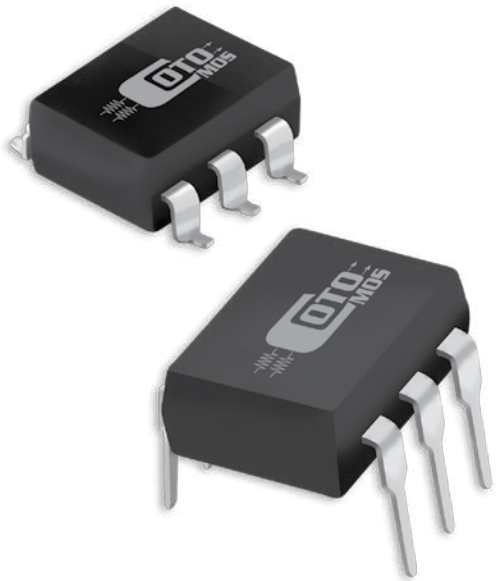


CotoMOS® CT138/CS138

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.

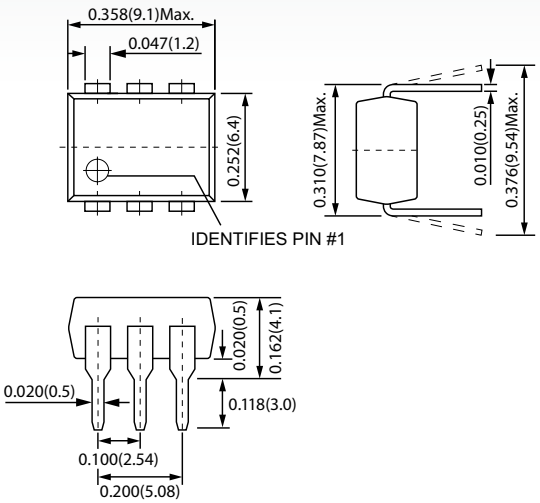
CT138/CS138 Features

- 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

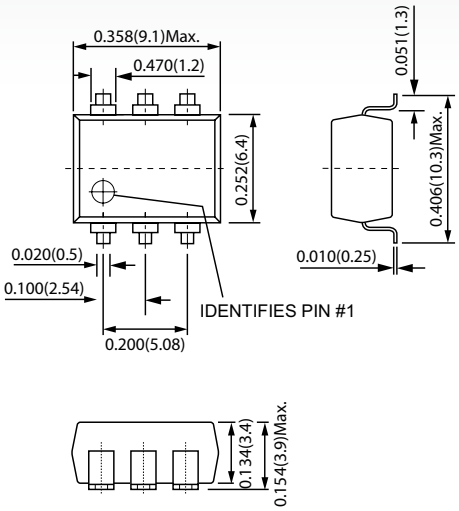
DIMENSIONS

in Inches (Millimeters)

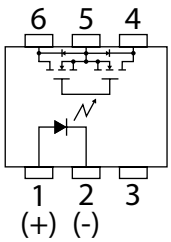
CT138



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	50
Peak LED Current	I_{FP}	mA	500
LED Reverse Voltage	V_R	V	5
Input Power Dissipation	P_{in}	mW	75
OUTPUT SPECIFICATIONS			
Load Voltage	V_L	V (AC peak or DC)	600
Load Current	I_L	mA	80
Peak Load Current	I_{Peak}	A	0.2
Output Power Dissipation	P_{Out}	mW	450
RELAY SPECIFICATIONS			
Total Power Dissipation	P_T	mW	500
I/O Breakdown Voltage	$V_{I/O}$	Vrms	1500
Operating Temperature	T_{Opr}	°C	-40 ~ +85
Storage Temperature	T_{Stg}	°C	-40 ~ +100

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

Parameters	Symbol	Test Conditions	Units	Min	Typ	Max
INPUT						
LED Forward Voltage	V_F	I=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.

Mouser Electronics

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Coto Technology:
CT138