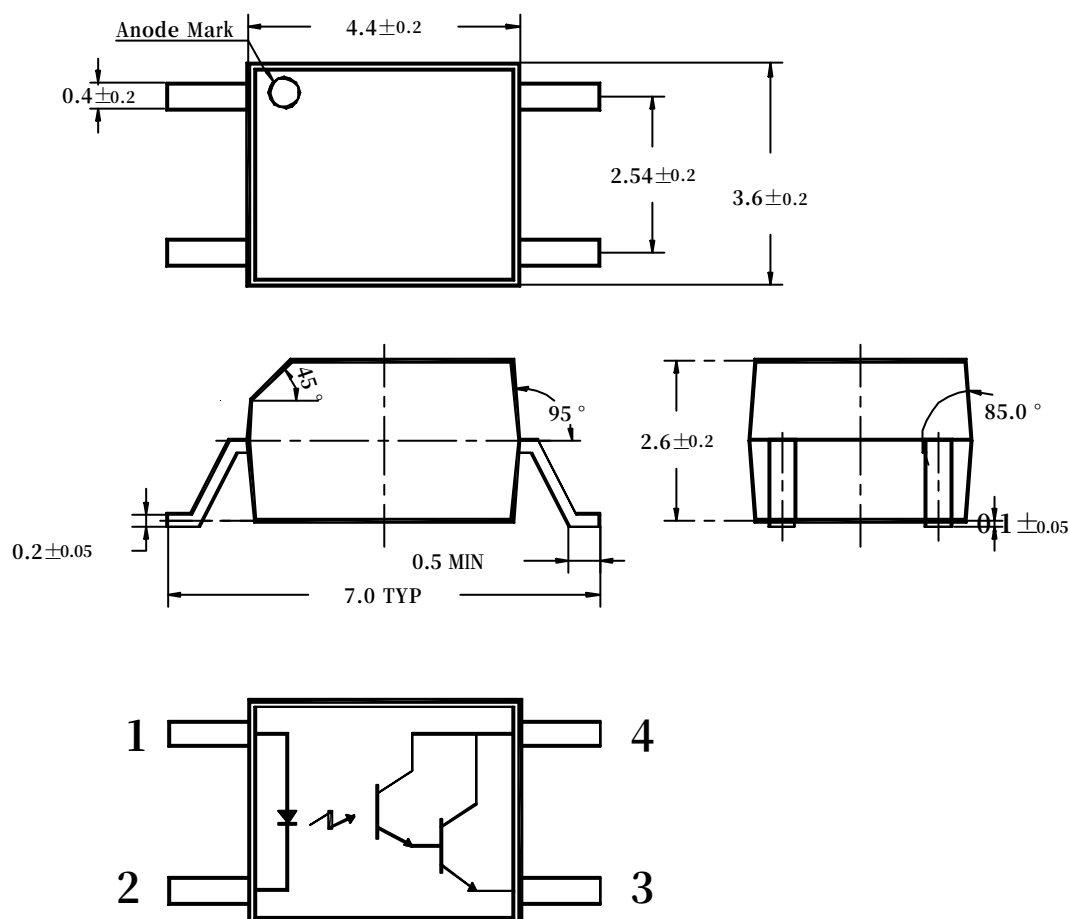


## Features

- Office machine
  - AC/DC input module
  - Telecommunication
  - Programmable controller
  - Power supply
- UL recognized file No. E192807

