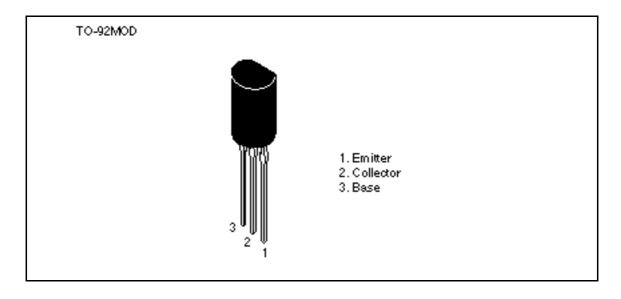
Silicon NPN Triple Diffused

HITACHI

Application

- High frequency high voltage amplifier
- Video output

Outline



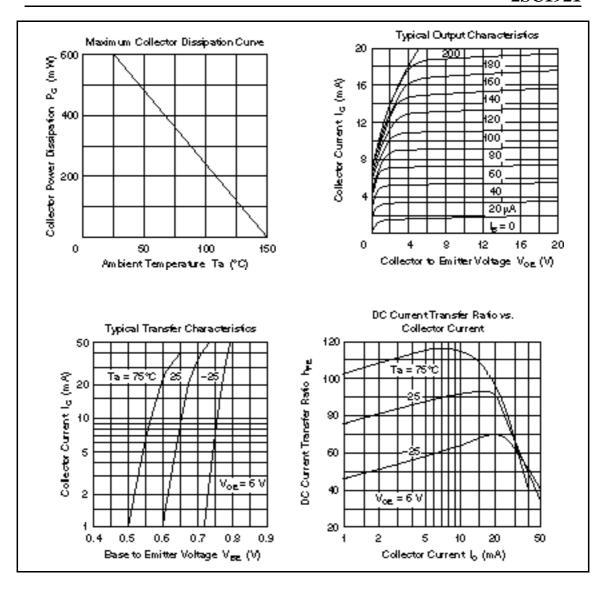


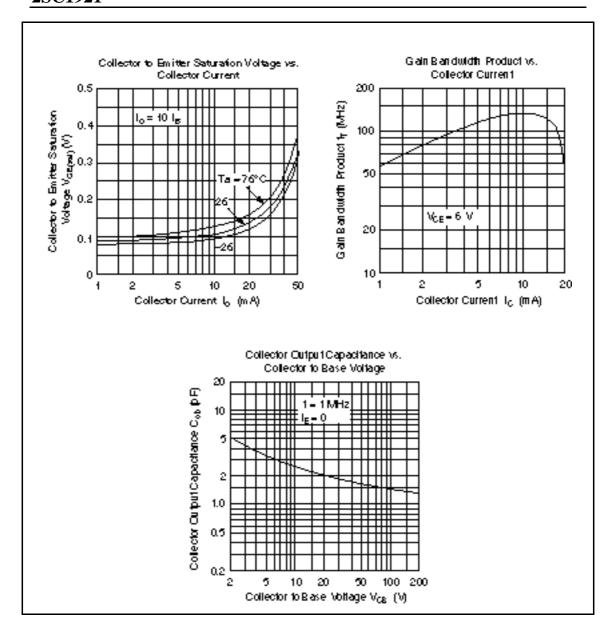
Absolute Maximum Ratings ($Ta = 25^{\circ}C$)

Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	250	V
Collector to emitter voltage	V _{CEO}	200	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I _c	50	mA
Collector power dissipation	P _c	600	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	$V_{(BR)CBO}$	250	_	_	V	$I_{\rm C} = 10 \ \mu A, \ I_{\rm E} = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	200	_	_	V	$I_{\rm C}$ = 1 mA, $R_{\rm BE}$ =
Emitter to base breakdown voltage	$V_{(BR)EBO}$	5	_	_	V	$I_{E} = 10 \ \mu A, \ I_{C} = 0$
Collector cutoff current	I _{CEO}	_	_	1.0	μΑ	V _{CE} = 120 V, R _{BE} =
DC current transfer ratio	h _{FE}	30	_	300		V_{CE} = 6 V, I_{C} = 10 mA
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	_	_	1.0	V	$I_{\rm C}$ = 10 mA, $I_{\rm B}$ = 1 mA
Gain bandwidth product	f _T	60	130	_	MHz	$V_{CE} = 6 \text{ V}, I_{C} = 10 \text{ mA}$
Collector output capacitance	Cob	_	3	4	pF	$V_{CB} = 6 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$





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. Neppon Bidg, 2-6-2, Ohte-medii, Chiyode-ku, Tokyo 100, Japan Tet Tokyo (03, 3270-2111) Fex: (03, 3270-5109)

For Author in formellon write to:

Hitechi Americe, Ltd.
Semiconductor & IC Div.
2000 Sierre Point Perkwey
Brisbane, CA. 94005-1835
U.S.A.
Tet 415-589-8300
Fex: 415-583-4207

Hitechi Burope GmbH
Bedronic Componente Group
Cartinertal Burope
Darnecher Streße 3
D-85622 Feldkirchen
München
Tet 089-9 94 80-0
Fex: 089-9 29 30 00

Hitachi Burope Ltd.
Bedronic Componenta Div.
Northern Burope Headquartera
Whitborook Fark
Lower Cook hem Road
Heidenhead
Barkshire SL 68YA
Urited Kingdon
Tet 0628-885000
Fex: 0628-778322

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

Hitachi Asia (Hong Kong) Ltd. Unit 705, North Towar, World Finance Centre, Herbour City, Centon Road Taim Sha Tau, Kowloon Hong Kong Tat 27:3592/8 Fax: 27:308074