

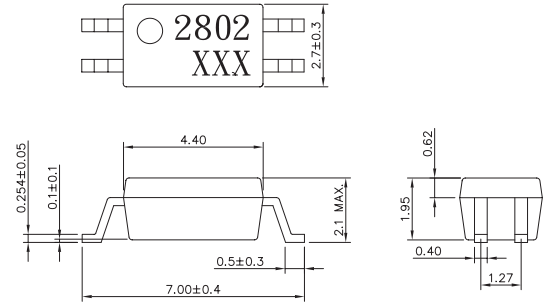
Features

- 1. High isolation voltage (BV=2500 Vrms)
- 2. Small and thin package (4pin SOP, Pin pitch 1.27 mm)
- 3. High current transfer ratio (CTR=2000% TYP. @ IF=1mA, VCE=2V)

Applications

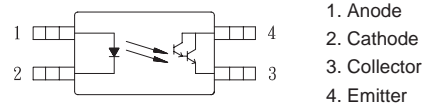
- 1. Programmable logic controllers
- 2. Measuring instruments
- 3. Hybrid IC

Outside Dimension:Unit (mm)



TOLERANCE : ± 0.2mm

Schematic:Top View



Absolute Maximum Ratings

(Ta=25°C)

| Parameter | | Symbol | Rating | Unit |
|-----------------------|----------------------------|--------|-------------|---------|
| Input | Forward current (DC) | IF | 50 | mA |
| | Reverse voltage | VR | 6 | V |
| | Power dissipation derating | Pd/°C | 0.6 | mW / °C |
| | Power dissipation | Pd | 60 | mW |
| | Peak forward current *1 | IFP | 1 | A |
| Output | Collector-emitter voltage | VCE0 | 40 | V |
| | Emitter-collector voltage | VECO | 6 | V |
| | Collector current | IC | 90 | mA |
| | Power dissipation derating | Pc/°C | 1.2 | mW / °C |
| | Total power dissipation | Pc | 120 | mW |
| Isolation voltage *2 | | Viso | 2500 | Vrms |
| Operating temperature | | Topr | -30 to +100 | °C |
| Storage temperature | | Tstg | -55 to +150 | °C |

*1 PW=100 μs, duty cycle=1%

*2 AC voltage for 1 minute at TA=25°C, RH=60% between input and output

Electro-optical Characteristics

(Ta=25°C)

| Parameter | | Symbol | Conditions | MIN. | TYP. | MAX. | Unit |
|--------------------------|----------------------------------|-----------|---------------------------|--------------------|------------------|------|------|
| Input | Forward voltage | VF | IF=5mA | | 1.1 | 1.4 | V |
| | Reverse current | IR | VR=5V | | | 5 | μA |
| | Terminal capacitance | Ct | V=0V, f=1.0MHZ | | 30 | | pF |
| Output | Collector-emitter dark current | ICE0 | VCE=40V, IF=0mA | | | 400 | nA |
| Transfer characteristics | Current transfer ratio (IC / IF) | CTR | IF=1mA, VCE=2V | 200 | 2000 | | % |
| | Collector saturation voltage | VCE (sat) | IF=1mA, IC=2mA | 0.5 | | 1.0 | V |
| | Isolation resistance | RI-o | VI-o=500VDC | 5X10 ¹⁰ | 10 ¹¹ | | ohm |
| | Floating capacitance | CI-o | V=0V, f=1.0MHZ | | 0.4 | | pF |
| | Response time (Rise) *1 | tr | VCE=5V, IC=2mA, RL=100ohm | | 200 | | μS |
| Response time (Fall) *1 | tf | | | 200 | | μS | |

