

### DESCRIPTION:

The products are transistor opto-couplers in a SSOP4 package. The device is a photoelectric coupler composed of light-emitting diode and phototransistor. The products are widely used in switching power supply, intelligent meter, industrial control, measuring instruments, office equipment such as copiers, household appliances: such as air conditioners, fans, water heaters, etc.

### MAIN FEATURES

High isolation 3750 VRMS

Operating temperature range -40°C to 125°C

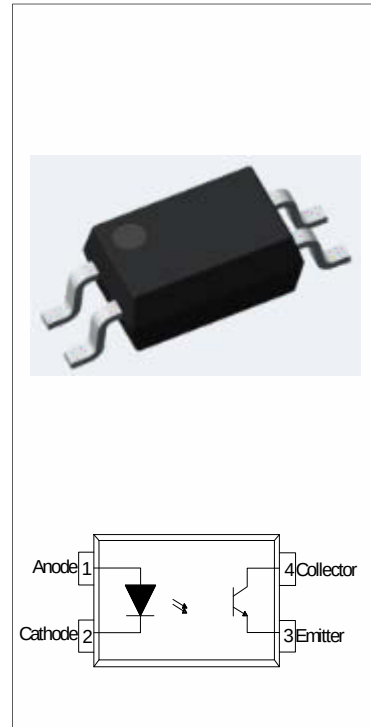
RoHS & REACH Compliance

HBM: H3A; MM: M4; CDM:C3

CQC approved

VDE approved

UL approved



### ABSOLUTE MAXIMUM RATINGS (Temperature=25°C)

| Parameter               |                           | Symbol    | Value    | Unit |
|-------------------------|---------------------------|-----------|----------|------|
| Input                   | Forward Current           | $I_F$     | 50       | mA   |
|                         | Peak Forward Current      | $I_{FP}$  | 1        | A    |
|                         | Reverse Voltage           | $V_R$     | 6        | V    |
|                         | Power Dissipation         | $P_D$     | 75       | mW   |
| Output                  | Collector-emitter Voltage | $V_{CEO}$ | 80       | V    |
|                         | Emitter-collector Voltage | $V_{ECO}$ | 7        | V    |
|                         | Collector Current         | $I_C$     | 50       | mA   |
|                         | Power Dissipation         | $P_C$     | 150      | mW   |
| Total Power Dissipation |                           | $P_{tot}$ | 225      | mW   |
| Isolation Voltage       |                           | $V_{iso}$ | 3750     | Vrms |
| Operating Temperature   |                           | $T_{opr}$ | -40~+125 |      |
| Junction Temperature    |                           | $T_j$     | 135      |      |
| Storage Temperature     |                           | $T_{stg}$ | -55~+125 |      |
| Soldering Temperature   |                           | $T_{sol}$ | 260      |      |

NOTE1:

NOTE2:

**ELECTRICAL CHARACTERISTICS** (Temperature=25°C)

| Parameter |                                     | Symbol     | Condition                        | Min. | Typ. | Max. | Unit          |
|-----------|-------------------------------------|------------|----------------------------------|------|------|------|---------------|
| Input     | Forward Voltage                     | $V_F$      | $I_F=10\text{mA}$                | -    | 1.2  | 1.5  | V             |
|           | Reverse Current                     | $I_R$      | $V_R=6\text{V}$                  | -    | -    | 1    | $\mu\text{A}$ |
|           | Terminal Capacitance                | $C_t$      | $V=0$ ,<br>$f=1\text{MHz}$       | -    | 30   | 250  | pF            |
| Output    | Collector-Emitter dark current      | $I_{CEO}$  | $V_{CE}=20\text{V}$ ,<br>$I_F=0$ | -    | -    | 50   | nA            |
|           | Collector-Emitter breakdown voltage | $BV_{CEO}$ | $I_C=0.1\text{mA}$<br>$I_F=0$    | 80   | -    | -    | V             |
|           | Emitter-Collector breakdown voltage | $BV_{ECO}$ | $I_E=0.1\text{mA}$<br>$I_F=0$    | 7    | -    | -    | V             |

Current transfer ratio

$$\frac{CTR}{F_{break}}$$

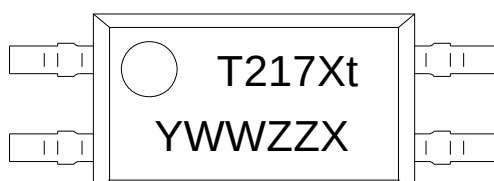
Transfer  
Characteristics

ORDERING INFORMATION

|                                   |              |            |                     |              |                    |            |                 |
|-----------------------------------|--------------|------------|---------------------|--------------|--------------------|------------|-----------------|
| <u>J</u>                          | <u>OC</u>    | <u>T</u>   | <u>217</u>          | <u>P</u>     | <u>t</u>           | <u>-S4</u> | <u>/</u>        |
| JieJie Microelectronics Co., Ltd. | Opto Coupler | Transistor | Marketization Model | CTR Rank:P/Q | t:High Temperature | SSOP4      | None:T1<br>R:T2 |

