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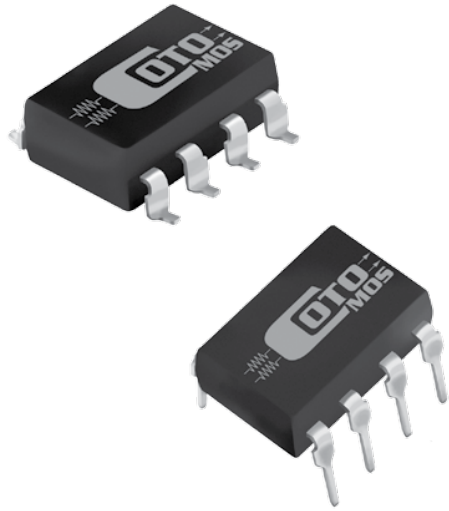
[Coto Technology](#)

[CSA17](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

# CTA17/CSA17



## CotoMOS® CTA17/CSA17

The CTA17 and CSA17 feature current switching capability to 90mA with a low on resistance of 50Ω Maximum. Designed for Security, Measurement and Instrumentation applications the CotoMOS® relay is capable of handling 400V load conditions. If your requirements are different please contact your Coto Applications Engineer for assistance through [www.cotorelay.com](http://www.cotorelay.com).

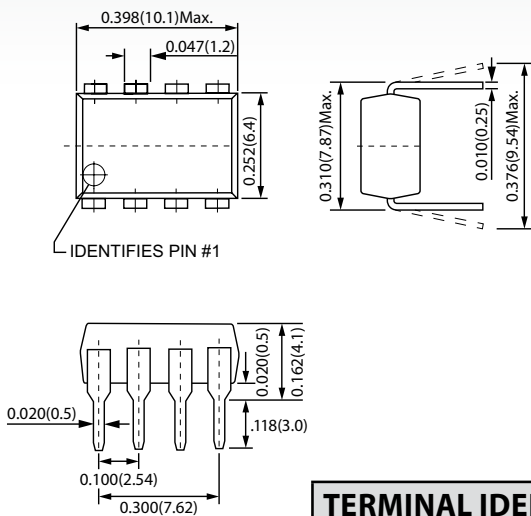
## CTA17/CSA17 Features

- ▶ Contact Form: 1A
- ▶ Load Voltage: 350V Minimum
- ▶ Operation LED Current: 3.0mA Maximum
- ▶ Load Current: 120mA Maximum
- ▶ On-Resistance: 30Ω Maximum
- ▶ Low Off-State Leakage Current: 1μA Maximum
- ▶ I/O Breakdown Voltage: 3750Vrms Minimum

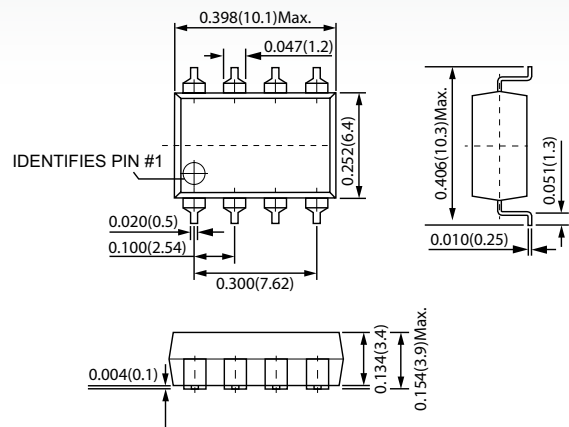
## DIMENSIONS

in Millimeters

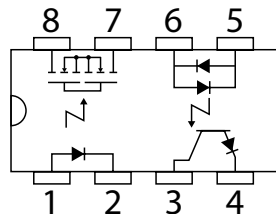
### CTA17



### CSA17



## TERMINAL IDENTIFICATION



- |                                    |                              |
|------------------------------------|------------------------------|
| 1: +LED - MOS Relay                | 5: LED - Phototransistor +/- |
| 2: -LED - MOS Relay                | 6: LED - Phototransistor +/- |
| 3: Collector - Phototransistor +/- | 7: Load - MOS Relay Output   |
| 4: Emitter - Phototransistor +/-   | 8: Load - MOS Relay Output   |

