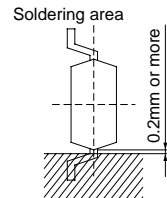


Absolute Maximum Ratings

(Ta = 25°C)

| Parameter | | Symbol | Rating | Unit |
|--------------------------|-----------------------------|------------------|---------------|------------------|
| Input | Forward current | I _F | ± 50 | mA |
| | *1 Peak forward current | I _{FM} | ± 1 | A |
| | Power dissipation | P | 70 | mW |
| Output | Collector-emitter voltage | V _{CEO} | 35 | V |
| | Emitter-collector voltage | V _{ECO} | 6 | V |
| | Collector current | I _C | 50 | mA |
| | Collector power dissipation | P _C | 150 | mW |
| Total power dissipation | | P _{tot} | 170 | mW |
| *2 Isolation voltage | | V _{iso} | 3 750 | V _{rms} |
| Operating temperature | | T _{opr} | - 30 to + 100 | °C |
| Storage temperature | | T _{stg} | - 40 to + 125 | °C |
| *3 Soldering temperature | | T _{sol} | 260 | °C |



*1 Pulse width ≤ 100 μs, Duty ratio : 0.001

*2 40 to 60% RH, AC for 1 minute

*3 For 10 seconds

Classification of current transfer ratio (CTR)

| Model No. | Rank mark | CTR (%) |
|-----------|--------------|-----------|
| PC354N1T | A | 50 to 150 |
| PC354NT | A or No mark | 20 to 400 |

* Conditions : I_F = ± 1mA, V_{CE} = 5V, Ta = 25°C

Electro-optical Characteristics

(Ta = 25°C)

| Parameter | | Symbol | Conditions | MIN. | TYP. | MAX. | Unit |
|--------------------------|--------------------------------------|----------------------|---|--|------------------|------------------|------|
| Input | Forward voltage | V _F | I _F = ± 20mA | - | 1.2 | 1.4 | V |
| | Terminal capacitance | C _t | V = 0, f = 1kHz | - | 30 | 250 | pF |
| Output | Collector dark current | I _{CEO} | V _{CE} = 20V, I _F = 0 | - | - | 10 ⁻⁷ | A |
| | Collector-emitter breakdown voltage | BV _{CEO} | I _C = 0.1mA, I _F = 0 | 35 | - | - | V |
| | Emitter-collector breakdown voltage | BV _{ECO} | I _E = 10 μA, I _F = 0 | 6 | - | - | V |
| Transfer-characteristics | Current transfer ratio | CTR | I _F = ± 1mA, V _{CE} = 5V | 20 | - | 400 | % |
| | Collector-emitter saturation voltage | V _{CE(sat)} | I _F = ± 20mA, I _C = 1mA | - | 0.1 | 0.2 | V |
| | Isolation resistance | R _{ISO} | DC500V, 40 to 60% RH | 5 x 10 ¹⁰ | 10 ¹¹ | - | Ω |
| | Floating capacitance | C _f | V = 0, f = 1MHz | - | 0.6 | 1.0 | pF |
| | Response time | Rise time | t _r | V _{CE} = 2V, I _C = 2mA | - | 4 | 18 |
| Fall time | | t _f | R _L = 100Ω | - | 3 | 18 | μs |

