Thru-Hole DIP Switches



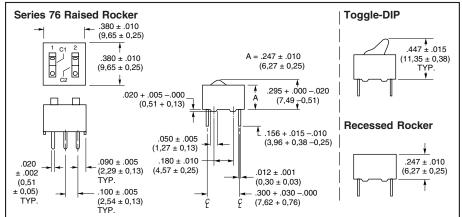


SERIES 76 and 78 SPDT

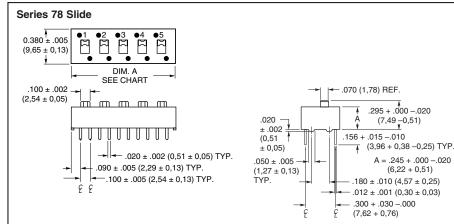
FEATURES

- Raised and Recessed Rocker, and Toggle Actuated Styles
- SPDT with a Common Pole, or SPDT with 2 Isolated Circuits
- Spring and Ball Contact
- Top Tape Seal Option for Most Styles

DIMENSIONS: Series 76 In inches (and millimeters)



DIMENSIONS: Series 78 In inches (and millimeters)

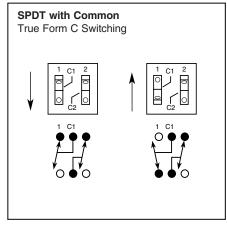


ORDERING INFORMATION

Circuitry	Positions	Length Inches	Length Metric	No./ Tube	Raised Type*	Recessed Rockers*	Toggle- DIP*
SPDT Form C	2 3 4	0.380" 0.580" 0.780"	9,7mm 14,7mm 19,8mm	27 18 13	76SC02T 76SC03T 76SC04T	76RSC02T 76RSC03T 76RSC04T	76STC02T 76STC03T 76STC04T
SPDT 2 Circuits	1 2 3 4 5 6	0.280" 0.480" 0.680" 0.880" 1.080" 1.280"	7,1mm 12,2mm 17,3mm 22,4mm 27,4mm 32.5mm	35 21 15 12 9 8	78J01T 78J02T 78J03T 78J04T 78J05T 78J06T	 	

*To order top seal versions, add "S" before the "T" in the Grayhill part number. Not available on Toggle-DIP.

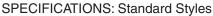
CIRCUITRY: Series 76



CIRCUITRY: Series 78

$\label{eq:available} Available\,from\,your\,local\,Grayhill\,Distributor.$

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



Ratings Mechanical Life: Operations per switch position	76 2,000	78 2,000	90B 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: 10 mA, 30 Vdc; or 10 mA, 50 mVdc: 10 mA, 50 mVdc; or 25 mA, 24 Vdc; or 100 mA, 6 Vdc:	2,000 	2,000 	 2,000 2,000	
Contact Resistance: Initially: After life, at 10 mA, 50 mVdc, open circuit:	$\leq 30 \text{ m}\Omega \\ \leq 100 \text{ m}\Omega$	\leq 30 m Ω \leq 100 m Ω	\leq 20 m Ω \leq 100 m Ω	
Insulation Resistance: Minimum, at 100 Vdc between adjacent closed contacts and also across open switch contacts Initially (Mohms): After life (Mohms):	5,000 1,000	5,000 1,000	5,000 1,000	
Dielectric Strength: Minimum voltage (AC, RMS) measured between adjacent closed contacts and also across open switch contacts. Initially: After life:	750 V 500 V	750 V 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 Gravhill 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.

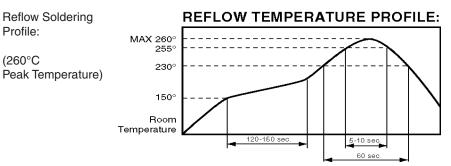
Protective Cover: 76,78, only-Polycarbonate. Tape Seal:

76, 78: Polyester film

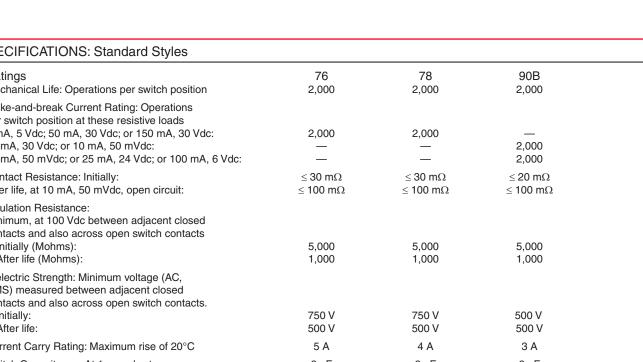
90: Polyimide film

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

Recommended Soldering Conditions:



WAVE SOLDERING: 260°C maximum solder temperature for 5 seconds max. ** Note: 100% matte tin terminal plating does not meet MIL-S-83504 for lead content.



DIP Switches

Grayhill