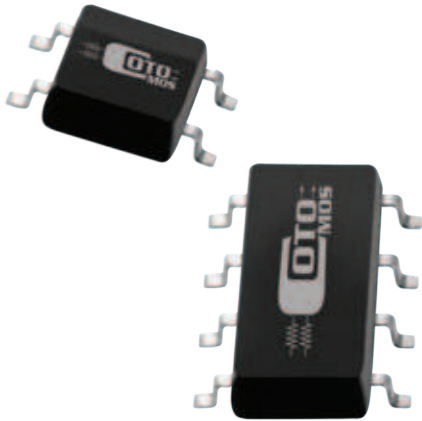


## CotoMOS C231S/C331S

When small size and high performance are needed, the SOP package, such as the C231S or C331S, is the industry choice. Both the C231S and the C331S feature high load voltage capability and the opportunity for efficient board layout, saving precious board space without compromising on performance. In addition, the C331S offers two fully-independent form A channels for further space savings. Both relays are ideally suited to the needs of Test and Measurement, Industrial, and Telecommunications.



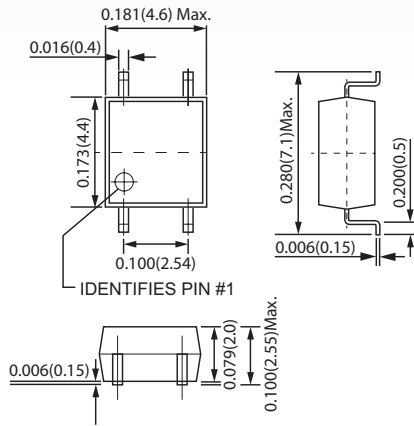
### C231S/C331S Features

- ▶ Contact Form: C231S: 1a / C331S: 2a
- ▶ Load Voltage: 350V Maximum
- ▶ Operation LED Current: 3.0mA Maximum
- ▶ Load Current: C231S: 120mA Maximum / C331S: 100mA Maximum
- ▶ On-Resistance: 24Ω Maximum
- ▶ Output Capacitance: 115pF Typical
- ▶ Low Off-State Leakage Current: 1.0μA Maximum

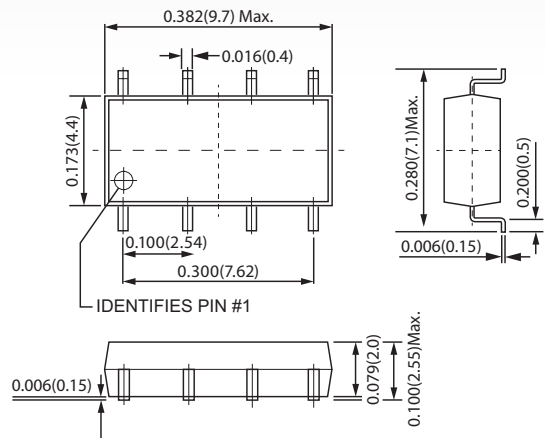
## DIMENSIONS

*in Inches (Millimeters)*

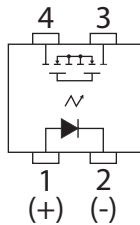
C231S



C331S



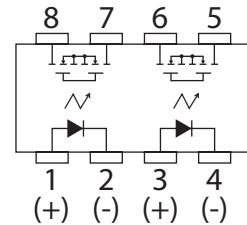
### TERMINAL IDENTIFICATION



1: Anode (LED)  
2: Cathode (LED)

3,4: Drain (MOSFET)

### TERMINAL IDENTIFICATION



1,3: Anode (LED)  
2,4: Cathode (LED)

5,6,7,8: Drain (MOSFET)

## C231S/C331S 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	500mA
LED Reverse Voltage	V <sub>R</sub>	V	5V
Input Power Dissipation	P <sub>in</sub>	mW	75mW
<b>OUTPUT SPECIFICATIONS</b>			
Load Voltage	V <sub>L</sub>	V	350V (AC peak or DC)
Load Current	I <sub>L</sub>	A	120mA (1Ch) / 100mA (2Ch)
Peak Load Current	I <sub>Peak</sub>	A	0.6A
Output Power Dissipation	P <sub>Out</sub>	mW	300mW (1Ch) / 450mW (2Ch)
<b>RELAY SPECIFICATIONS</b>			
Total Power Dissipation	P <sub>T</sub>	mW	350mW (1Ch) / 500mW (2Ch)
I/O Breakdown Voltage	V <sub>I/O</sub>	V	1500Vrms
Operating Temperature	T <sub>Opr</sub>		-40°C ~ +85°C
Storage Temperature	T <sub>Stg</sub>		-40°C ~ +100°C

## C231S/C331S ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)

Parameters	Symbol	Test Conditions	Units	Min	Typ	Max
<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		17	24
Off-State Leakage Current	I <sub>Leak</sub>	V <sub>L</sub> =350V	μA			1.0
Output Capacitance	C <sub>Out</sub>	V <sub>L</sub> =0V, f=1MHz	pF		115	
<b>TRANSMISSION</b>						
Turn-On Time	T <sub>On</sub>	I <sub>F</sub> =5mA, I <sub>L</sub> =Rating	ms		0.25	0.5
Turn-Off Time	T <sub>Off</sub>		ms		0.05	0.2
<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.