



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

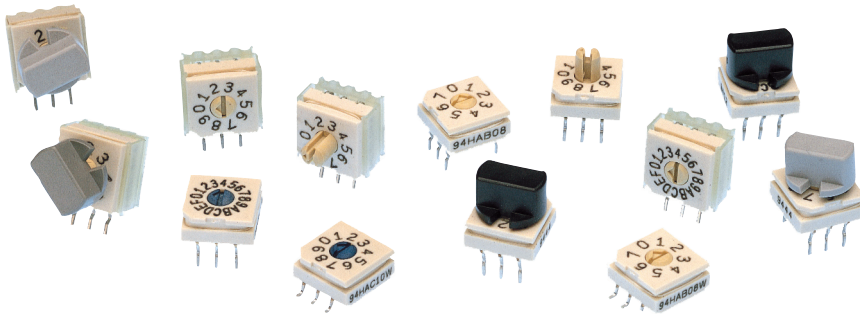
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**SERIES 94H**  
Binary Coded



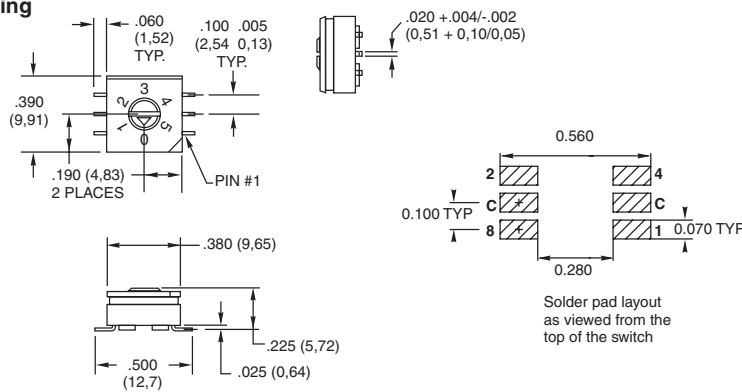
**FEATURES**

- Sealed Construction; No Tape Seal Required
- Surface Mount or Thru-Hole Style
- Tube or Tape and Reel Packaging
- Octal, BCD, and Hexadecimal Code
- In Standard or Complement
- Standard and Right Angle Mount
- Flush or Extended Actuators
- Gold-Plated Contacts
- RoHS Compliant

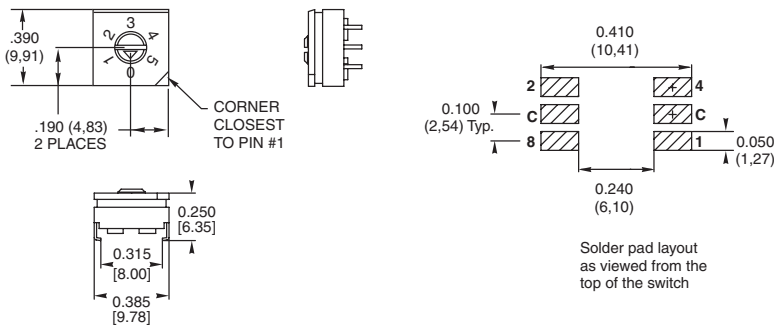
**DIMENSIONS** in inches (and millimeters)

Tolerances are ± .010 inches unless specified otherwise.