Fig. 1 Forward Current vs. Ambient Temperature

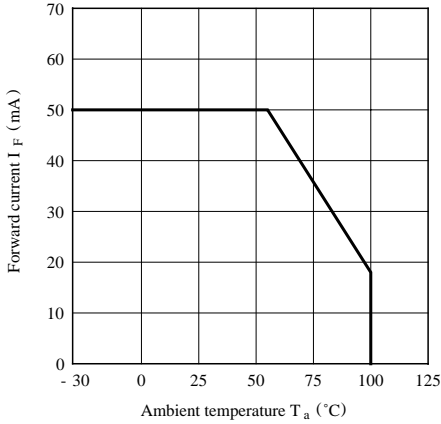


Fig. 2 Diode Power Dissipation vs. Ambient Temperature

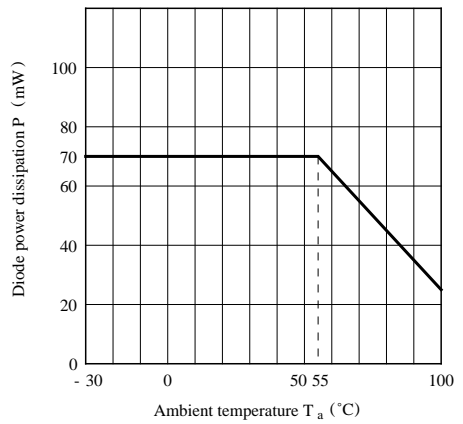


Fig. 3 Collector Power Dissipation vs. Ambient Temperature

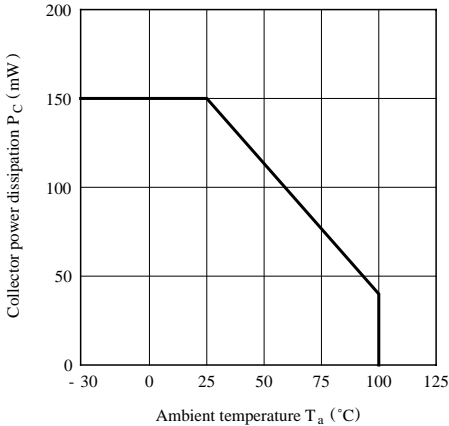


Fig. 4 Total Power Dissipation vs. Ambient Temperature

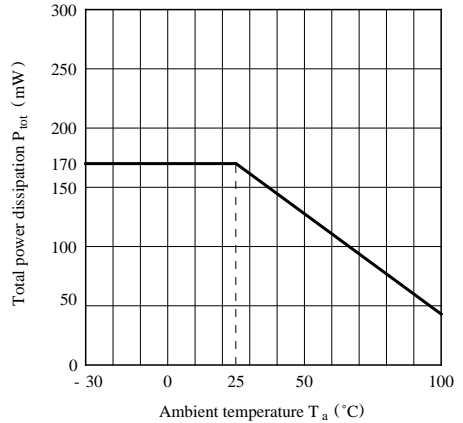


Fig. 5 Peak Forward Current vs. Duty Ratio

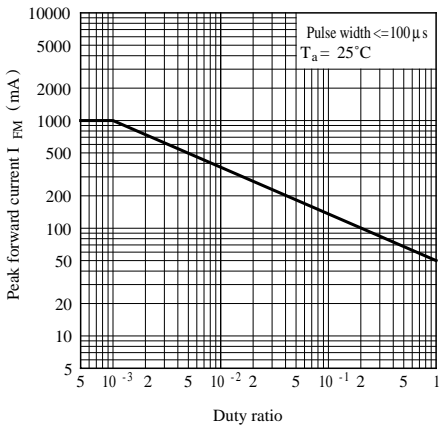


Fig. 6 Forward Current vs. Forward Voltage

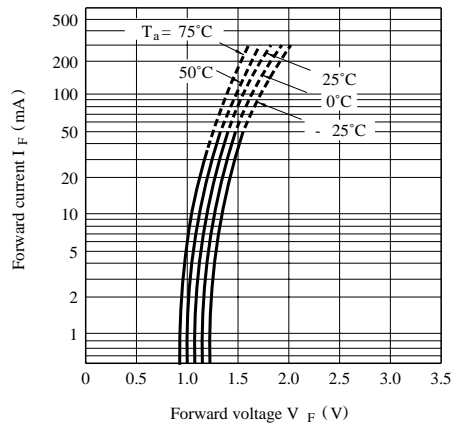


Fig. 7 Current Transfer Ratio vs. Forward Current

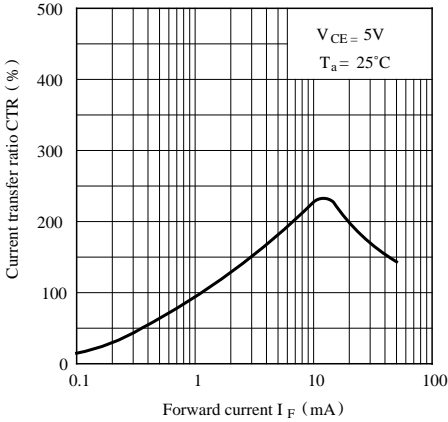


Fig. 8 Collector Current vs. Collector-emitter Voltage

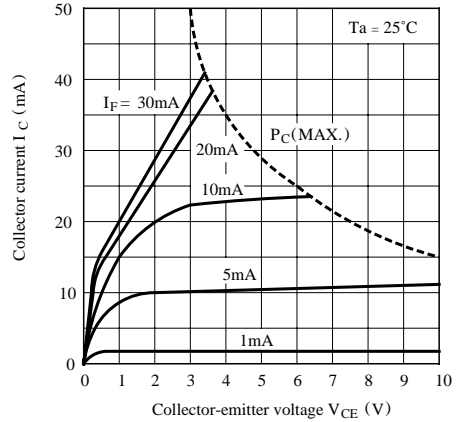


Fig. 9 Relative Current Transfer Ratio vs. Ambient Temperature

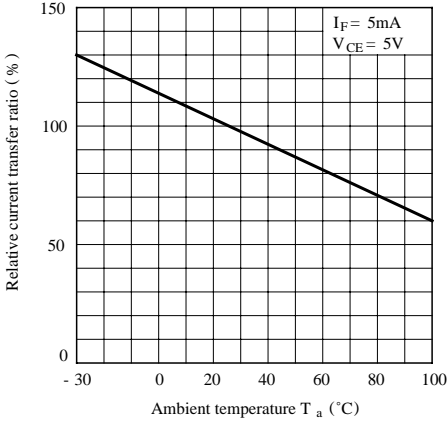


Fig.10 Collector-emitter Saturation Voltage vs. Ambient Temperature