*1 Test circuit for switching time

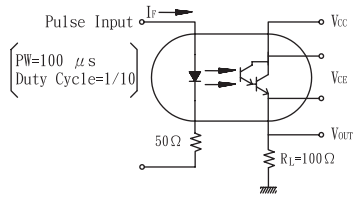


Fig.1 Forward Current vs. Ambient Temperature

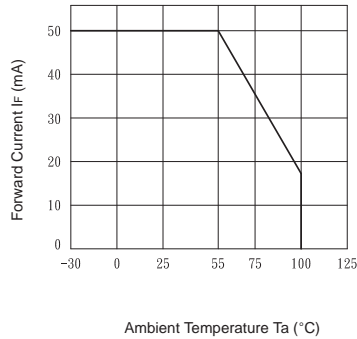


Fig.2 Collector Power Dissipation vs. Ambient Temperature

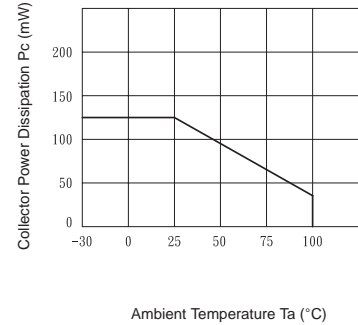


Fig.3 Peak Forward Current vs. Duty Ratio

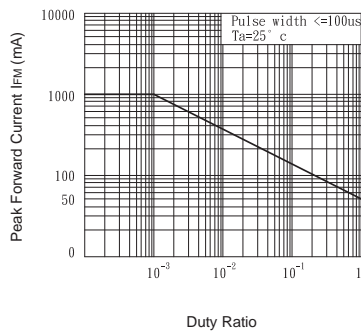


Fig.4 Forward Current vs. Ambient Temperature

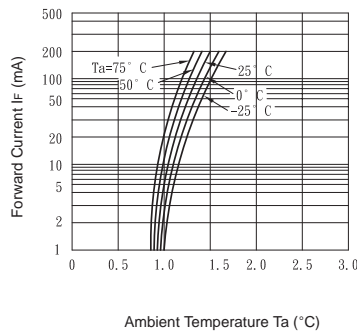


Fig.5 Current Transfer Ratio vs. Forward Current

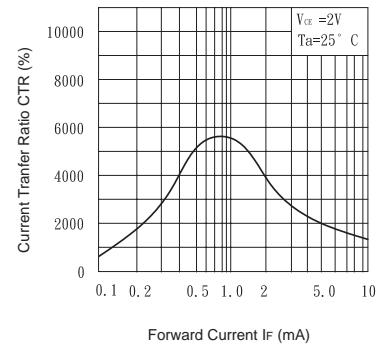


Fig.6 Collector Current vs. Collector-emitter Voltage

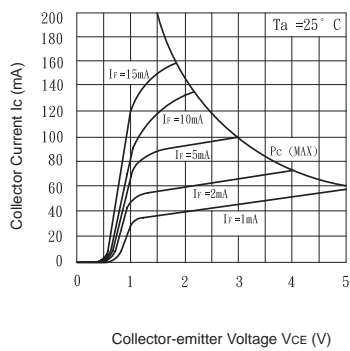


Fig.7 Relative Current Transfer Ratio vs. Ambient Temperature

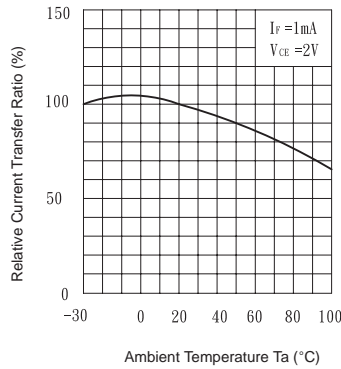


Fig.8 Collector-emitter Saturation Voltage vs. Ambient Temperature

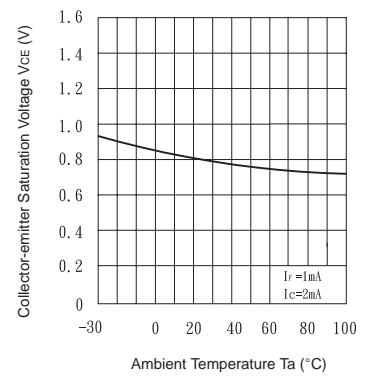


Fig.9 Collector Dark Current vs. Ambient Temperature

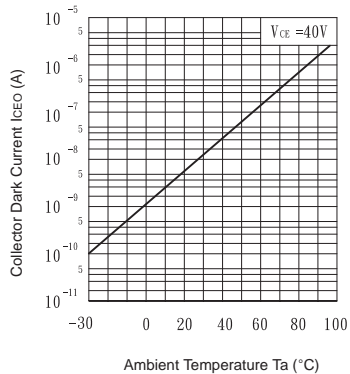


Fig.10 Response Time vs. Load Resistance

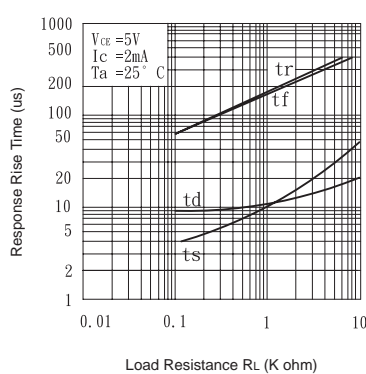


Fig.11 Collector-emitter Saturation Voltage vs. Forward Current

