

1 Description

The CT10 is an overmolded dry reed switch. It is single-pole, single throw (SPST) type, having normally open ruthenium contacts.

The sensor is a double-ended type and may be actuated with an electromagnet, a permanent magnet or a combination of both.

The device is designed for SMD mounting and is available in three lead configurations.

2 Features

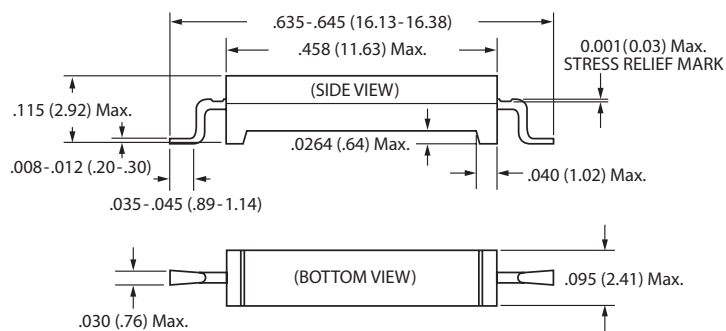
- ▶ Ideal for SMD pick and place
- ▶ Tape and reel packaging
- ▶ 10W rating
- ▶ Rugged encapsulation
- ▶ Excellent life and reliability
- ▶ UL File 67117
- ▶ RoHS compliant

3 Applications

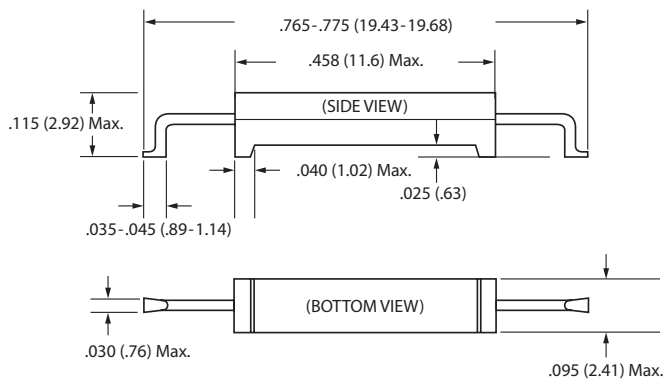
- ▶ Proximity Sensing
- ▶ Security Alarm Sensor
- ▶ Level Sensor
- ▶ Flow Sensor
- ▶ Pulse Counter

