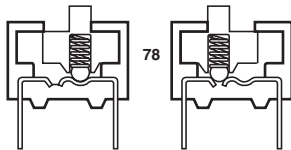




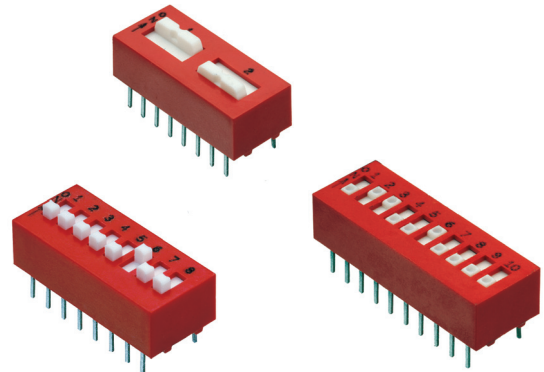
SERIES 78

SPST To 4PST Slide



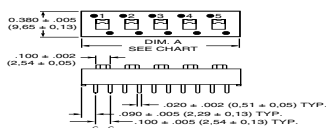
FEATURES

- Raised and Recessed Slides
- SPST, 2PST, 3PST, 4PST
- Sealed Base Standard
- Spring and Ball Contact
- Top Tape Seal Option

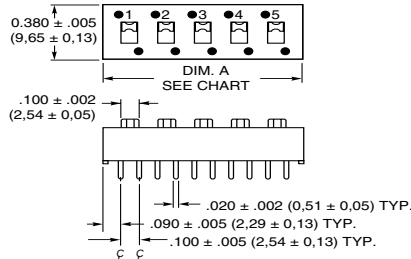
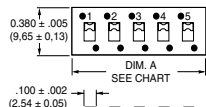


DIMENSIONS In inches (and millimeters)

Single Pole/Single Throw Switch in Raised and Recessed Slides

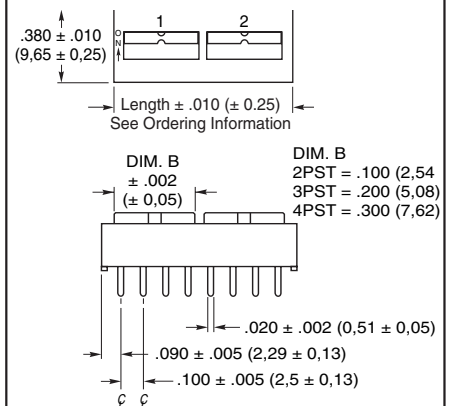


Note:
Recessed slides have a dimple for
tool actuation. For recessed slides,
the .295 dimension does not apply.



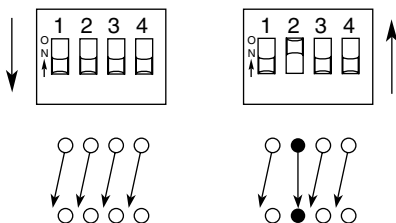
Typical Multiple Pole Switch with Raised Slides

(Switch shown here is 78H02, 4PST)



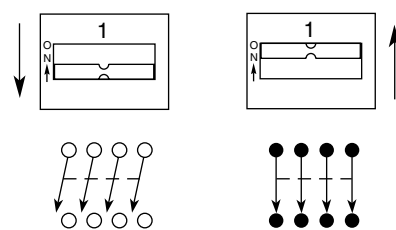
CIRCUITRY

Single Pole/Single Throw Switch



Typical Multiple Pole Switch

Typical Circuit Diagram



ORDERING INFORMATION

Circuitry	No. of Positions	Length Inches	Length Metric	No./ Tube	Raised Slides*	Recessed Slides*
SPST	2	0.280"	7,1mm	35	78B02T	78RB02T
	3	0.380"	9,7mm	27	78B03T	78RB03T
	4	0.480"	12,2mm	21	78B04T	78RB04T
	5	0.580"	14,7mm	18	78B05T	78RB05T
	6	0.680"	17,3mm	15	78B06T	78RB06T
	7	0.780"	19,8mm	13	78B07T	78RB07T
	8	0.880"	22,4mm	12	78B08T	78RB08T
	9	0.980"	24,9mm	10	78B09T	78RB09T
	10	1.080"	27,4mm	9	78B10T	78RB10T
	12	1.280"	32,5mm	8	78B12T	78RB12T
2PST	1	0.280"	7,1mm	35	78F01T	Recessed Slides Not Available
	2	0.480"	12,2mm	21	78F02T	
	3	0.680"	17,3mm	15	78F03T	
	4	0.880"	22,4mm	12	78F04T	
	5	1.080"	27,4mm	9	78F05T	
	6	1.280"	32,5mm	8	78F06T	
3PST	1	0.380"	9,7mm	27	78G01T	Recessed Slides Not Available
	2	0.680"	17,3mm	15	78G02T	
	3	0.980"	24,9mm	10	78G03T	
4PST	1	0.480"	12,2mm	21	78H01T	Recessed Slides Not Available
	2	0.880"	22,4mm	12	78H02T	

For switches with 5, 6, 7, 8, or 10PST circuitry, contact Grayhill.

