
2SA1083, 2SA1084, 2SA1085

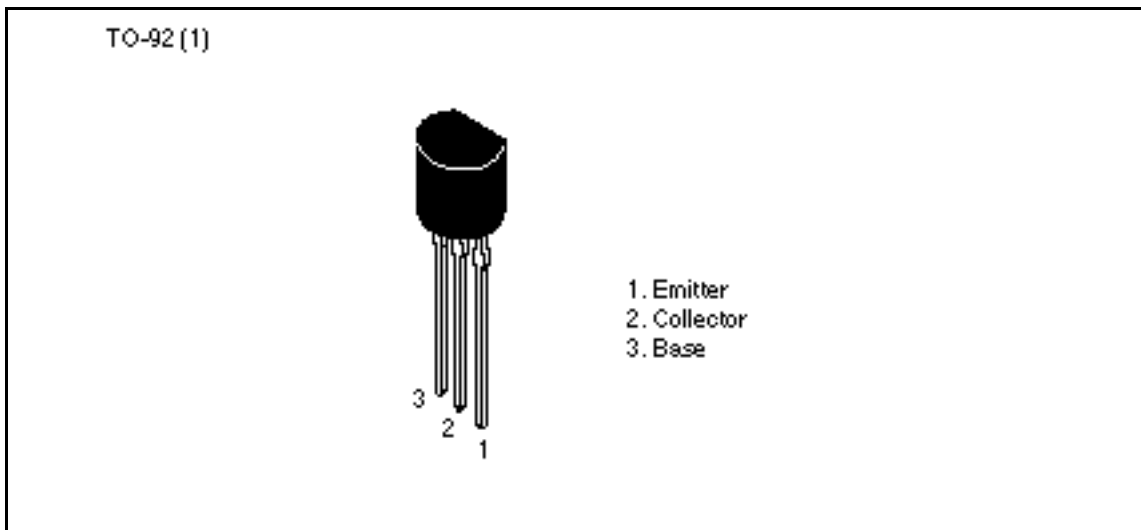
Silicon PNP Epitaxial

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Application

- Low frequency low noise amplifier
- Complementary pair with 2SC2545, 2SC2546 and 2SC2547

Outline



2SA1083, 2SA1084, 2SA1085

Absolute Maximum Ratings (Ta = 25°C)