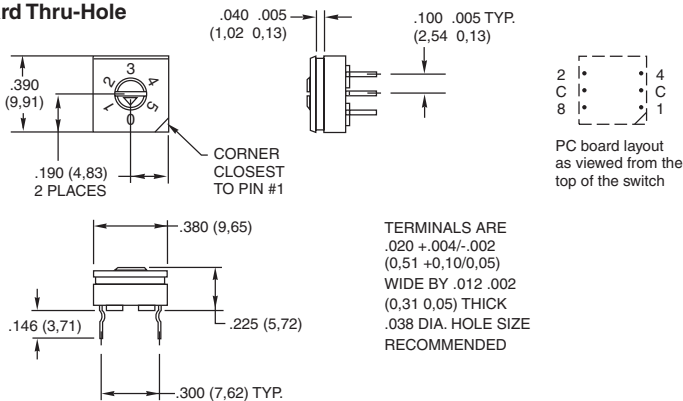
**Surface Mount Gullwing**



**Surface Mount J-Lead**



**Standard Thru-Hole**



**ACTUATOR STYLES**



**Octal-8 position**



**BCD-10 position**



**Hex-16 position**

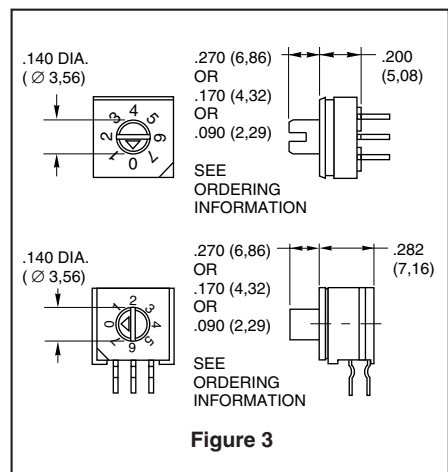


**Figure 2**  
"F" style rotor

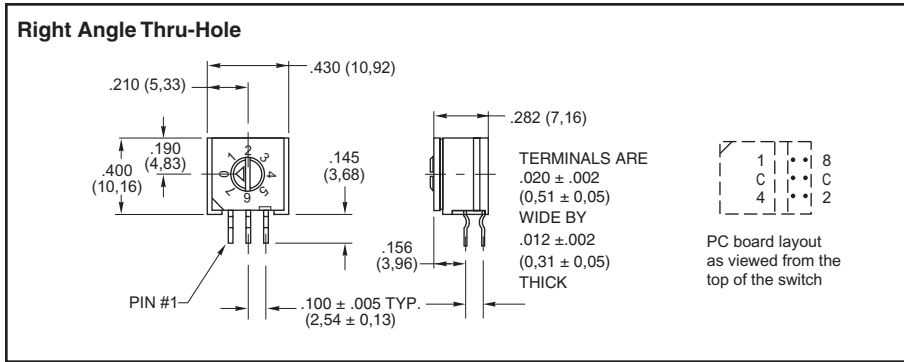
**Figure 1**  
"A" style rotor

All actuation types are available in octal (8), binary coded decimal (10), or hexadecimal (16) codes; with either standard or complement output. Standard code outputs have natural color rotors; complements in a contrasting color.

