

# 2SC2611

Silicon NPN Triple Diffused

# HITACHI

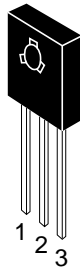
ADE-208-884 (Z)  
1st. Edition  
Sep. 2000

## Application

High voltage amplifier TV VIDEO output

## Outline

TO-126 MOD



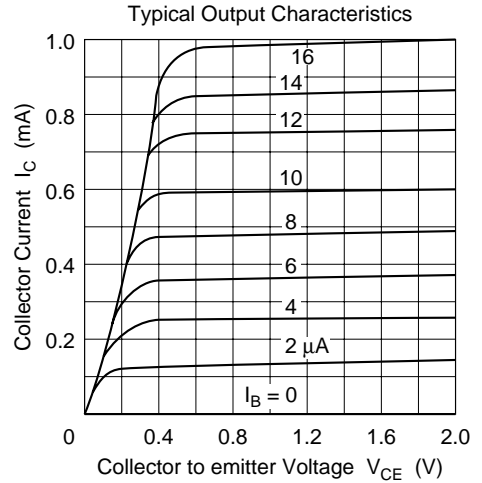
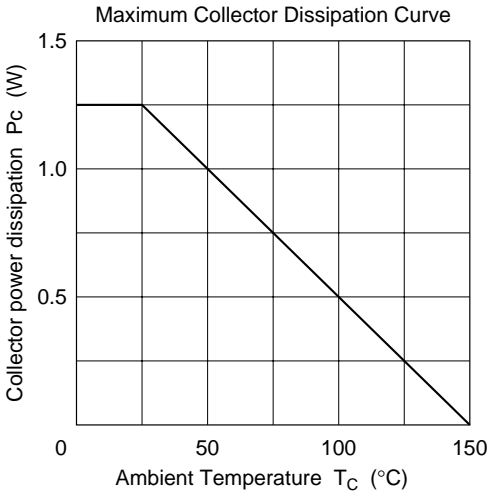
1. Emitter  
2. Collector  
3. Base

## Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

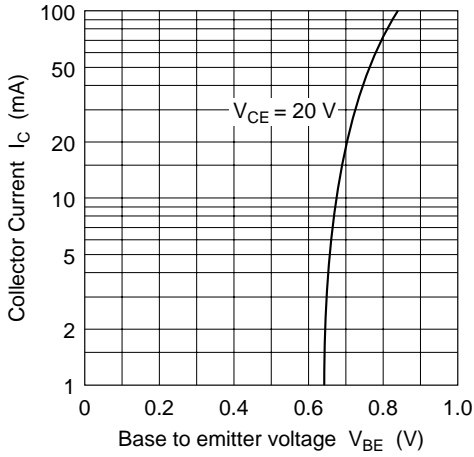
| Item                         | Symbol           | Ratings     | Unit |
|------------------------------|------------------|-------------|------|
| Collector to base voltage    | V <sub>CBO</sub> | 300         | V    |
| Collector to emitter voltage | V <sub>CEO</sub> | 300         | V    |
| Emitter to base voltage      | V <sub>EBO</sub> | 5           | V    |
| Collector current            | I <sub>C</sub>   | 100         | mA   |
| Collector power dissipation  | P <sub>C</sub>   | 1.25        | W    |
| Junction temperature         | T <sub>j</sub>   | 150         | °C   |
| Storage temperature          | T <sub>stg</sub> | -55 to +150 | °C   |

## Electrical Characteristics (Ta = 25°C)

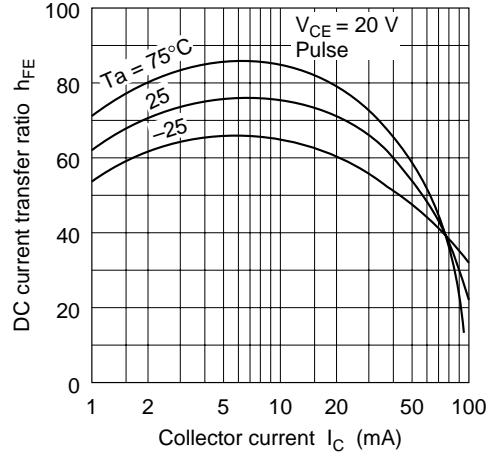
| Item                                    | Symbol        | Min | Typ | Max | Unit    | Test conditions                                     |
|---|---------------|-----|-----|-----|---------|---|
| Collector to base breakdown voltage     | $V_{(BR)CBO}$ | 300 | —   | —   | V       | $I_C = 10 \mu A, I_E = 0$                           |
| Collector to emitter breakdown voltage  | $V_{(BR)CEO}$ | 300 | —   | —   | V       | $I_C = 1 \text{ mA}, R_{BE} = \infty$               |
| 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 | $\mu A$ | $V_{CE} = 250 \text{ V}, R_{BE} = \infty$           |
| DC current transfer ratio               | $h_{FE}$      | 30  | —   | 200 |         | $V_{CE} = 20 \text{ V}, I_C = 20 \text{ mA}$        |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | —   | —   | 1.5 | V       | $I_C = 20 \text{ mA}, I_B = 2 \text{ mA}$           |
| Gain bandwidth product                  | $f_T$         | 50  | 80  | —   | MHz     | $V_{CE} = 20 \text{ V}, I_C = 20 \text{ mA}$        |
| Collector output capacitance            | $C_{ob}$      | —   | —   | 4.0 | pF      | $V_{CB} = 20 \text{ V}, I_E = 0, f = 1 \text{ MHz}$ |