## Outline Dimensions

unit : mm



### PIN Connections

1. Anode
2. Cathode
3. Emitter
4. Collector

## Absolute maximum ratings

(Ta=25)

| Characteristic |                            | Symbol    | Ratings                 | Unit      |
|----------------|----------------------------|-----------|-------------------------|-----------|
| IRED           | Continuous Forward Current | $I_F$     | 50                      | mA        |
|                | Reverse Voltage            | $V_R$     | 5                       | V         |
|                | Power Dissipation          | $P_D$     | 70                      | mW        |
| Detector       | Collector-Emitter Voltage  | $V_{CEO}$ | 35                      | V         |
|                | Emitter-Collector Voltage  | $V_{ECO}$ | 6                       | V         |
|                | Collector Current          | $I_C$     | 50                      | mA        |
|                | Power Dissipation          | $P_D$     | 150                     | mW        |
| Coupler        | Operating Temperature      | $T_{opr}$ | -30~100                 | °C        |
|                | Storage Temperature        | $T_{stg}$ | -55~125                 | °C        |
|                | Soldering Temperature      | $T_{sol}$ | 260°C within 10 seconds |           |
|                | *1Isolation Voltage        | $V_{iso}$ | 3,750                   | $V_{rms}$ |

\*1.Measured at RH = 40 ~60% for 1 min

## Electrical Characteristics

| Parameter      |                                      | Symbol        | Test Condition                          | Min. | Typ. | Max. | Unit |
|----------------|--------------------------------------|---------------|-----------------------------------------|------|------|------|------|
| IRED           | Forward Current                      | $V_F$         | $I_F=10mA$                              | -    | 1.15 | 1.3  | V    |
|                | Reverse Current                      | $I_R$         | $V_R=5V$                                | -    | -    | 10   | uA   |
|                | Capacitance                          | $C_T$         | $V=0V, f=1MHz$                          | -    | 30   | -    | pF   |
| Detector       | Collector-Emitter Breakdown Voltage  | $BV_{CEO}$    | $I_C=0.5mA$                             | 35   | -    | -    | V    |
|                | Emitter-Collector Breakdown Voltage  | $BV_{ECO}$    | $I_E=10uA$                              | 6    | -    | -    | V    |
|                | Collector Dark Current               | $I_{CEO}$     | $I_F=0mA, V_{CE}=10V$                   | -    | -    | 100  | nA   |
|                | Capacitance                          | $C_{CE}$      | $V_{CE}=0, f=1MHz$                      | -    | 10   | -    | pF   |
| Coupler        | Current Transfer Ratio               | CTR           | $I_F=1mA, V_{CE}=2V$                    | 600  | 1600 | -    | %    |
|                | Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_F=20mA, I_C=5mA$                     | -    | 0.6  | 0.9  | V    |
|                | Input-Output Capacitance             | $C_{I-O}$     | $V=0V, f=1MHz$                          | -    | 0.8  | -    | pF   |
| Switching Time | Rise Time                            | $t_r$         | $V_{CC}=5V, R_L=100\Omega$<br>$I_C=2mA$ | -    | 60   | 300  | usec |
|                | Fall Time                            | $t_f$         |                                         | -    | 60   | 250  |      |