4 Dimensions Inches (Millimeters)

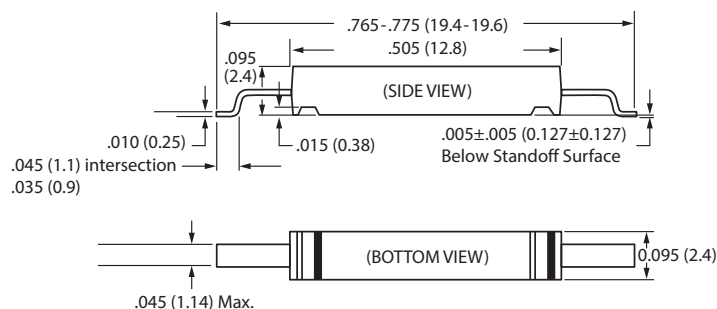
4.1 CT10-XXXX-G1



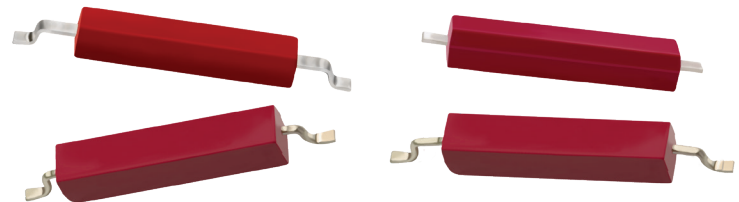
4.2 CT10-XXXX-G2



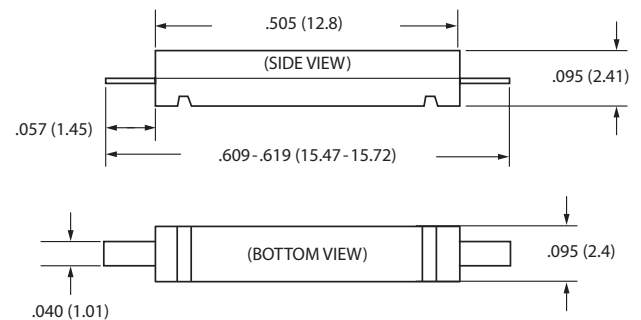
4.3 CT10-XXXX-G4



Device Packages



4.4 CT10-XXXX-A2



5 Ordering Information

CT10-XXXX-YY	
Series	Lead Configuration Subset:
CT10	A2 for Axial
	G1 for Gull Wing Version 1 (16.4mm)
	G2/G4 for Gull Wing Version 2 (19.6mm)
	AT Range (measured after mold & lead form)
	10-20; 10-25; 10-30; 10-40; 15-30; 15-40;
	20-30; 20-35; 25-35; 25-40

6 Specifications for CT10

6.1 Operating / Environmental Ratings for CT10-XXXX-YY

Parameters	Units	Min	Typ	Max
Operating Range	AT	10		40
Release Range	AT	3		39
Storage Temperature	°C	-40		125
Operating Temperature	°C	-40		125
Vibration Resistance	G		10	
Shock Resistance	G		100	

Notes:

1. AT values measured using a Philips 10JK coil.

6.2 Electrical Characteristics for CT10-XXXX-YY

Parameters	Units	Min	Typ	Max
Switched Power	W			10
Switched Voltage DC	V			200
Switched Voltage AC, RMS value	V			140
Switched Current DC	mA			500
Switched Current AC, RMS value	mA			500
Carry Current DC	mA			500
Breakdown Voltage	V	230		
Life Expectancy @ 1V, 10mA	10 ⁶ ops	1000		
Life Expectancy @ 10V, 10mA	10 ⁶ ops	500		
Contact Resistance	mΩ			200
Insulation Resistance	MΩ	10 ⁶		

