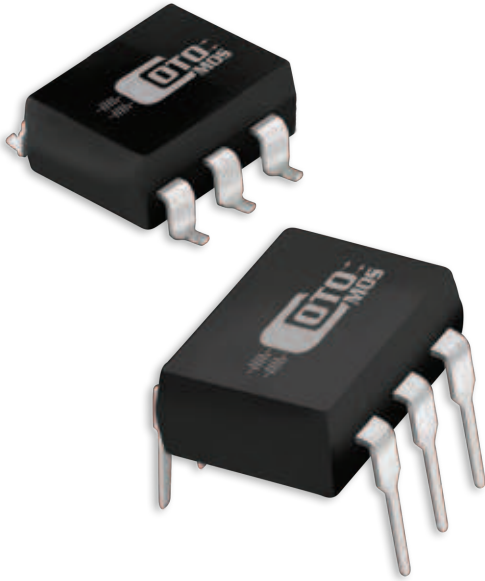


CotoMOS CT138/CS138

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.

CT138/CS138 Features

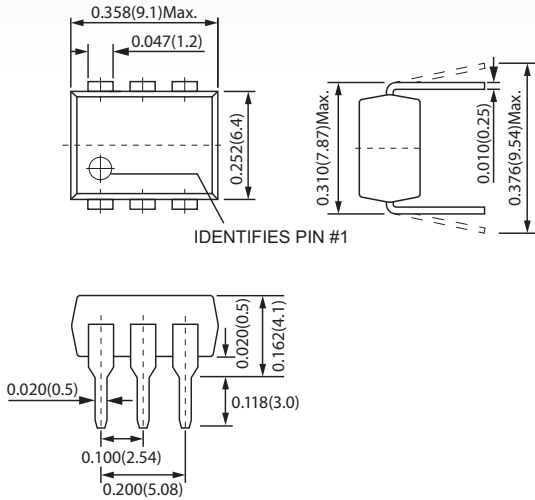
- ▶ Contact Form: 1a
- ▶ Load Voltage: 600V Maximum
- ▶ Operation LED Current: 3.0mA Maximum
- ▶ Load Current: 80mA Maximum
- ▶ On-Resistance: 60Ω Maximum
- ▶ Low Off-State Leakage Current: 1.0μA Maximum
- ▶ I/O Breakdown Voltage: 1500Vrms Minimum
- ▶ Suffix - H for I/O Breakdown Voltage: 5000Vrms Minimum



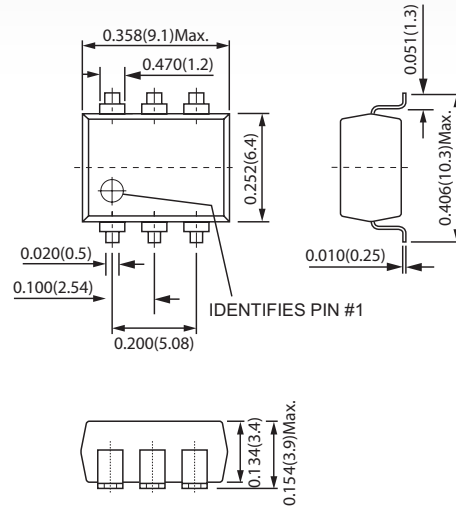
DIMENSIONS

in Inches (Millimeters)

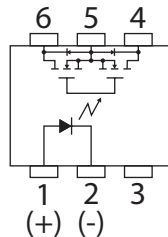
CT138



CS138



TERMINAL IDENTIFICATION



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

4,6: Drain (MOS FET)
5: Source (MOS FET)

CT138/CS138 MAXIMUM RATINGS (Ambient Temperature: 25°C)

Parameters	Symbol	Units	Value
INPUT SPECIFICATIONS			
Continuous LED Current	I _F	mA	50mA
Peak LED Current	I _{FP}	mA	500mA
LED Reverse Voltage	V _R	V	5V
Input Power Dissipation	P _{in}	mW	75mW
OUTPUT SPECIFICATIONS			
Load Voltage	V _L	V	600V (AC peak or DC)
Load Current	I _L	A	80mA
Peak Load Current	I _{Peak}	A	0.2A
Output Power Dissipation	P _{Out}	mW	450mW
RELAY SPECIFICATIONS			
Total Power Dissipation	P _T	mW	500mW
I/O Breakdown Voltage	V _{I/O}	V	1500Vrms
Operating Temperature	T _{Opr}		-40°C ~ +85°C
Storage Temperature	T _{Stg}		-40°C ~ +100°C

CT138/CS1382 ELECTRICAL SPECIFICATIONS (Ambient Temperature: 25°C)

Parameters	Symbol	Test Conditions	Units	Min	Typ	Max
INPUT						
LED Forward Voltage	V _F	I _F =10mA	V	1.0		1.5
Operation LED Current	I _{F On}		mA		0.9	3.0
Recovery LED Voltage	V _{F Off}		V	0.5		
OUTPUT						
On-Resistance Drain to Drain	R _{On}	I _F =5mA, I _L =Rating Time to flow is within 1 sec.	Ω		35.0	60.0
Off-State Leakage Current	I _{Leak}	V _L =600V	μA			1.0
Output Capacitance	C _{Out}	V _L =0V, f=1MHz	pF		95	
TRANSMISSION						
Turn-On Time	T _{On}	I _F =10mA, I _L =Rating	ms		0.1	1.0
Turn-Off Time	T _{Off}		ms		0.05	1.0
COUPLED						
I/O Insulation Resistance	R _{I/O}		Ω	10 ⁹		
I/O Capacitance	C _{I/O}	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.