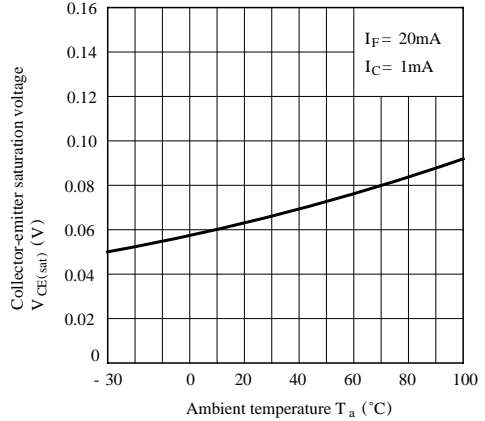


Fig.11 Collector Dark Current vs. Ambient Temperature

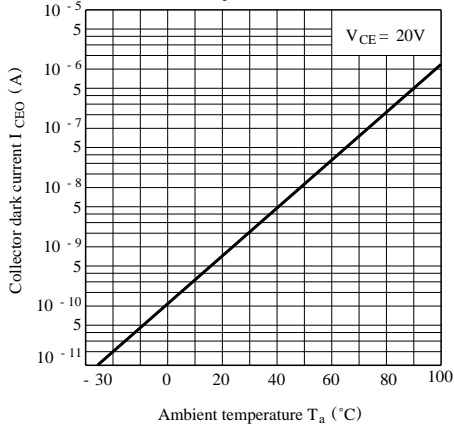
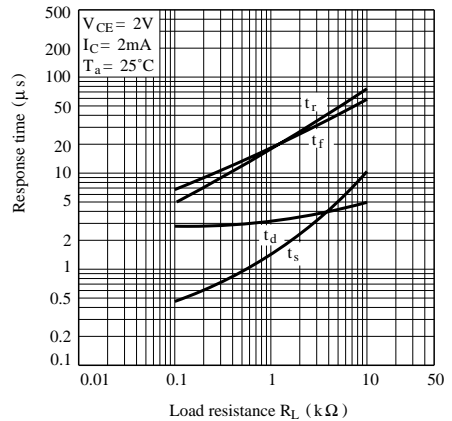


Fig.12 Response Time vs. Load Resistance



Test Circuit For Response Time

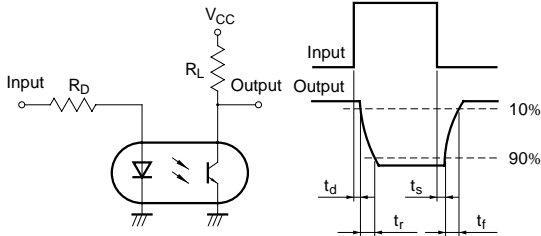
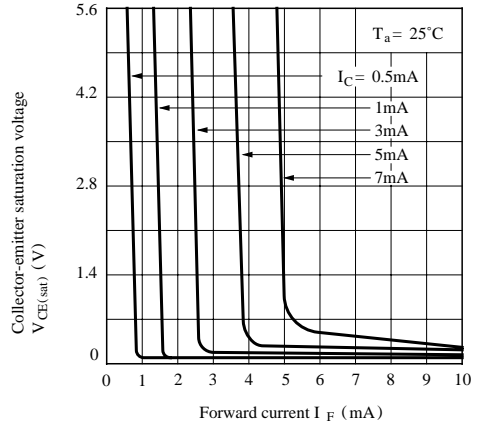
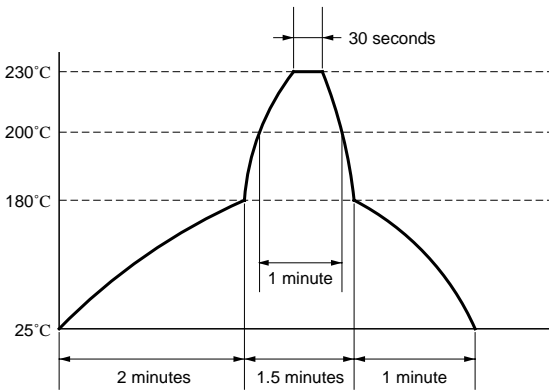


Fig.13 Collector-emitter Saturation Voltage vs. Forward Current



Temperature Profile of Soldering Reflow



- (1) One time soldering reflow is recommended within the condition of temperature and time profile shown below.
- (2) When using another soldering method such as infrared ray lamp, the temperature may rise partially in the mold of the device. Keep the temperature on the package of the device within the condition of above (1).

● Please refer to the chapter “Precautions for Use”.