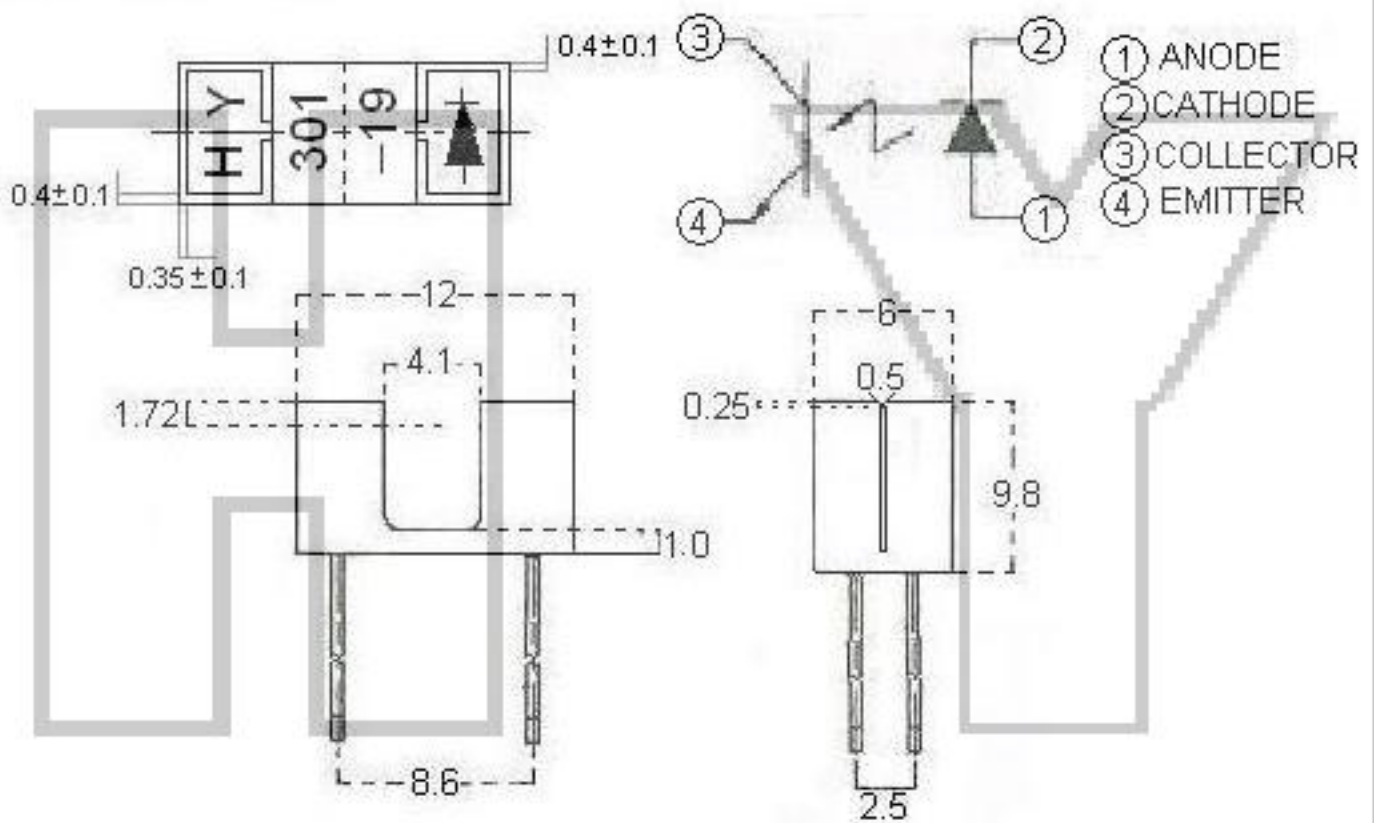


FEATURES

- * NON-CONTACT SWITCHING.
- * FOR DIRECT PC BOARD OR DUAL-IN-LINE SOCKET MOUNTING.
- * FAST SWITCHING SPEED.

PACKAGE DIMENSIONS

HY301—19



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}(.010")$ unless otherwise noted.

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ABSOLUTE MAXIMUM RATINGS AT TA=25°C

| PARAMETER | MAXIMUM RATING | UNIT |
|---|---------------------|-------------|
| IR Diode Continuous Forward Current | 50 | mA |
| IR Diode Reverse Voltage | 5 | V |
| Transistor Collector Current | 20 | mA |
| Transistor Power Dissipation | 75 | mW (Note 1) |
| IR Diode Peak Forward Current (Pulse Wide = 10 μ S, 300 pps) | 1 | A |
| Diode Power Dissipation | 100 | mW (Note 1) |
| Phototransistor Collector-Emitter Voltage | 30 | V |
| Phototransistor Emitter-Collector Voltage | 5 | V |
| Operating Temperature Range | -55°C to +100°C | |
| Storage Temperature Range | -55°C to +100°C | |
| Lead Soldering Temperature [1.6mm(.063") From Case] | 260°C for 5 Seconds | |

