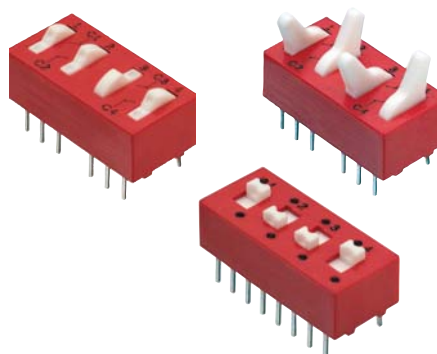




SPDT

- 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

[illegible]

SPDT with Common True Form C Switching

Series 78 Slide

Technical drawing of the Series 78 Slide, showing dimensions in inches and millimeters.

Top View Dimensions:

- Overall width: $0.380 \pm .005$ (9,65 $\pm$ 0,13)
- Pin pitch (DIM. A): SEE CHART
- Pin diameter: $.100 \pm .002$ (2,54 $\pm$ 0,05)

Side View Dimensions:

- Pin height: $.020 \pm .002$ (0,51 $\pm$ 0,05)
- Pin spacing (center-to-center): $.090 \pm .005$ (2,29 $\pm$ 0,13) TYP.
- Pin spacing (edge-to-center): $.100 \pm .005$ (2,54 $\pm$ 0,13) TYP.
- Slide body width: $.070$ (1,78) REF.
- Slide body height: $.295 \pm .000 - .020$ (7,49 - 0,51)
- Slide body thickness: $.156 \pm .015 - .010$ (3,96 $\pm$ 0,38 - 0,25) TYP.
- Slide body width (bottom): $.180 \pm .010$ (4,57 $\pm$ 0,25)
- Slide body width (bottom): $.012 \pm .001$ (0,30 $\pm$ 0,03)
- Slide body width (bottom): $.300 \pm .030 - .000$ (7,62 $\pm$ 0,76)

SPDT, 2 Circuits

(No Commons)

Dot on cover indicates active terminal when slide is on that side of switch. Contact is made with terminal on opposite side.

To create common poles, tie together 2 adjoining terminals on 1 (either) side of switch.

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

Not available on Toggle-DIP.

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

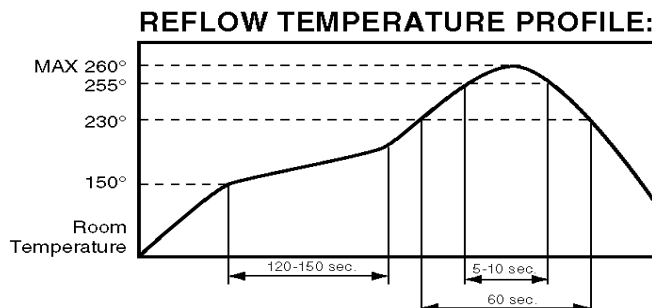
90: Polyimide film

Tape Seal Integrity: Passes gross leak test using 125°C flourinert 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.

** Note: 100% matte tin terminal plating does not meet MIL-S-83504 for lead content.