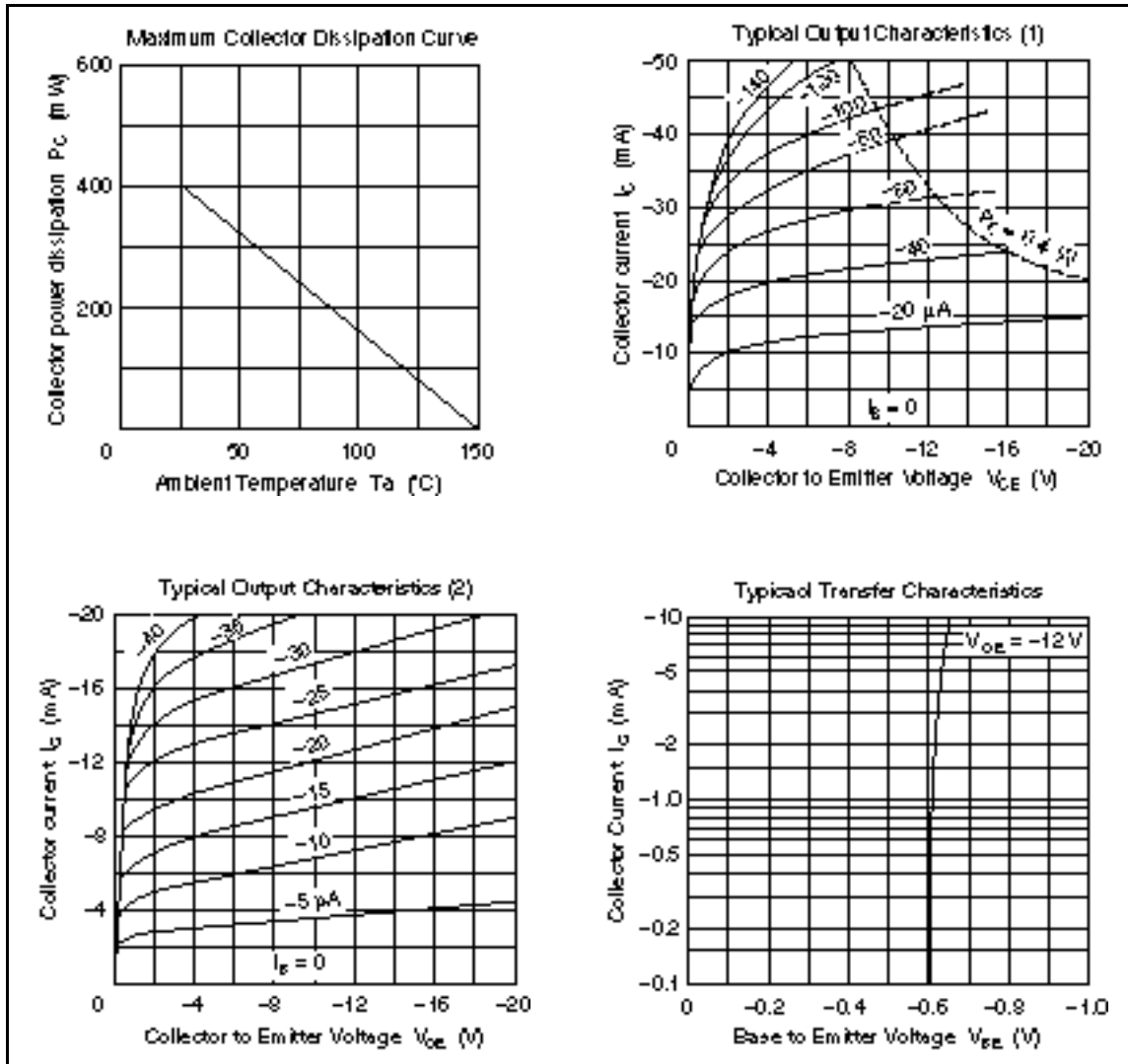
Item	Symbol	2SA1083	2SA1084	2SA1085	Unit
Collector to base voltage	V_{CBO}	-60	-90	-120	V
Collector to emitter voltage	V_{CEO}	-60	-90	-120	V
Emitter to base voltage	V_{EBO}	-5	-5	-5	V
Collector current	I_C	-100	-100	-100	mA
Emitter current	I_E	100	100	100	mA
Collector power dissipation	P_C	400	400	400	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)