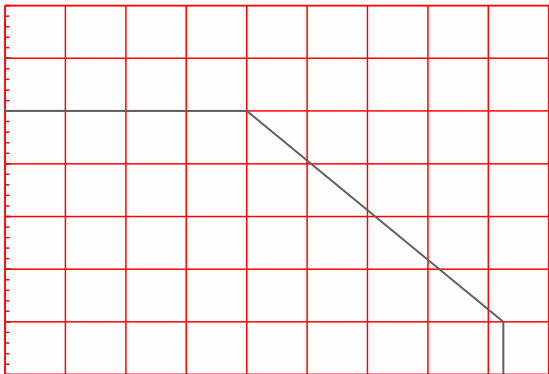
| Packing Quantity |          |
|------------------|----------|
| Option           | Quantity |
|                  |          |

MARKING

|                                                                                     |                                     |
|-------------------------------------------------------------------------------------|-------------------------------------|
|  | <p><u>YWWZZX</u></p> <p>LOT NO.</p> |
|-------------------------------------------------------------------------------------|-------------------------------------|

Characteristics Curves

**FIG.1:** Max. Allowable LED Forward Current vs. Ambient Temperature

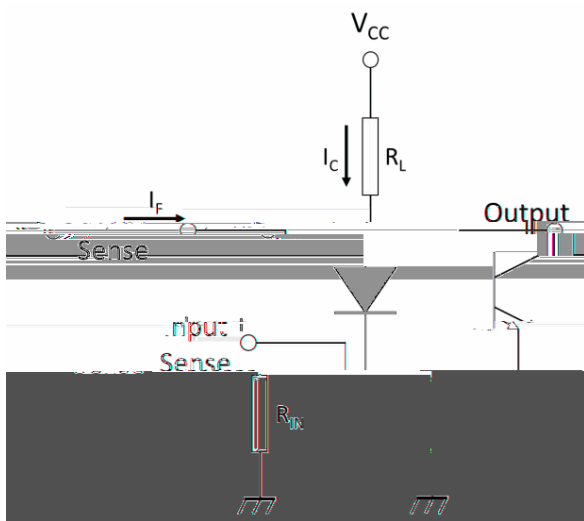


**FIG.2:** Collector Power Dissipation vs. Ambient Temperature

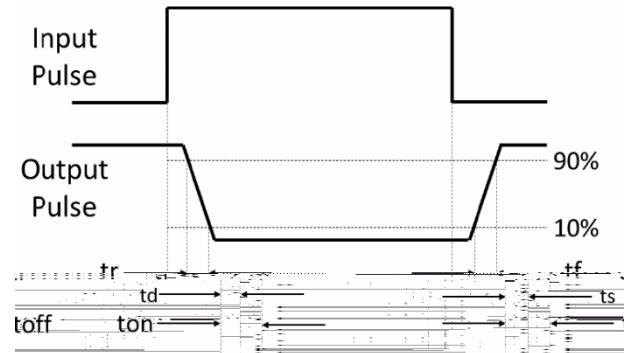


## Test Circuits

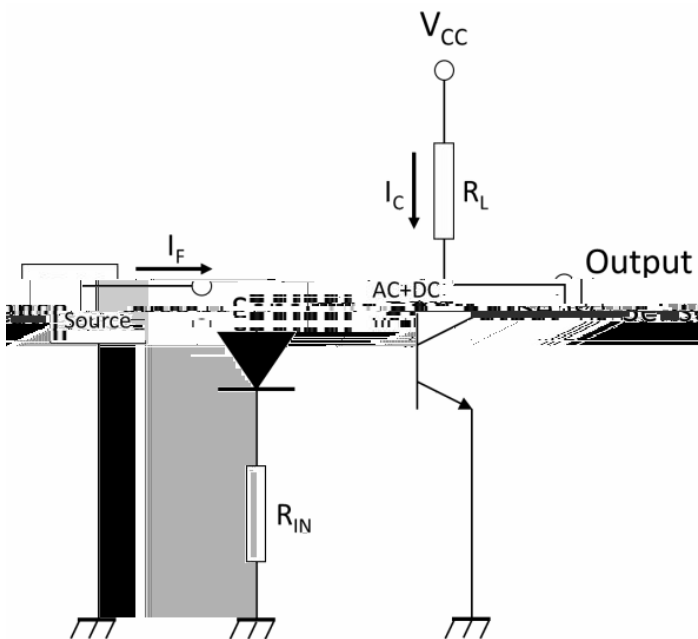
**FIG.11:** Test Circuits of Response Time



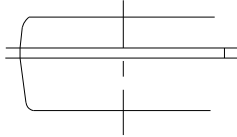
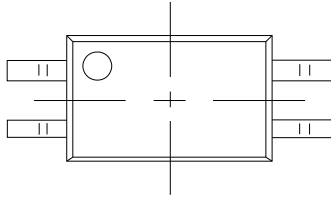
**FIG.12:** Curves of Response Time