Note 1: Derate Linearly 1.33mW/°C from 25°C

NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25 mm(.010") unless otherwise noted.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTICS CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

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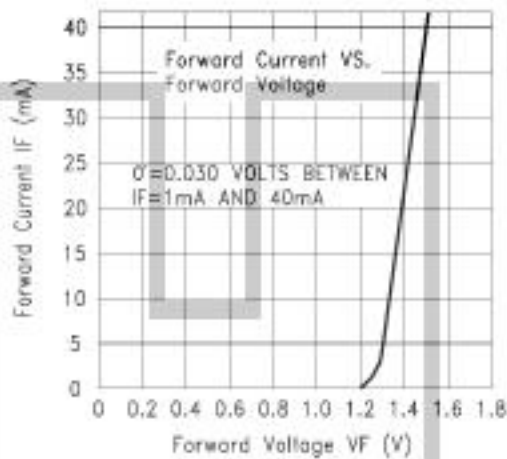


Fig. 1 FORWARD CURRENT VS. FORWARD VOLTAGE

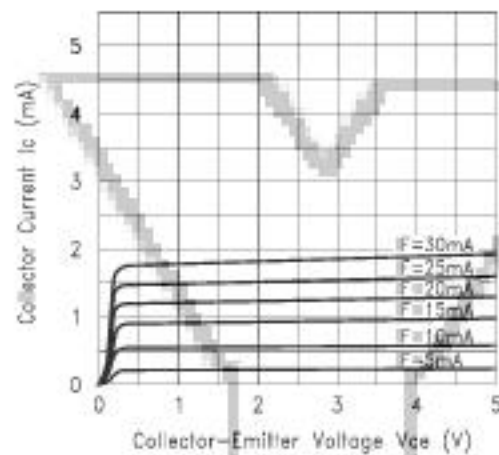


Fig. 2 COLLECTOR CURRENT VS. COLLECTOR VOLTAGE

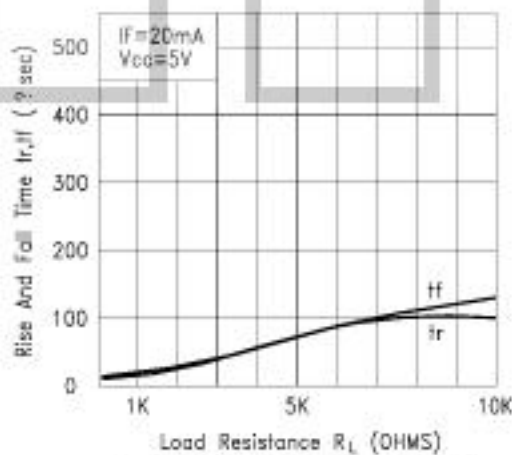


Fig. 3 RISE AND FALL TIME VS. LOAD RESISTANCE

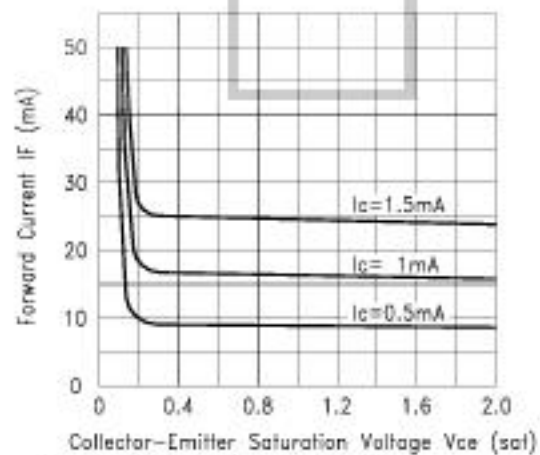


Fig. 4 FORWARD CURRENT VS. COLLECTOR-EMITTER SATURATION VOLTAGE

NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.

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ELECTRICAL OPTICAL CHARACTERISTICS AT TA=25°C

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITION |
|---|----------------------|------|------|------|------|---|
| INPUT LED | | | | | | |
| Forward Voltage | V _F | | 1.2 | 1.6 | V | I _F = 20mA |
| Reverse Current | I _R | | | 100 | μA | V _R = 5V |
| OUTPUT PHOTOTRANSISTOR | | | | | | |
| Collector-Emitter Breakdown Voltage | V _{(BR)CEO} | 30 | | | V | I _C = 1mA |
| Emitter-Collector Breakdown Voltage | V _{(BR)ECO} | 5 | | | V | I _E = 100 μA |
| Collector-Emitter Dark Current | I _{CEO} | | | 100 | nA | V _{CE} = 10V |
| COUPLER | | | | | | |
| Collector-Emitter Saturation Voltage | V _{CE(SAT)} | | | 0.4 | V | I _C = 0.2mA I _F = 20mA |
| On State Collector Current | I _{c(ON)} | 0.4 | | 2.4 | mA | V _{CE} = 5V I _F = 20mA |

NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm(.010") unless otherwise noted.