# Characteristic Diagrams

Fig. 1  $I_F - V_F$

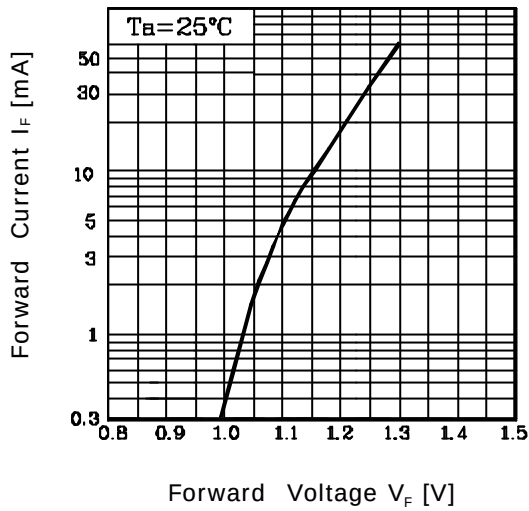


Fig. 2 CTR -  $I_F$

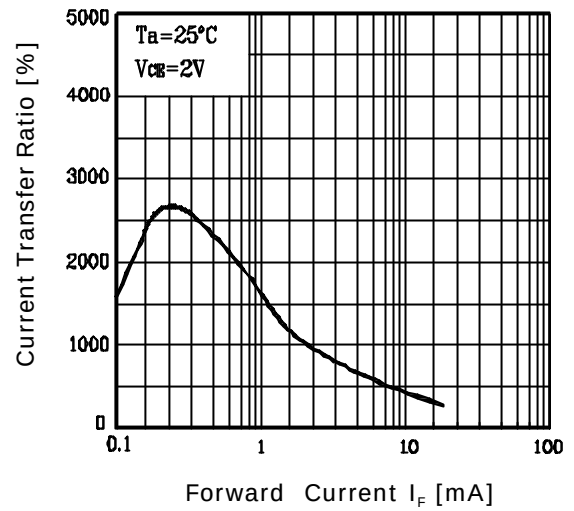


Fig. 3  $I_F - T_a$

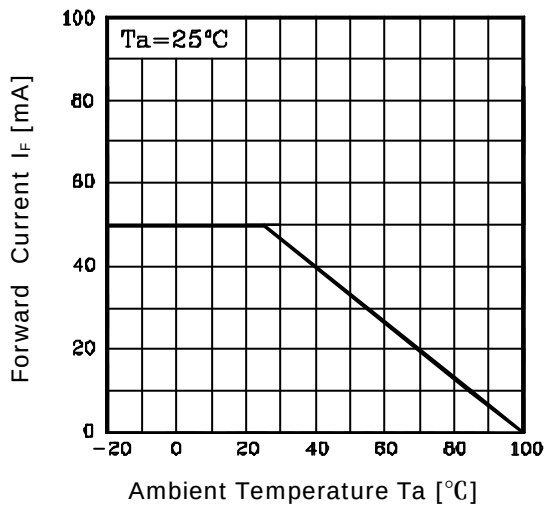


Fig. 4  $P_D - T_a$

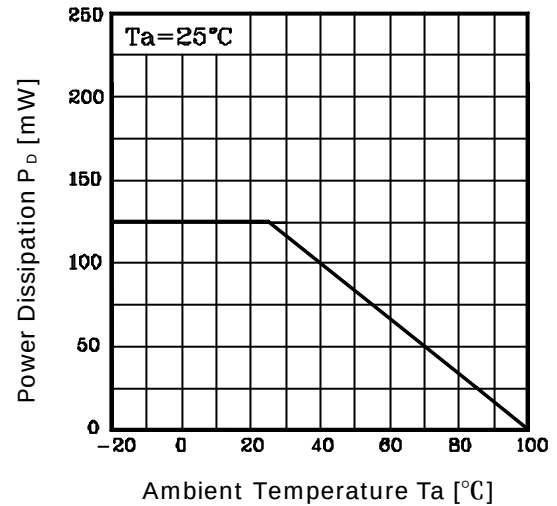


Fig. 5  $I_{CEO} - T_a$

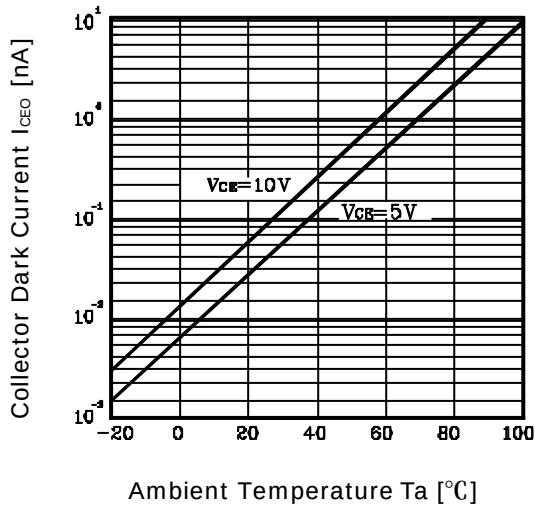


Fig. 5  $I_r - T_a$

