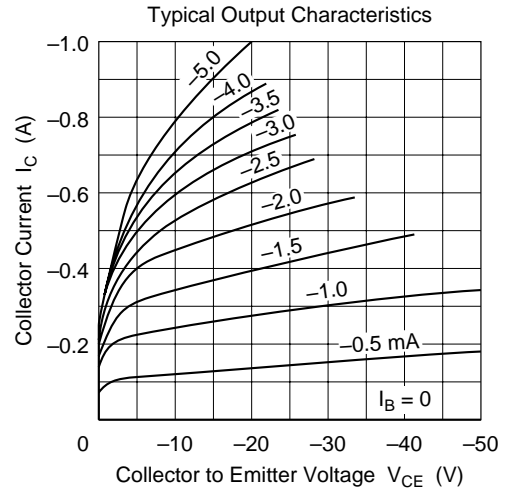
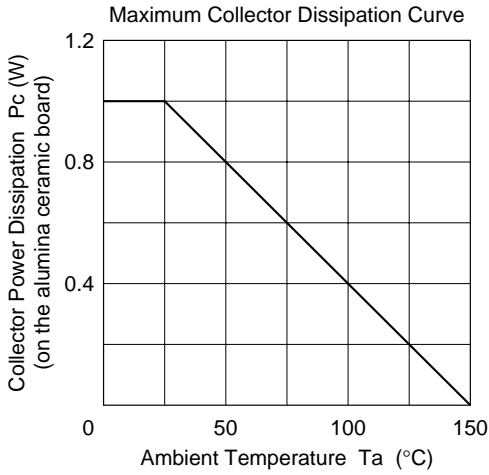
2. Value on the alumina ceramic board (12.5 × 20 × 0.7 mm)

Electrical Characteristics (Ta = 25°C)

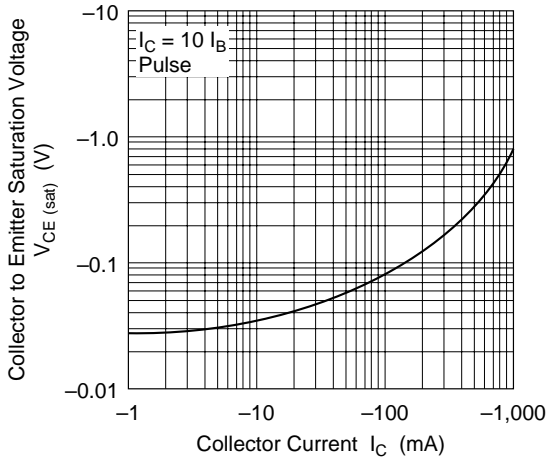
Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	-180	—	—	V	$I_C = -1$ mA, $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-120	—	—	V	$I_C = -10$ mA, $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -1$ mA, $I_C = 0$
Collector cutoff current	I_{CBO}	—	—	-10	μA	$V_{CB} = -160$ V, $I_E = 0$
DC current transfer ratio	h_{FE1}^{*1}	60	—	320		$V_{CE} = -5$ V, $I_C = -0.15$ A, pulse
	h_{FE2}	30	—	—		$V_{CE} = -5$ V, $I_C = -0.5$ A, pulse
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-1.0	V	$I_C = -0.5$ A, $I_B = -50$ mA, Pulse
Base to emitter voltage	V_{BE}	—	—	-0.9	V	$V_{CE} = -5$ V, $I_C = -0.15$ A, pulse

Note: 1. The 2SB1027 is grouped by h_{FE1} as follows.

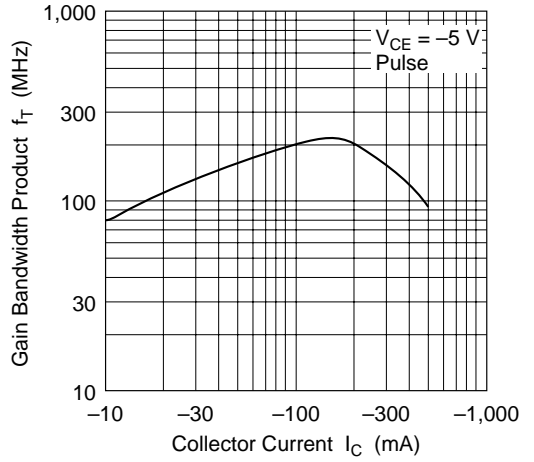
Mark	EH	EJ	EK
h_{FE1}	60 to 120	100 to 200	160 to 320



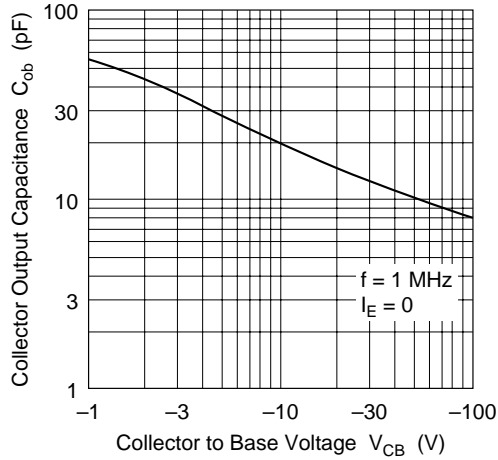
Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current

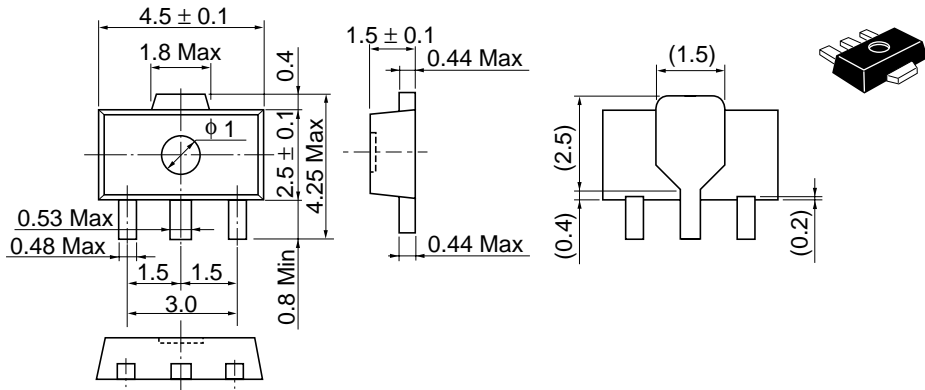


Collector Output Capacitance vs. Collector to Base Voltage



Package Dimensions

As of January, 2001
Unit: mm



Hitachi Code	UPAK
JEDEC	—
EIAJ	Conforms
Mass (reference value)	0.050 g

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HITACHI

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 NorthAmerica : <http://semiconductor.hitachi.com/>
 Europe : <http://www.hitachi-eu.com/hel/ecg>
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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 Straße 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) 585160

Hitachi Asia Ltd.
 Hitachi Tower
 16 Collyer Quay #20-00,
 Singapore 049318
 Tel : <65>-538-6533/538-8577
 Fax : <65>-538-6933/538-3877
 URL : <http://www.hitachi.com.sg>

Hitachi Asia Ltd.
 (Taipei Branch Office)
 4/F, No. 167, Tun Hwa North Road,
 Hung-Kuo Building,
 Taipei (105), Taiwan
 Tel : <886>-(2)-2718-3666
 Fax : <886>-(2)-2718-8180
 Telex : 23222 HAS-TP
 URL : <http://www.hitachi.com.tw>

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
 URL : <http://www.hitachi.com.hk>

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