*A top tape seal is required for switches that are machine soldered or heavily cleaned after hand soldering. To order top seal versions, add "S" before the "T" in the Grayhill part number.

Available from your local Grayhill Distributor.

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

SPECIFICATIONS: Standard Styles

Ratings	76	78	90B
Mechanical Life: Operations per switch position	2,000	2,000	2,000
Make-and-break Current Rating: Operations per switch position at these resistive loads			
1 mA, 5 Vdc; 50 mA, 30 Vdc; or 150 mA, 30 Vdc:	2,000	2,000	—
10 mA, 30 Vdc; or 10 mA, 50 mVdc:	—	—	2,000
10 mA, 50 mVdc; or 25 mA, 24 Vdc; or 100 mA, 6 Vdc:	—	—	2,000
Contact Resistance: Initially:	≤ 30 mΩ	≤ 30 mΩ	≤ 20 mΩ
After life, at 10 mA, 50 mVdc, open circuit:	≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ
Insulation Resistance:			
Minimum, at 100 Vdc between adjacent closed contacts and also across open switch contacts			
Initially (Mohms):	5,000	5,000	5,000
After life (Mohms):	1,000	1,000	1,000
Dielectric Strength: Minimum voltage (AC, RMS) measured between adjacent closed contacts and also across open switch contacts.			
Initially:	750 V	750 V	500 V
After life:	500 V	500 V	500 V
Current Carry Rating: Maximum rise of 20°C	5 A	4 A	3 A
Switch Capacitance: At 1 megahertz	2 pF	2 pF	2 pF
Operating Temperature Range:	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C
Storage Temperature Range:	-55°C to + 85°C	-55°C to + 85°C	-55°C to + 85°C

Mechanical Ratings

Vibration Resistance: Per Method 204, Test Condition B, 1 mS opening (10 mS allowed)

Mechanical Shock: Per Method 213, Test Condition A, 1 mS opening (10 mS allowed)

Thermal Shock Resistance: Per specification; no failures; passes contact resistance.

Terminal Strength: Per specification

Thermal Aging: 1,000 hours at 85°C; no failures.

Environmental Ratings

Meets all requirements of MIL- S-83504. Where Grayhill performance is superior, the MIL spec is listed in parentheses.

Moisture Resistance: Per MIL-STD-202, Method 106.

Soldering Information

Series 90 MIDIP and Series 76 recessed rocker (76RSB style) sealed switches have been tested to EIA Standard RS-448-2. Similar performance can be expected from other sealed Series 76 and 78 DIP switches.

Solderability: Per MIL-STD-202, Method 208
Resistance to Soldering Heat: 76RSB: Passes EIA Standard using two, four, and six second soldering time. 90: Per MIL-S-83504, six second test.

Fluxing: Per EIA RS-448-2 with flux touching switch body.

Cleaning: 76, 78 and 90 series tape sealed products: Passes immersion test using water/detergent. Acceptable solutions include 1-1-1 trichlorethane, freon, (TF, TE, or TMS), isopropyl alcohol, detergent (140°F maximum). Terpene acceptable for Series 90 only. Solutions which are not recommended include acetone, methylene chloride, freon TMC.

Materials and Finishes

Shorting Member (Ball): Brass, gold-plated over nickel barrier.

Base Contacts: Copper alloy, gold-plated over nickel barrier.

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

Non-Conductive Parts: Thermoplastic (UL94V-O)

Potting Material: Epoxy, 76,78 only.

Protective Cover: 76,78, only-Polycarbonate.

Tape Seal:

76, 78: Polyester film

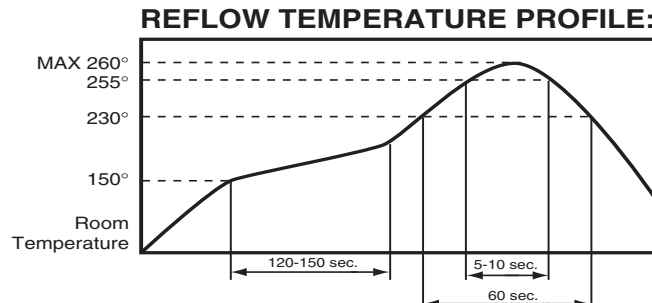
90: Polyimide film

Tape Seal Integrity: Passes gross leak test using 125°C fluorinert for 20 seconds minimum. Reference MIL-STD-202, Method 112.

Recommended Soldering Conditions:

Reflow Soldering Profile:

(260°C Peak Temperature)



WAVE SOLDERING: 260°C maximum solder temperature for 5 seconds max.