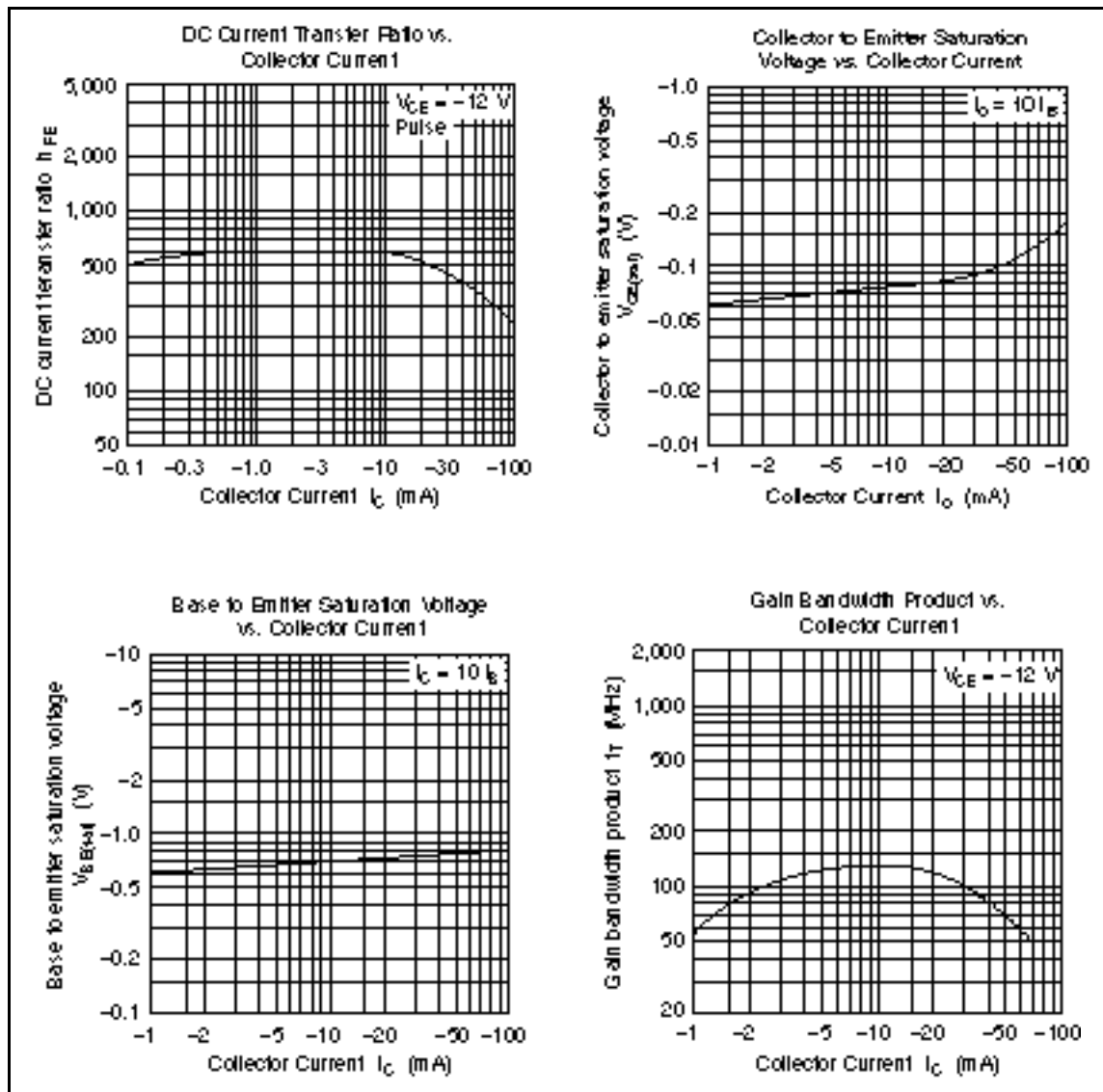
Item	Symbol	2SA1083			2SA1084			2SA1085			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	$V_{(BR)CBO}$	-60	—	—	-90	—	—	-120	—	—	V	$I_C = -10 \mu A, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-60	—	—	-90	—	—	-120	—	—	V	$I_C = -1 \text{ mA}, R_{BE} =$
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	—	800	250	—	800	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}	—	3.5	—	—	3.5	—	—	3.5	—	pF	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$
Noise voltage referred to input	e_n	—	0.5	—	—	0.5	—	—	0.5	—	nV/Hz	$V_{CE} = -6 \text{ V}, I_C = -10 \text{ mA}, f = 1 \text{ kHz}, R_g = 0, f = 1 \text{ Hz}$

Note: 1. The 2SA1083, 2SA1084 and 2SA1085 are grouped by h_{FE} as follows.