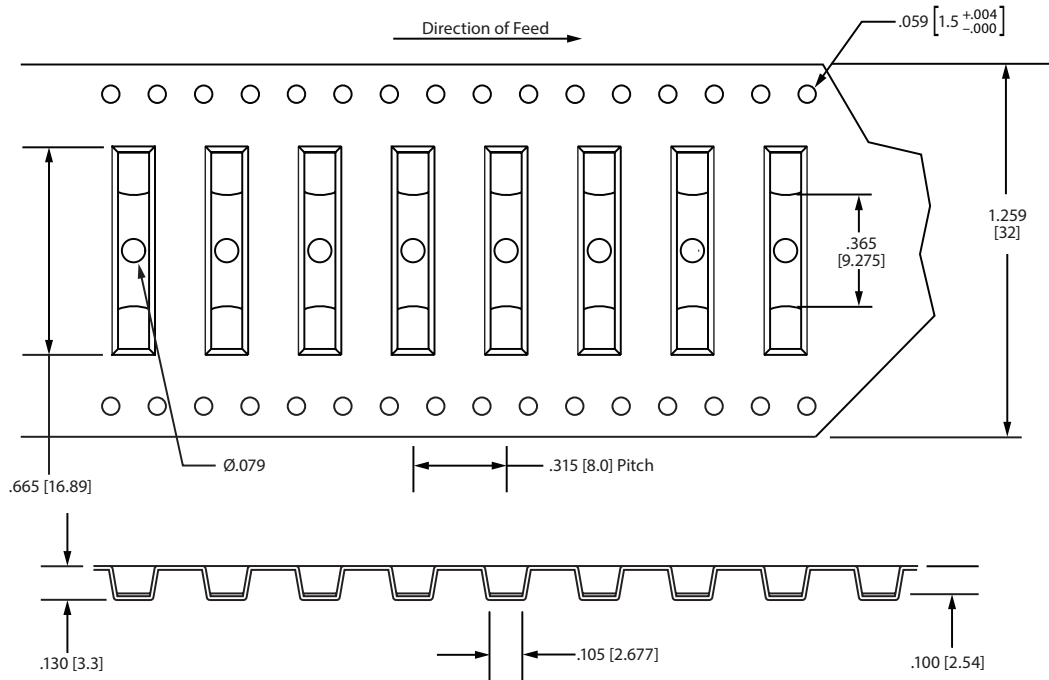
6 Specifications for CT10

6.3 Operating Characteristics for CT10-XXXX-YY

Part Number	Parameters	Units	Min	Typ	Max
CT10-1020-YY	Operating Range	AT	10		20
	Release Range	AT	3		19
CT10-1025-YY	Operating Range	AT	10		25
	Release Range	AT	3		24
CT10-1030-YY	Operating Range	AT	10		30
	Release Range	AT	3		29
CT10-1040-YY	Operating Range	AT	10		40
	Release Range	AT	3		39
CT10-1530-YY	Operating Range	AT	15		30
	Release Range	AT	3		29
CT10-1540-YY	Operating Range	AT	15		40
	Release Range	AT	3		39
CT10-2030-YY	Operating Range	AT	20		30
	Release Range	AT	3		29
CT10-2035-YY	Operating Range	AT	20		35
	Release Range	AT	3		34
CT10-2535-YY	Operating Range	AT	25		35
	Release Range	AT	3		34
CT10-2540-YY	Operating Range	AT	25		40
	Release Range	AT	3		39

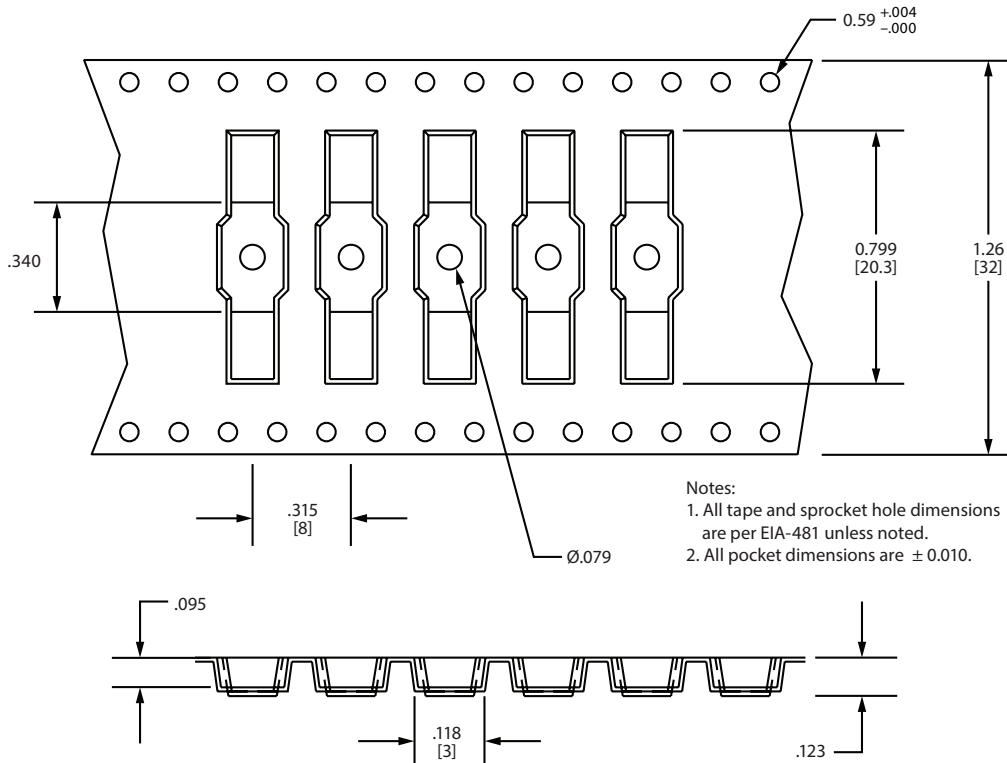
7 CT10 Reel & Carrier Tape Packaging

7.1 CT10-XXXX-G1 and CT10-XXXX-A2 Carrier Tape



- Notes:
 1. All tape and sprocket hole dimensions are per EIA-481 unless noted.
 2. All pocket dimensions are $\pm .005$ ".