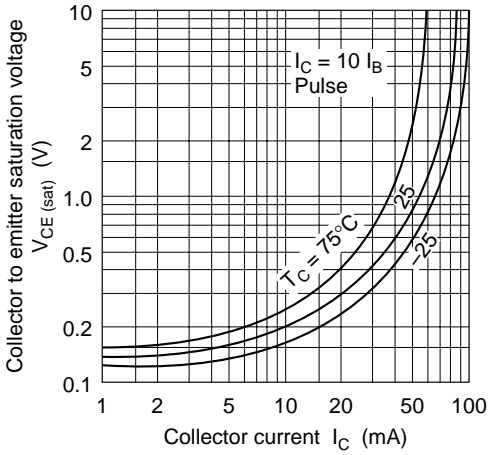
Typical Transfer Characteristics



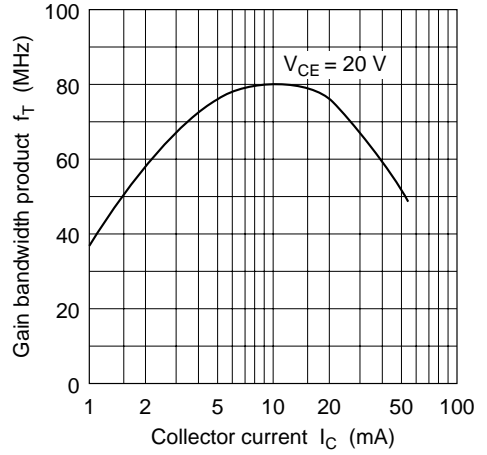
DC Current Transfer Ratio vs. Collector Current



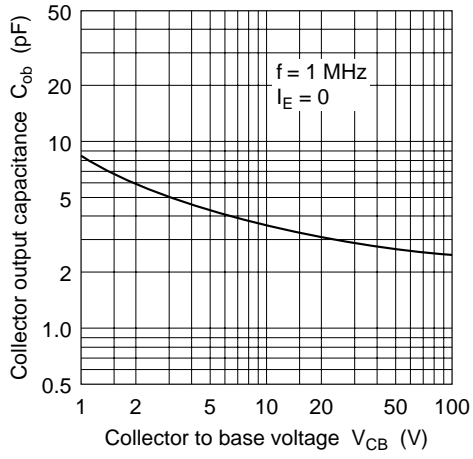
Collector to Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current

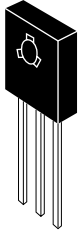
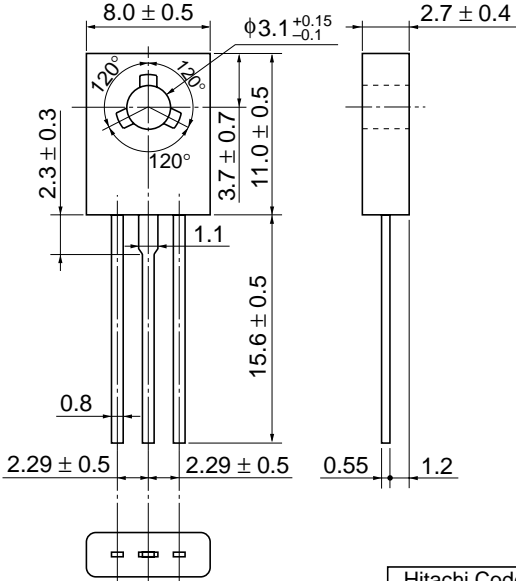


Collector Output Capacitance vs.  
Collector to Base Voltage



Package Dimensions

Unit: mm



|                        |            |
|------------------------|------------|
| Hitachi Code           | TO-126 Mod |
| JEDEC                  | —          |
| EIAJ                   | —          |
| Mass (reference value) | 0.67 g     |

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**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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