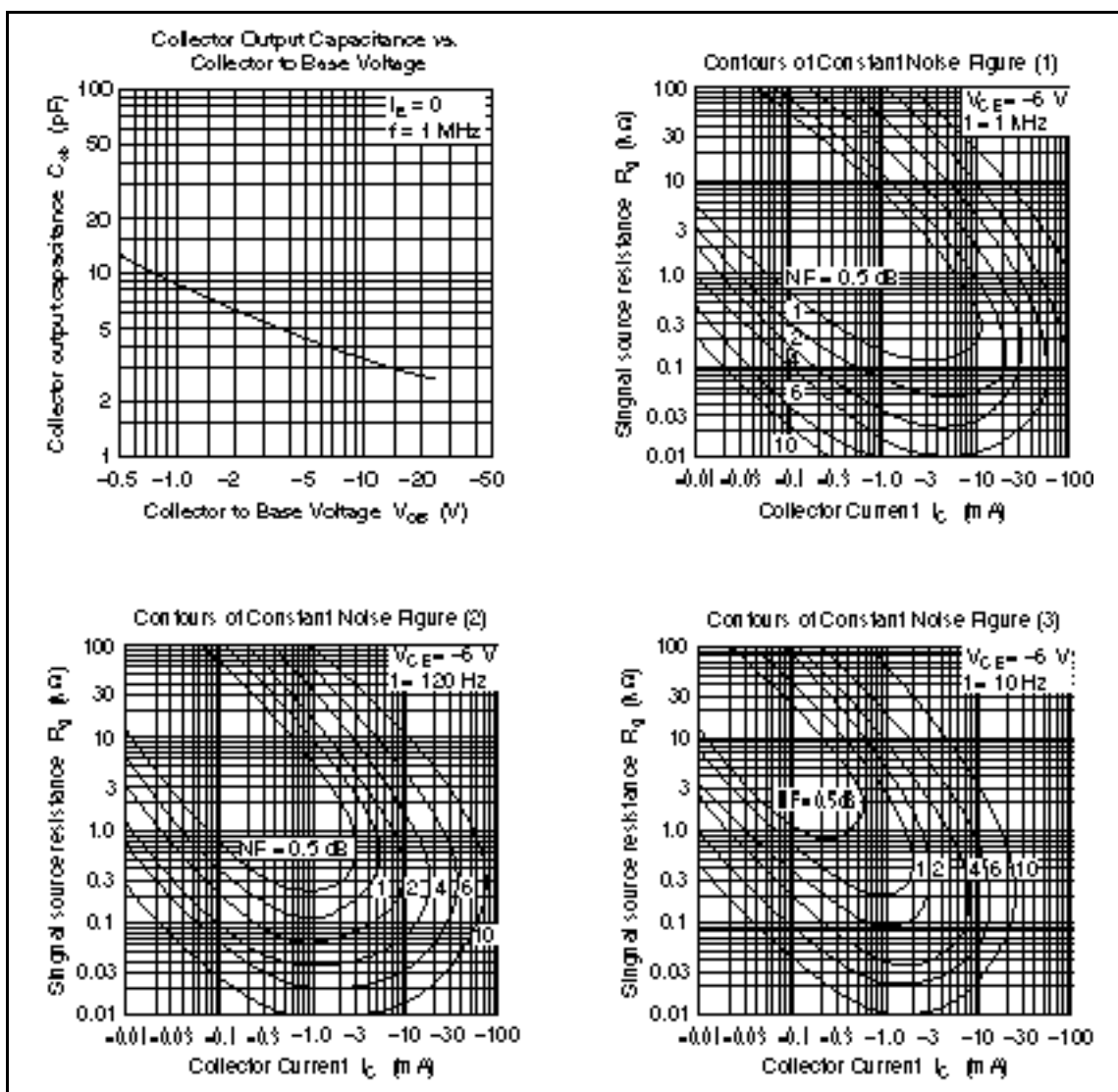
D	E
250 to 500	400 to 800



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Hitachi, Ltd.

Semiconductor & IC Div.

Nippon Bldg., 2-5-2, Ohite-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
Dornacher 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 0104
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: 27308074

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