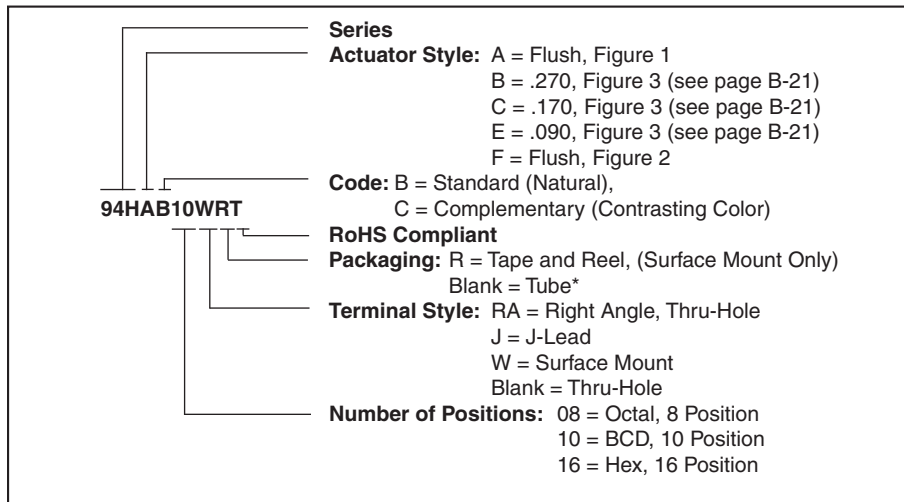
**EXTENDED ACTUATOR TYPES**



**DIMENSIONS** in inches (and millimeters)

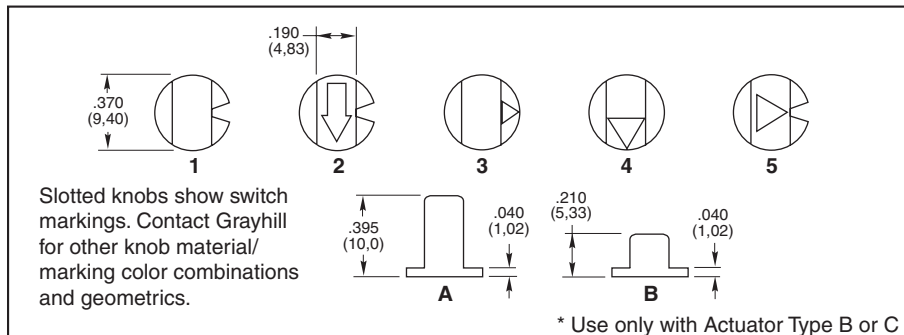


**ORDERING INFORMATION: Series 94H**



\* 27 Pieces per tube for surface mount and thru-hole, 24 pieces per tube for right angle switches.

**SERIES 94 High Temperature Knobs: For Shaft Extensions**

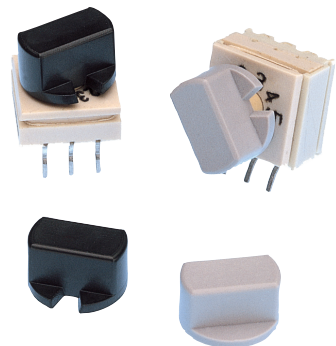
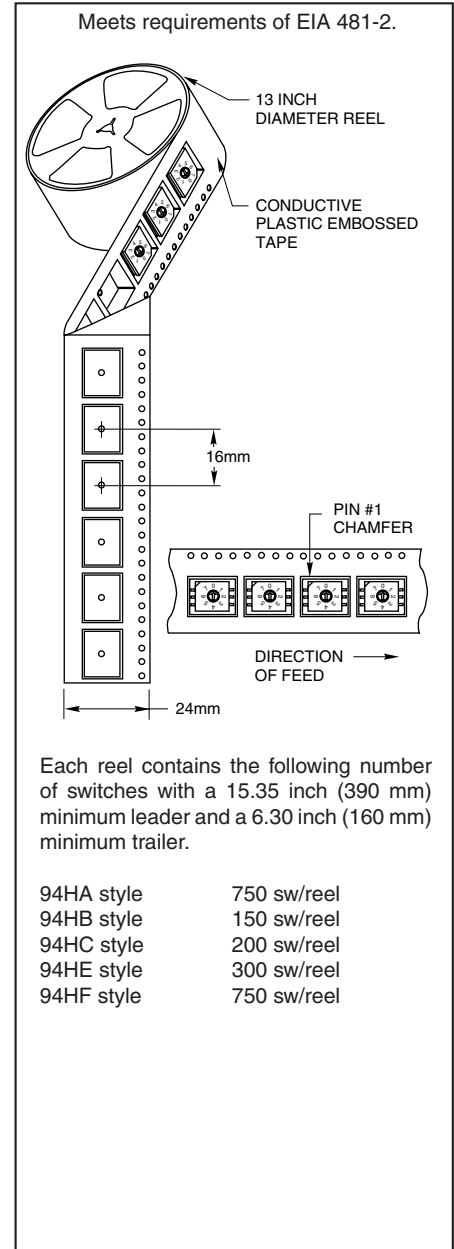


**ORDERING INFORMATION: Series 94 High Temperature Knobs\***

Knob Style and Height	Knob Color	Arrow Color	Part Number
1A	Gray	N/A	947706-001
5A	Gray	Black	947706-005
1B	Black	N/A	947705-001
1B	Gray	N/A	947705-012
2B	Gray	White	947705-004
3B	Gray	Black	947705-017
4B	Gray	Black	947705-018
1B	Natural	N/A	947705-009
4B	Black	White	947705-010
5B	Gray	Black	947705-019

\*Ordered as a separate item. B = Standard (Natural), C = Complementary (Contrasting Color).

