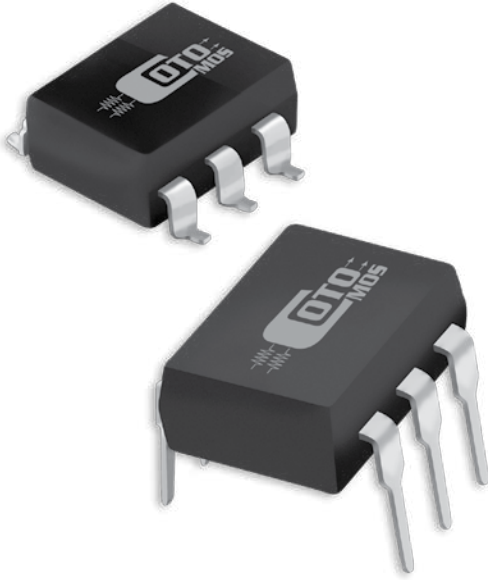


**CotoMOS® CT138/CS138**

The CT138 and CS138 feature current switching capability to 80mA with a low on resistance of 60Ω Maximum. Designed for Security, Measurement and Instrumentation applications the CotoMOS® relay is capable of handling 600V load conditions. If your requirements are different please contact your Coto Applications Engineer for assistance through [www.cotorelay.com](http://www.cotorelay.com).

**CT138/CS138 Features**

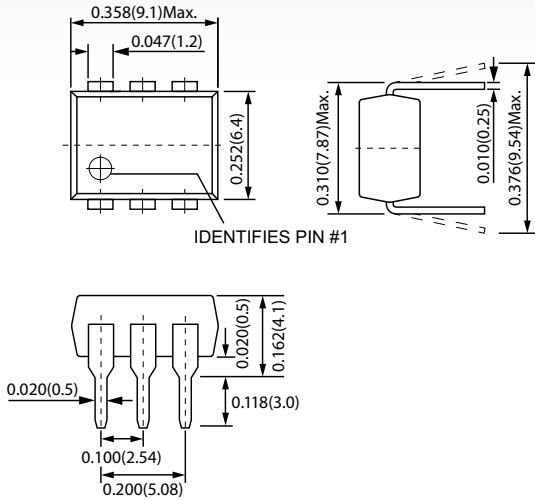
- ▶ Contact Form: 1A
- ▶ Load Voltage: 600V Maximum
- ▶ Operation LED Current: 3.0mA Maximum
- ▶ Load Current: 80mA Maximum
- ▶ On-Resistance: 60Ω Maximum
- ▶ Low Off-State Leakage Current: 1.0μA Maximum
- ▶ I/O Breakdown Voltage: 1500Vrms Minimum
- ▶ Suffix - H for I/O Breakdown Voltage: 5000Vrms Minimum



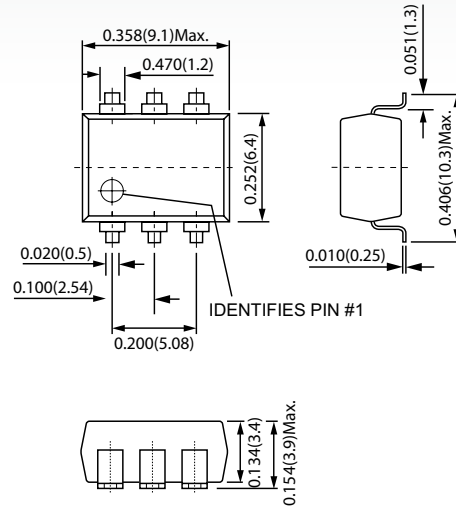
**DIMENSIONS**

*in Inches (Millimeters)*

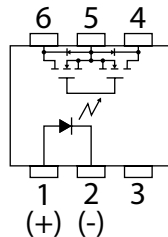
CT138



CS138



**TERMINAL IDENTIFICATION**



- |                  |                      |
|------------------|----------------------|
| 1: Anode (LED)   | 4,6: Drain (MOS FET) |
| 2: Cathode (LED) | 5: Source (MOS FET)  |
| 3: NC            |                      |

<b>CT138/CS138 MAXIMUM RATINGS (Ambient Temperature: 25°C)</b>			
<b>Parameters</b>	<b>Symbol</b>	<b>Units</b>	<b>Value</b>
<b>INPUT SPECIFICATIONS</b>			
Continuous LED Current	I <sub>F</sub>	mA	50
Peak LED Current	I <sub>FP</sub>	mA	500
LED Reverse Voltage	V <sub>R</sub>	V	5
Input Power Dissipation	P <sub>in</sub>	mW	75
<b>OUTPUT SPECIFICATIONS</b>			
Load Voltage	V <sub>L</sub>	V (AC peak or DC)	600
Load Current	I <sub>L</sub>	mA	80
Peak Load Current	I <sub>Peak</sub>	A	0.2
Output Power Dissipation	P <sub>Out</sub>	mW	450
<b>RELAY SPECIFICATIONS</b>			
Total Power Dissipation	P <sub>T</sub>	mW	500
I/O Breakdown Voltage	V <sub>I/O</sub>	V <sub>rms</sub>	1500
Operating Temperature	T <sub>Opr</sub>	°C	-40 ~ +85
Storage Temperature	T <sub>Stg</sub>	°C	-40 ~ +100

<b>CT138/CS1382 ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)</b>						
<b>Parameters</b>	<b>Symbol</b>	<b>Test Conditions</b>	<b>Units</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
<b>INPUT</b>						
LED Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	V	1.0		1.5
Operation LED Current	I <sub>F On</sub>		mA		0.9	3.0
Recovery LED Voltage	V <sub>F Off</sub>		V	0.5		
<b>OUTPUT</b>						
On-Resistance Drain to Drain	R <sub>On</sub>	I <sub>F</sub> =5mA, I <sub>L</sub> =Rating Time to flow is within 1 sec.	Ω		35.0	60.0
Off-State Leakage Current	I <sub>Leak</sub>	V <sub>L</sub> =600V	μA			1.0
Output Capacitance	C <sub>Out</sub>	V <sub>L</sub> =0V, f=1MHz	pF		95	
<b>TRANSMISSION</b>						
Turn-On Time	T <sub>On</sub>	I <sub>F</sub> =10mA, I <sub>L</sub> =Rating	ms		0.1	1.0
Turn-Off Time	T <sub>Off</sub>		ms		0.05	1.0
<b>COUPLED</b>						
I/O Insulation Resistance	R <sub>I/O</sub>		Ω	10 <sup>9</sup>		
I/O Capacitance	C <sub>I/O</sub>	f=1MHz	pF		1.3	

**Environmental Ratings:**

Operating Temp: -40°C to +85°C; Storage Temp: -40 to +100 C.  
All electrical parameters measured at 25° C unless otherwise specified.