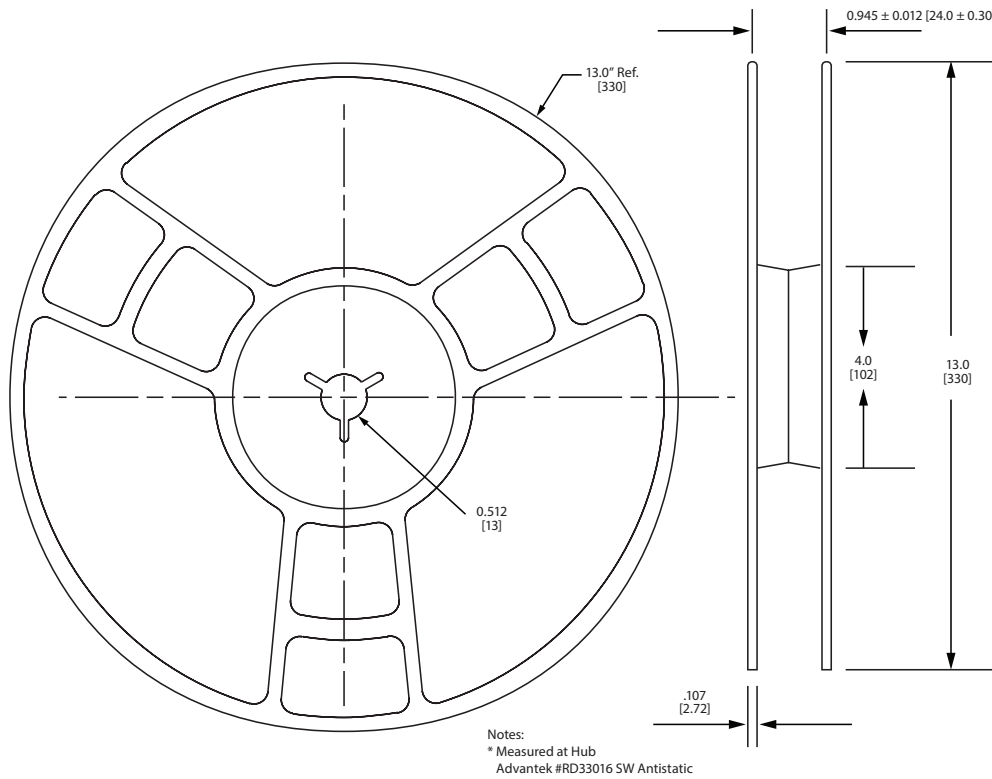
7.2 CT10-XXXX-G2 and CT10-XXXX-G4 Carrier Tape



- Notes:
 1. All tape and sprocket hole dimensions are per EIA-481 unless noted.
 2. All pocket dimensions are ± 0.010 ".

7 CT10 Reel & Carrier Tape Packaging

7.3 CT10 Reel Packaging



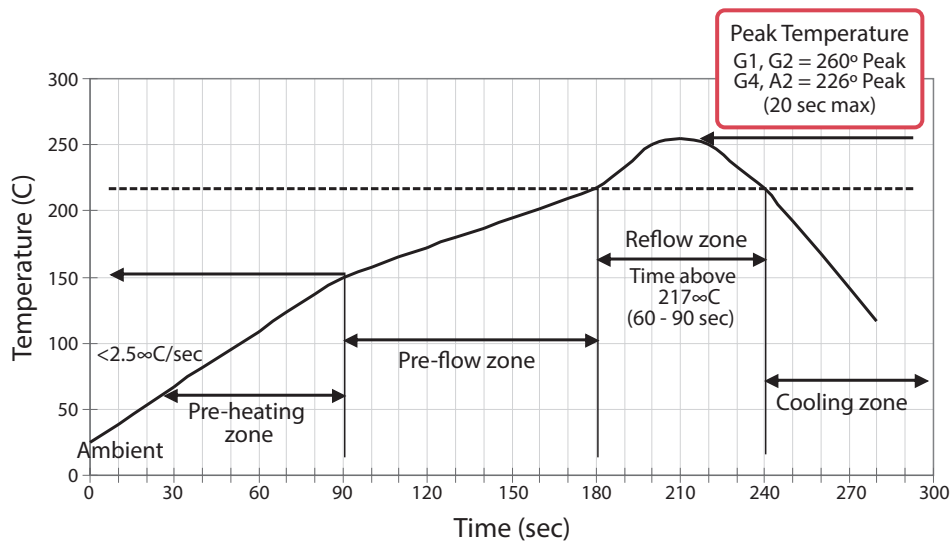
CT10 Packaging

Box Dimensions - 14x14x6 inches
 Fits 1 to 3 reels = 2000 to 6000 pcs
 Weight for 2000 pcs: 1.20 kilos
 Weight for 6000 pcs: 2.90 kilos

8 Switch Processing Notes

8.1 Recommended Reflow Profile SAC Alloy

Coto Technology recommends that the max switch temperature during the solder reflow process does not exceed 260°C. Temperature and time more than the recommended levels may result in damage to the switch. Recommended solder profile for SAC alloys as below.

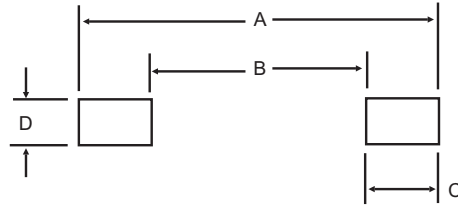


8 Switch Processing Notes

8.2 Recommended Pad Layouts for SMD Reed Switches

Model	Lead Type	Fig. #	Dim. A	Dim. B	Dim. C	Dim. D
CT10	A2	1	.666/16.92	.529/13.44	.069/1.74	.050/1.27
CT10	G1	1	.692/17.57	.520/13.20	.086/2.18	.041/1.04
CT10	G2	1	.822/20.87	.640/16.25	.091/2.31	.057/1.45
CT10	G4	1	.822/20.87	.640/16.25	.091/2.31	.057/1.45

(Dimensions in Inches/Millimeters)



8.3 Cleaning

CT10 is designed and manufactured to provide an adequate seal from external conditions. However, caution must be taken during the cleaning process not to expose the switches to conditions that will allow moisture to permeate into the package. Caution should be taken with dwell time between reflow and cleaning, high pressure spraying, and time in cleaning solvent/aqueous solutions, as these cleaning process parameters can contribute to moisture permeation. Board level bake out may be required after wash to remove moisture that has been introduced during cleaning operations.

8.4 Switch Storage

Switch parametric specifications are specified at 25°C and 40% RH. Reduced switch performance may result if storage or use environments significantly exceed these conditions. If high insulation resistance is required, Coto Technology recommends that switch storage, processing, and use environments are adequate to achieve the desired results. Switches should be stored in similar environmental conditions as other high-reliability active and passive electronic components. Proper storage of switches is also important to maintain solderability over an extended period of time.

8.5 Handling

Switches should be handled with care. Dropping or mishandling switches may result in damage that can contribute to a direct failure or, even worse, a latent field failure. If switches are dropped, Coto Technology recommends that they should be discarded.

Coto Technology does not recommend use of ultrasonic activated equipment with switches. The use of ultrasonic equipment may change the characteristics of the switch and can contribute to failure.

For more [technical and application information](#), please refer to the following QR code:



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