**TAPE AND REEL PACKAGING: Series 94H**



**Available from your local Grayhill Distributor.**  
 For prices and discounts, contact a local Sales Office, an authorized Distributor or Grayhill.

**SPECIFICATIONS**

**Electrical Ratings**

**Make-and-break Current Rating:** 30 mA at 30 Vdc for 10,000 cycles of operation.

**Carrying Current Rating:** 100 mA at 50 Vdc

**Contact Resistance:** 50 mohms maximum initially (measured at 10 mA, 50 mVdc). 150 mohms maximum after life.

**Insulation Resistance:**(measured at 100 Vdc across open switch contacts)  
Initial: 5000 Mohms minimum. After Life: 1000 Mohms minimum.

**Dielectric Strength:** (measured across open switch contacts) Initial: 500 Vac RMS minimum. After Life: 250 Vac RMS

**Mechanical Ratings**

**Mechanical Life:** 10,000 cycles of operation. One cycle is a rotation through all positions and a complete return through all positions.

**Mechanical Shock:** 1000g's, 0.5mS, half sine per MIL-STD-202F, Method 213, Test Condition E.

**Vibration Resistance:** 10-2000 Hz at 15G or 0.060" double amplitude per MIL-STD-202F, Method 204, Test Condition B.

**Operational Torque:** 2 to 6 inch-ounces initially and 1.2 inch-ounces minimum after life.

**Environmental Ratings**

**Operating Temperature Range:** -40° to +85°C.

**Storage Temperature Range:** -40° to +85°C.

**Moisture Resistance:** 240 hours with temperature cycling and polarization. Passes insulation resistance and dielectric strength per MIL-STD-202F, Method 106 following exposure.

**Materials and Finishes**

**Rotor and Switch Body:** Plastic (UL94V-O)

**Contact Material:** Copper alloy plated. 30 microinches minimum gold over 50 microinches minimum nickel.

**Shorting Member:** Copper alloy plated. 30 microinches minimum gold over 50 microinches minimum nickel.

**Terminals:** Copper alloy, matte tin plated over nickel barrier.

**Internal O-ring:** Rubber BUNA-N

**Soldering Information**

\*For the most current soldering & cleaning processing guidelines, reference Grayhill Dip Switch Processing Information, Bulletin 1234

**Soldering Temperature:** 260° C maximum.  
**Cleaning:** Acceptable solutions include 1-1-1 Trichlorethane, Freon (TF, TE, or TMS), Isopropyl Alcohol and detergent (140°F maximum). Solutions which are not recommended include Acetone, Methylene Chloride, and Freon TMC.

**CODE & TRUTH TABLES**

All switches are continuous rotation.

Dot indicates terminal to common connection.

Octal and Octal Complement outputs are 0 thru 7 positions.

BCD and BCD Complement outputs are 0 thru 9 positions.

Hexadecimal and Hexadecimal Complement outputs are 0 thru F positions.

Standard codes have natural color rotors. Complements have rotors in a contrasting color.

		Standard Output				Complement Output			
		CODE OUTPUT				CODE OUTPUT			
		1	2	4	8	1	2	4	8
SWITCH POSITION	0					●	●	●	●
	1	●					●	●	●
	2		●			●		●	●
	3	●	●					●	●
	4			●		●	●		●
	5	●		●			●		●
	6		●	●		●		●	
	7	●	●	●					●
	8				●	●	●	●	
	9	●			●		●	●	
	A		●	●		●	●		
	B	●	●	●				●	
	C			●	●	●	●		
	D	●		●	●		●		
	E		●	●	●	●			
	F	●	●	●	●				