## CTA17/CSA17 MAXIMUM RATINGS (Ambient Temperature: 25°C)

| Parameters                   | Symbol            | Units | Value                |
|------------------------------|-------------------|-------|----------------------|
| <b>INPUT SPECIFICATIONS</b>  |                   |       |                      |
| Continuous LED Current       | I <sub>F</sub>    | mA    | 50mA                 |
| Peak LED Current             | I <sub>FP</sub>   | mA    | 1A                   |
| LED Reverse Voltage          | V <sub>R</sub>    | V     | 5V                   |
| Input Power Dissipation      | P <sub>in</sub>   | mW    | 150mW                |
| <b>OUTPUT SPECIFICATIONS</b> |                   |       |                      |
| Load Voltage                 | V <sub>L</sub>    | V     | 350V (AC peak or DC) |
| Load Current                 | I <sub>L</sub>    | A     | 120mA                |
| Peak Load Current            | I <sub>Peak</sub> | A     | 350mA                |
| Output Power Dissipation     | P <sub>Out</sub>  | mW    | 450mW                |
| <b>RELAY SPECIFICATIONS</b>  |                   |       |                      |
| Total Power Dissipation      | P <sub>T</sub>    | mW    | 600mW                |
| I/O Breakdown Voltage        | V <sub>I/O</sub>  | V     | 3750Vrms             |

## CTA17/CSA17 RELAY ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)

|                     | Parameters                | Symbol             | Test Conditions                          | Units | Min | Typ  | Max |
|---------------------|---------------------------|--------------------|------------------------------------------|-------|-----|------|-----|
| Input Pin<br>(1,2)  | LED Forward Voltage       | V <sub>F</sub>     | I <sub>F</sub> =10mA                     | V     | 0.9 | 1.2  | 1.4 |
|                     | Reverse Current           | I <sub>R</sub>     | V <sub>R</sub> =5V                       | uA    |     |      | 10  |
|                     | Operation LED Current     | I <sub>F On</sub>  |                                          | mA    |     | 0.7  | 3.0 |
|                     | Recovery LED Voltage      | V <sub>F Off</sub> |                                          | V     | 0.5 | 1.1  |     |
| Output Pin<br>(7,8) | Load Voltage (Peak)       | V <sub>L</sub>     |                                          | V     | 350 |      |     |
|                     | Load Current (Continuous) | I <sub>L</sub>     |                                          | mA    |     |      | 120 |
|                     | Peak Load Current         | I <sub>Peak</sub>  |                                          | mA    |     |      | 350 |
|                     | On-Resistance             | R <sub>On</sub>    |                                          | Ω     |     | 19   | 30  |
|                     | Off-State Leakage Current | I <sub>Leak</sub>  | V <sub>L</sub> =350V                     | μA    |     |      | 1.0 |
| TRANSMISSION        |                           |                    |                                          |       |     |      |     |
|                     | Turn-On Time              | T <sub>On</sub>    | I <sub>F</sub> =5mA, V <sub>L</sub> =20V | ms    |     | 0.3  | 2.5 |
|                     | Turn-Off Time             | T <sub>Off</sub>   |                                          | ms    |     | 0.04 | 1.0 |
| COUPLED             |                           |                    |                                          |       |     |      |     |
|                     | Output Capacitance        | C <sub>Out</sub>   | f=1MHz                                   | pF    |     | 115  |     |

## CTA17/CSA17 DETECTOR ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)

|                         | Parameters                   | Symbol               | Test Conditions                             | Units | Min | Typ | Max |
|-------------------------|------------------------------|----------------------|---------------------------------------------|-------|-----|-----|-----|
| <b>Input Pin (5,6)</b>  | LED Forward Voltage          | V <sub>F</sub>       | I <sub>F</sub> =+/-10mA                     | V     | 0.9 | 1.2 | 1.5 |
| <b>Output Pin (3,4)</b> | C-E Breakdown Voltage        | V <sub>ceo</sub>     | I <sub>c</sub> =0.1mA                       | V     | 35  |     |     |
|                         | E-C Breakdown Voltage        | V <sub>ceo</sub>     | I <sub>e</sub> =0.1mA                       | V     | 5   |     |     |
|                         | Collector Dark Current       | I <sub>ceo</sub>     | V <sub>ce</sub> =5V, I <sub>F</sub> =0mA    | nA    |     |     | 500 |
|                         | Collector Saturation Voltage | V <sub>ce(sat)</sub> | I <sub>F</sub> =±16mA, I <sub>c</sub> =2mA  | V     |     |     | 0.5 |
|                         | Current Transfer Ratio       | CTR                  | I <sub>F</sub> =±6mA, V <sub>ce</sub> =0.5V | %     | 33  |     |     |

### Environmental Ratings:

Operating Temp: -40°C to +85°C; Storage Temp: -40°C to +120°C.  
 All electrical parameters measured at 25°C unless otherwise specified.