

## GI1202

### PNP EPITAXIAL PLANAR SILICON TRANSISTOR

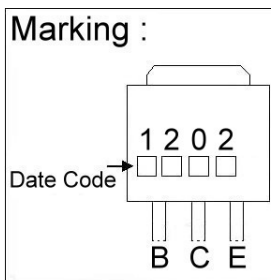
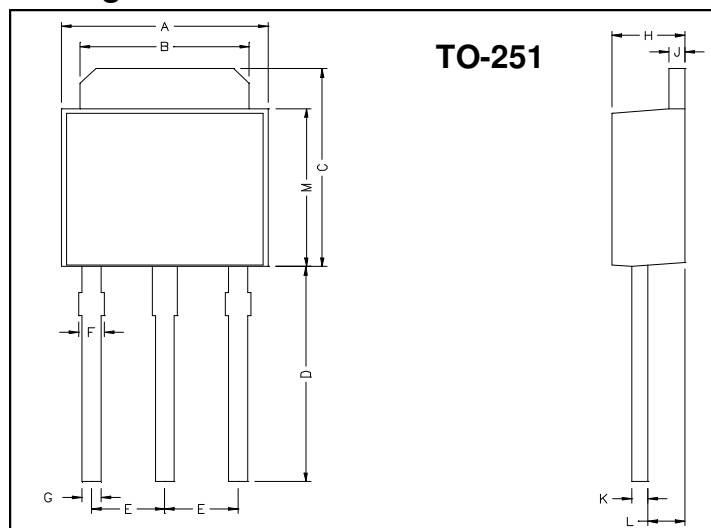
#### Description

The GI1202 is designed for voltage regulators, relay drivers, lamp drivers and electrical equipment applications.

#### Features

- \*Large current capacitance and wide ASO
- \*Low collector-to-emitter saturation voltage
- \*Fast switching speed

#### Package Dimensions



| REF. | Millimeter |      | REF. | Millimeter |      |
|------|------------|------|------|------------|------|
|      | Min.       | Max. |      | Min.       | Max. |
| A    | 6.40       | 6.80 | G    | 0.50       | 0.70 |
| B    | 5.20       | 5.50 | H    | 2.20       | 2.40 |
| C    | 6.80       | 7.20 | J    | 0.45       | 0.55 |
| D    | 7.20       | 7.80 | K    | 0.45       | 0.60 |
| E    | 2.30 REF.  |      | L    | 0.90       | 1.50 |
| F    | 0.60       | 0.90 | M    | 5.40       | 5.80 |

#### Absolute Maximum Ratings (Ta = 25°C, unless otherwise specified)

| Parameter                    | Symbol      | Ratings    | Unit |
|------------------------------|-------------|------------|------|
| Collector to Base Voltage    | VCBO        | -60        | V    |
| Collector to Emitter Voltage | VCEO        | -50        | V    |
| Emitter to Base Voltage      | VEBO        | -6         | V    |
| Collector Current            | IC          | -3         | A    |
| Collector Current(Pulse)     | ICP         | -6         | A    |
| Junction Temperature         | Tj          | +150       | °C   |
| Storage Temperature          | TSTG        | -55 ~ +150 | °C   |
| Total Power Dissipation      | PD          | 1          | W    |
|                              | PD(Tc=25°C) | 15         | W    |

#### Electrical Characteristics (Rating at Ta=25°C)

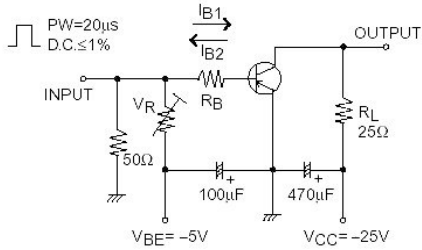
| Symbol              | Min. | Typ.  | Max. | Unit | Test Conditions             |
|---------------------|------|-------|------|------|-----------------------------|
| BVCBO               | -60  | -     | -    | V    | IC=-10uA, IE=0              |
| BVCEO               | -50  | -     | -    | V    | IC=-1mA, RE=∞               |
| BVEBO               | -6   | -     | -    | V    | IE=-10uA, IC=0              |
| ICBO                | -    | -     | -1   | uA   | VCB=-40V, IE=0              |
| IEBO                | -    | -     | -1   | uA   | VEB=-4V, IC=0               |
| *VCE(sat)1          | -    | -0.35 | -0.7 | V    | IC=-2A, IB=-100mA           |
| *VBE(sat)           | -    | -0.94 | -1.2 | V    | IC=-2A, IB=-100mA           |
| *hFE1               | 100  | -     | 560  |      | VCE=-2V, IC=100mA           |
| *hFE2               | 35   | -     | -    |      | VCE=-2V, IC=3A              |
| fT                  | -    | 150   | -    | MHz  | VCE=-10V, IC=-50mA          |
| Cob                 | -    | 39    | -    | pF   | VCB=-10V, f=1MHz            |
| ton (Turn-On Time)  | -    | 70    | -    | ns   | See specified test circuit. |
| tstg (Storage Time) | -    | 450   | -    | ns   | See specified test circuit. |
| tf (Fall Time)      | -    | 35    | -    | ns   | See specified test circuit. |

\* Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

#### Classification Of hFE1

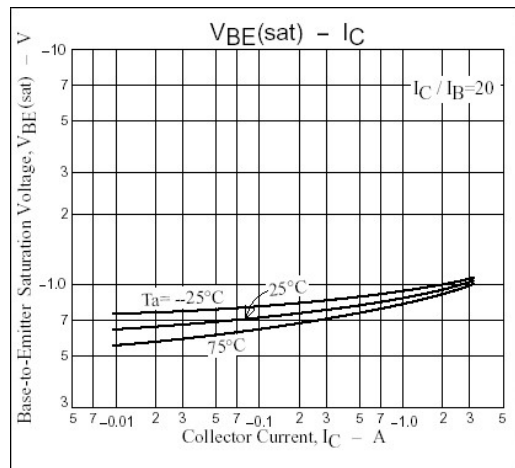
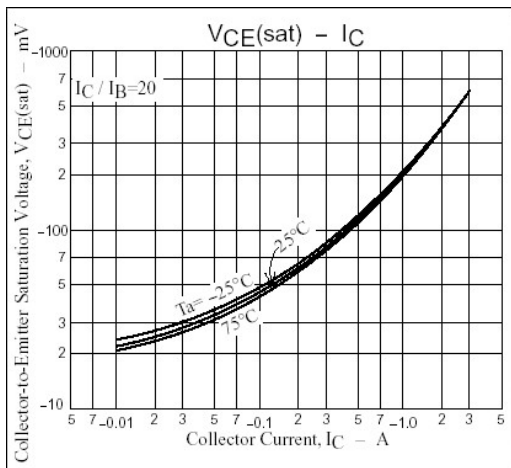
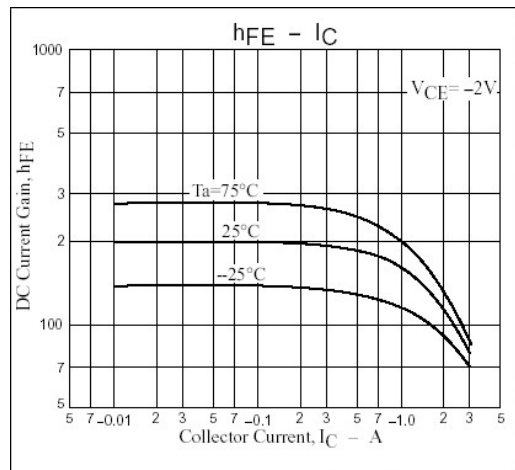
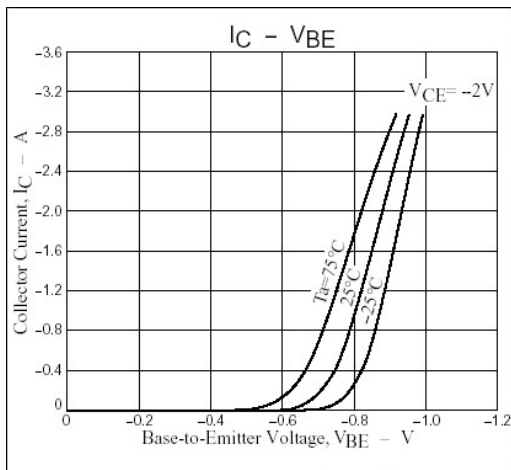
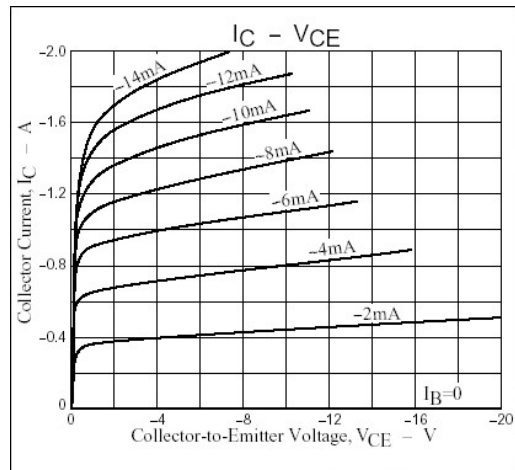
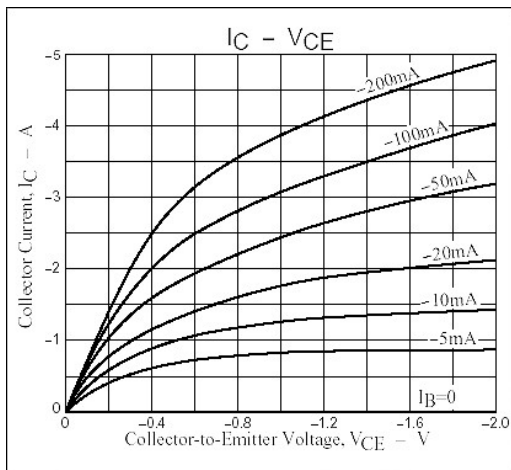
| Rank  | R         | S         | T         | U         |
|-------|-----------|-----------|-----------|-----------|
| Range | 100 ~ 200 | 140 ~ 280 | 200 ~ 400 | 280 ~ 560 |

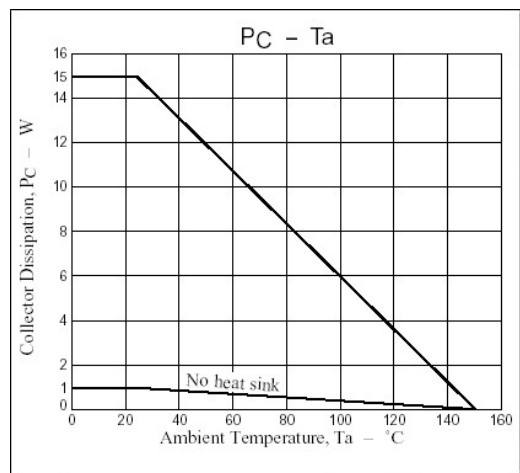
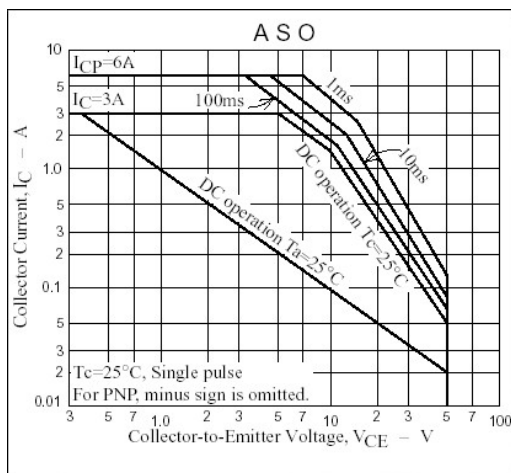
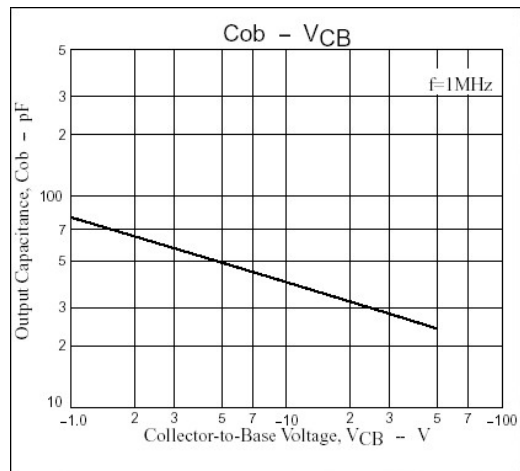
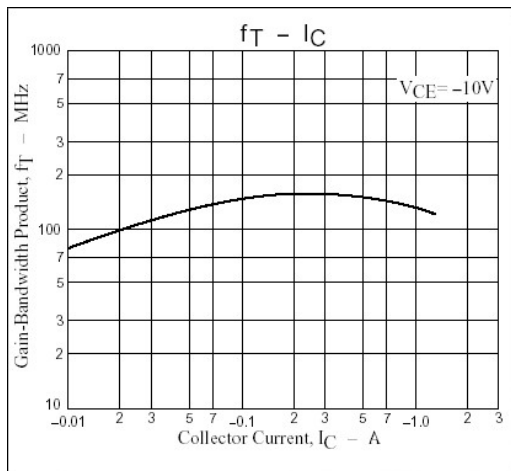
## Switching Time Test Circuit



$$I_C = 10 I_{B1} = -10 I_{B2} = 1A$$

## Characteristics Curve





**Important Notice:**

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of GTM.
- GTM reserves the right to make changes to its products without notice.
- GTM semiconductor products are not warranted to be suitable for use in life-support Applications, or systems.
- GTM assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

**Head Office And Factory:**

- **Taiwan:** No. 17-1 Tatung Rd. Fu Kou Hsin-Chu Industrial Park, Hsin-Chu, Taiwan, R. O. C.
- TEL : 886-3-597-7061 FAX : 886-3-597-9220, 597-0785
- **China:** (201203) No.255, Jang-Jiang Tsai-Lueng RD. , Pu-Dung-Hsin District, Shang-Hai City, China
- TEL : 86-21-5895-7671 ~ 4 FAX : 86-21-38950165