
2SC2396, 2SC2543, 2SC2544

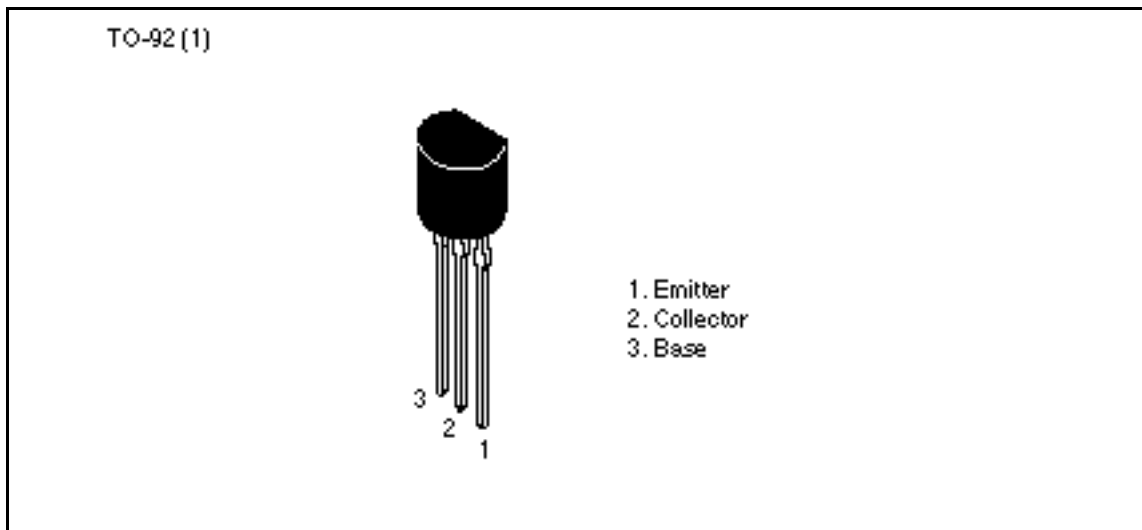
Silicon NPN Epitaxial

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Application

- Low frequency amplifier
- Complementary pair with 2SA1025, 2SA1081 and 2SA1082

Outline



2SC2396, 2SC2543, 2SC2544

Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	2SC2396	2SC2543	2SC2544	Unit
Collector to base voltage	V_{CBO}	60	90	120	V
Collector to emitter voltage	V_{CEO}	60	90	120	V
Emitter to base voltage	V_{EBO}	5	5	5	V
Collector current	I_C	100	100	100	mA
Emitter current	I_E	−100	−100	−100	mA
Collector power dissipation	P_C	400	400	400	mW
Junction temperature	T_j	150	150	150	°C
Storage temperature	T_{stg}	−55 to +150	−55 to +150	−55 to +150	°C

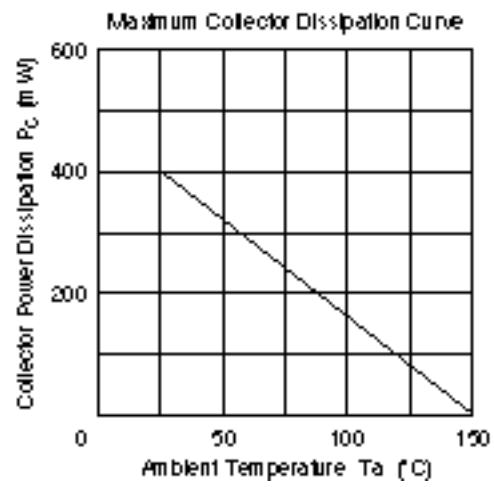
Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SC2396			2SC2543			2SC2544			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	$V_{(BR)CBO}$	60	—	—	90	—	—	120	—	—	V	$I_C = 10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	60	—	—	90	—	—	120	—	—	V	$I_C = 1 \text{ mA}, R_{BE} =$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	—	—	5	—	—	5	—	—	V	$I_E = 10 \mu A, I_C = 0$
Collector cutoff current	I_{CBO}	—	—	0.1	—	—	0.1	—	—	0.1	μA	$V_{CB} = 50 \text{ V}, I_E = 0$
Emitter cutoff current	I_{EBO}	—	—	0.1	—	—	0.1	—	—	0.1	μA	$V_{EB} = 2 \text{ V}, I_C = 0$
DC current transfer ratio h_{FE}^{*1}		250	—	1200	250	—	1200	250	—	800		$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	0.2	—	—	0.2	—	—	0.2	V	$I_C = 10 \text{ mA}, I_B = 1 \text{ mA}$
Base to emitter voltage	V_{BE}	—	0.6	—	—	0.6	—	—	0.6	—	V	$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}$
Gain bandwidth product	f_T	—	90	—	—	90	—	—	90	—	MHz	$V_{CE} = 12 \text{ V}, I_C = 2 \text{ mA}$
Collector output capacitance	C_{ob}	—	3.0	—	—	3.0	—	—	3.0	—	pF	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$

Note: 1. The 2SC2396, 2SC2543 and 2SC2544 are grouped by h_{FE1} as follows.

	D	E	F
2SC2396, 2SC2543	250 to 500	400 to 800	600 to 1200
2SC2544	250 to 500	400 to 800	—

See characteristic curves of 2SC2545, 2SC2546 and 2SC2547.



2SC2396, 2SC2543, 2SC2544

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Hitachi, Ltd.

Semiconductor & IC Div.

Nippon Bldg., 2-6-2, Ohte-machi, Chiyoda-ku, Tokyo 100, Japan

Tel: Tokyo (03) 3270-2111

Fax: (03) 3270-5109

For further information write to:

Hitachi America, Ltd.

Semiconductor & IC Div.

2000 Sierra Point Parkway

Brisbane, CA 94005-4835

U.S.A.

Tel: 415-589-8000

Fax: 415-589-4207

Hitachi Europe GmbH

Electronic Components Group

Continental Europe

Danrecher Straße 3

D-85622 Feldkirchen

München

Tel: 089-9 94 80-0

Fax: 089-9 29 30 00

Hitachi Europe Ltd.

Electronic Components Div.

Northern Europe Headquarters

Whitebrook Park

Lower Cookham Road

Maidenhead

Berkshire SL6 8YA

United Kingdom

Tel: 0628-585000

Fax: 0628-778322

Hitachi Asia Pte. Ltd.

45 Collyer Quay #20-00

Hitachi Tower

Singapore 0404

Tel: 535-2100

Fax: 535-1533

Hitachi Asia (Hong Kong) Ltd.

Unit 705, North Tower,

World Finance Centre

Harbour City, Canton Road

Tsim Sha Tsui, Kowloon

Hong Kong

Tel: 27359218

Fax: 27306074

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