**FIG.13:** Test Circuits of Frequency Response

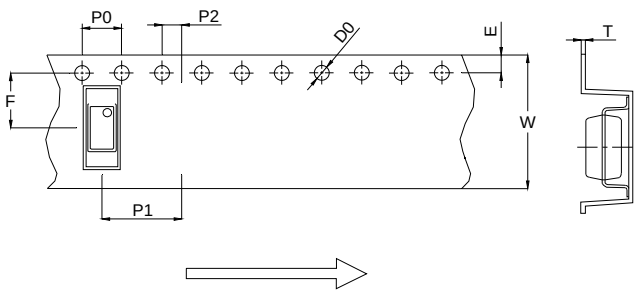


**Package Dimension (Unit: mm)**



CARRIER TAPE SPECIFICATIONS (Dimensions in mm unless otherwise stated)

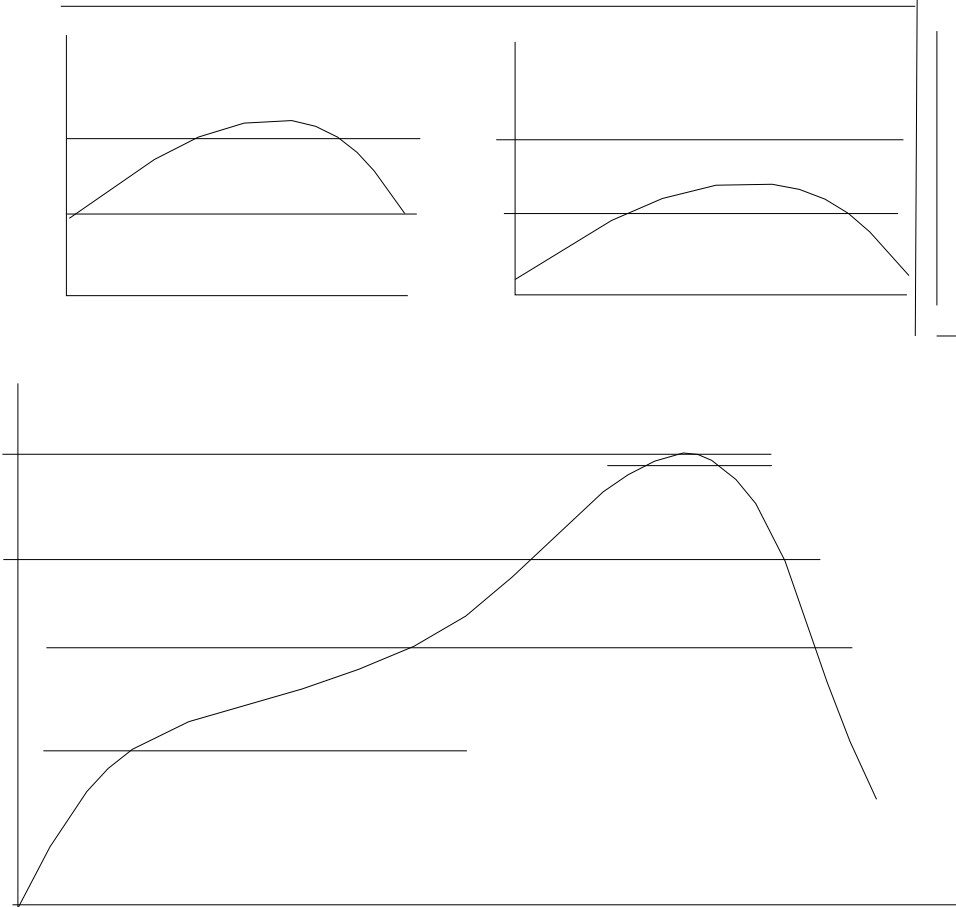
Option None/R



| Ref. | Dimensions  |      |       |        |       |       |
|------|-------------|------|-------|--------|-------|-------|
|      | Millimeters |      |       | Inches |       |       |
|      | Min.        | Typ. | Max.  | Min.   | Typ.  | Max.  |
| D0   |             | 1.50 | 1.60  |        | 0.059 | 0.063 |
| P0   | 3.90        |      | 4.10  | 0.154  |       | 0.161 |
| P1   | 7.90        |      | 8.10  | 0.311  |       | 0.319 |
| P2   | 1.90        |      | 2.10  | 0.075  |       | 0.083 |
| E    | 1.65        |      | 1.85  | 0.065  |       | 0.073 |
| F    | 5.40        |      | 5.60  | 0.213  |       | 0.220 |
| T    | 0.20        |      | 0.30  | 0.008  |       | 0.012 |
| W    | 11.90       |      | 12.30 | 0.469  |       | 0.484 |



REFLOW INFORMATION



Note: