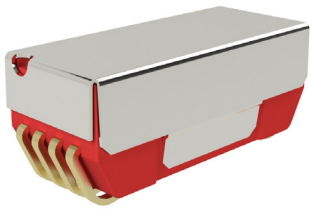
1 Description

Ideally suited to the needs of Automated Test Equipment, Instrumentation and Telecommunications requirements, Coto's new 9853 provides the same electrical performance and PCB layout as the popular 9852 J-lead. The 9853 is now available for high-volume ATE applications and features real break-before-make switching, high speed and high performance – all within a new compact package design.

Device Packages



2 Features

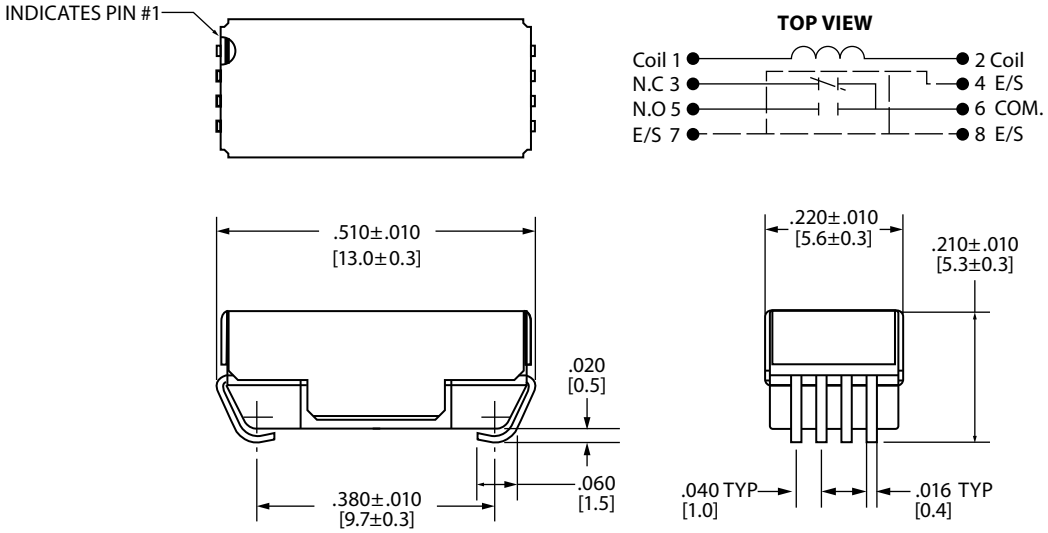
- Tape and Reel packaging available
- High reliability, hermetically sealed contact for long life
- Coaxial shield for 50 Ω impedance
- 50V switching voltage
- External Magnetic Shield
- RoHS compliant[3]
- Gold plated terminals

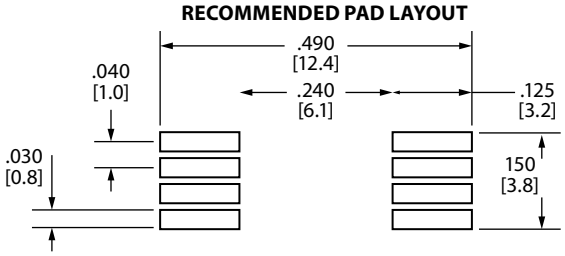
3 Applications

- Automated Test Equipment (ATE)
- Instrumentation
- Telecommunications

4 Dimensions

In Inches (Millimeters)





5 Ordering Information

9853-05-20 – Plastic Tube
9853-05-20TR – Tape & Reel

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6 Parameters - Model Number 9853

Parameters	Test Conditions	Units	1 Form C 50 Ω Coaxial
Coil Specs.			
Nom. Coil Voltage		VDC	5
Max. Coil Voltage		VDC	6
Coil Resistance	+/- 10%, 25°C	Ω	110
Operate Voltage	Must Operate By	VDC - Max.	3.8
Release Voltage	Must Operate By	VDC - Min.	0.4
Contact Ratings			
Switching Voltage	Max DC/Peak AC Resist.	Volts	50
Switching Current	Max DC/Peak AC Resist.	Amps	0.1
Carry Current	Max DC/Peak AC Resist.	Amps	0.2
Contact Rating	Max DC/Peak AC Resist.	Watts	3
Life Expectancy - Typical	Signal Level 1.0V, 10mA	x 10^6 Ops.	100 N/C & 200 N/O
Static Contact Resistance (Max. Init.)	50mV, 10mA	Ω	0.200
Dynamic Contact Resistance (Max. Init.)	0.5V, 50mA at 100Hz, 1.5msec.	Ω	0.200
Relay Specifications			
Insulation Resistance (Min.)	Between all Isolated Pins at 100V, 25°C, 40%RH	Ω	10^9
Capacitance - Typical Across Open Contacts	No Shield Shield Floating Shield Guarding	pF pF pF	- - 1.0
Open Contact to Coil	No Shield Shield Floating Shield Guarding	pF pF pF	- - 1.0
Closed Contact to Coil	Shield Guarding	pF	0.5
Contract to Shield	Contacts Open, Shield Floating	pF	-
Dielectric Strength (Min.)	Between Contacts Contacts to Shield Contacts/Shield to Coil	VDC/peak AC VDC/peak AC VDC/peak AC	200 1000 1000
Operate Time - Including Bounce - Typical	At Nominal Coil Voltage, 30Hz, Square Wave	msec.	1.0
Release Time - Typical		msec.	1.0

General Notes:

1. Consult factory for life expectancy at other switch loads.
2. Contact resistance >2.0 Ω defines end of life.
3. RoHS Compliance by exemption 7(a) from Directive 2011/64/EU.

Environmental Ratings:

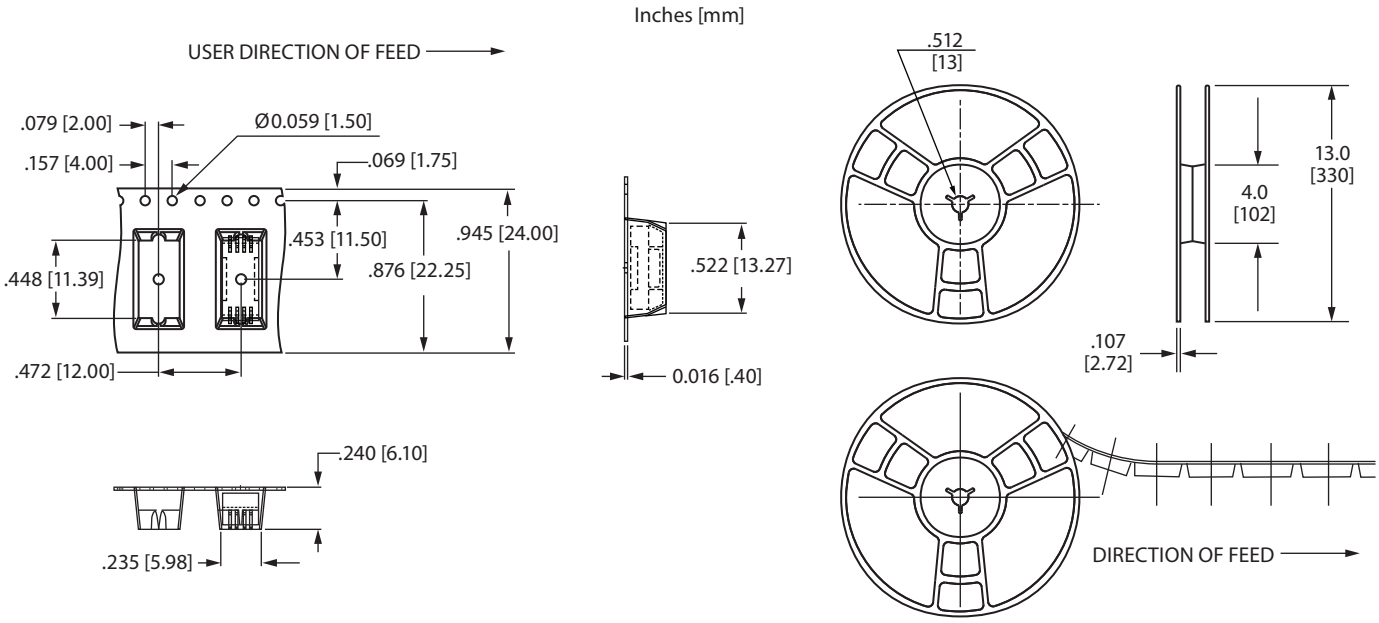
Storage Temp:-35°C to + 100°C; Operating Temp: -20°C to +85°C
All electrical parameters measured at 25°C unless otherwise specified.
Vibration: 20 G's to 2000 Hz; Shock: 50 G's

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7 Package Information

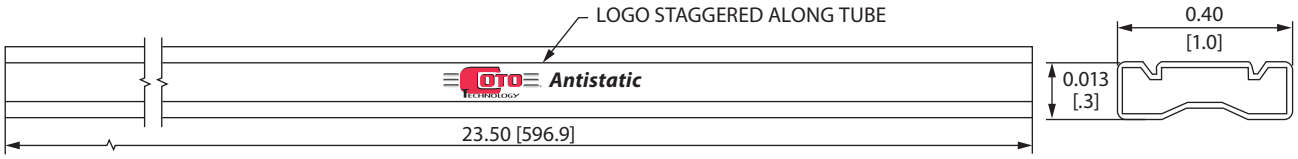
Tape & Reel Dimensions

- When ordered as part number 9853-05-20TR
- 1,000 relays per reel



Plastic Tube Dimensions

- When ordered as part number 9853-05-20
- 100 relays per tube

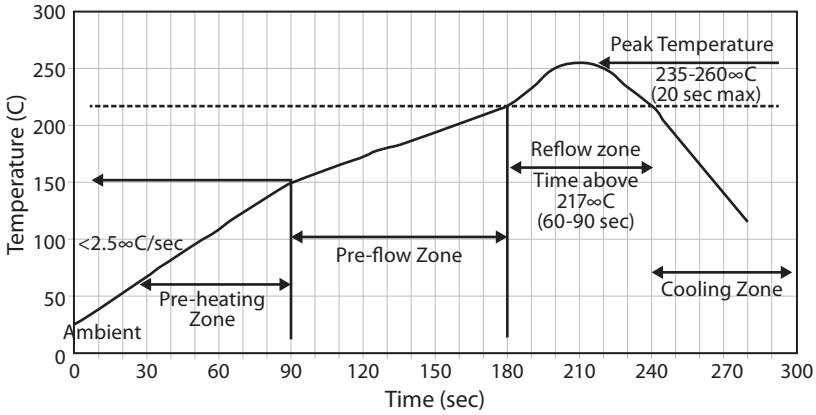


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8 Relay Processing Notes

8.1 Soldering

Coto Technology uses a higher temperature solder for all internal connections. We recommend that the max relay temperature during the solder reflow process does not exceed 260°C for 10 seconds maximum. Temperature and time more than the recommended levels may result in damage to the relay. Recommended solder profile as below.



8.2 Cleaning

9853 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 relays 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.

8.3 Relay Storage

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

8.4 Handling

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

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

For more technical and application information, please refer to the following QR code:

For recommendations and best practices for Form C relays refer to the following QR code:

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