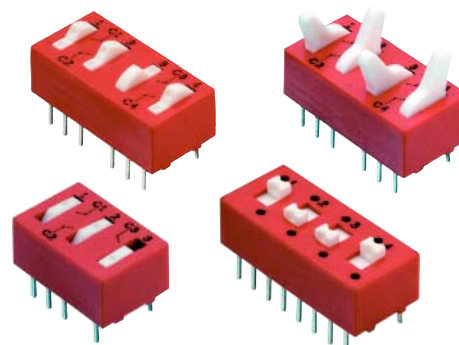


SERIES 76 and 78
SPDT

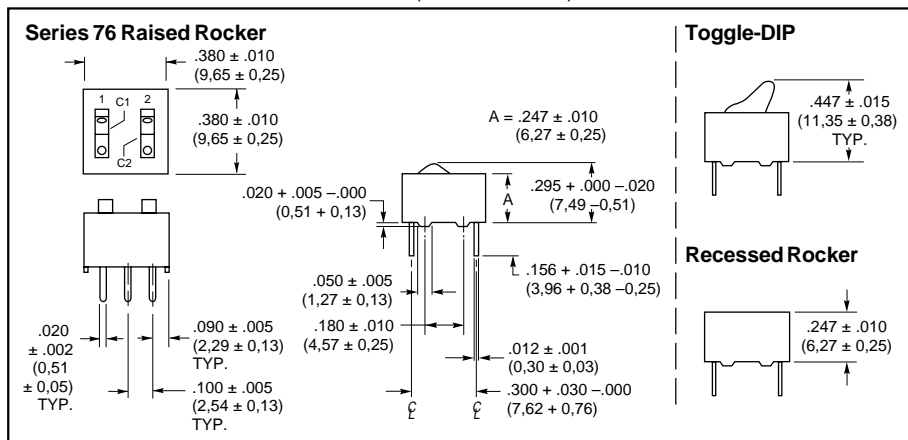
FEATURES

- 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

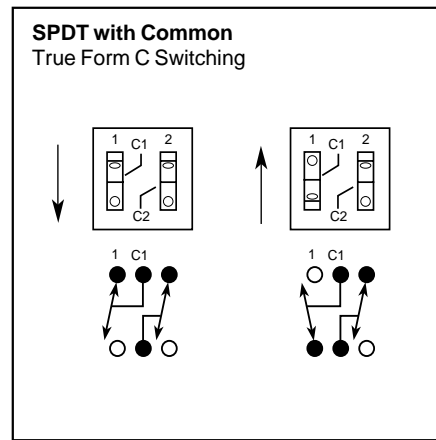


DIP Switches

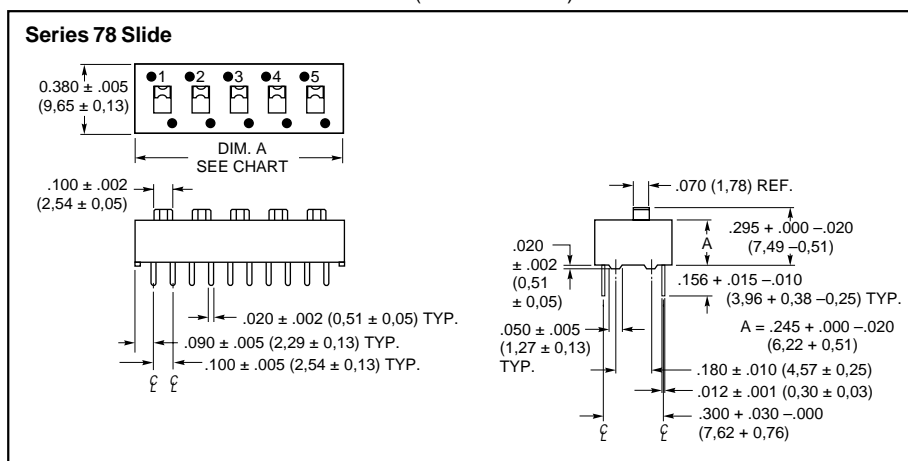
DIMENSIONS: Series 76 In inches (and millimeters)



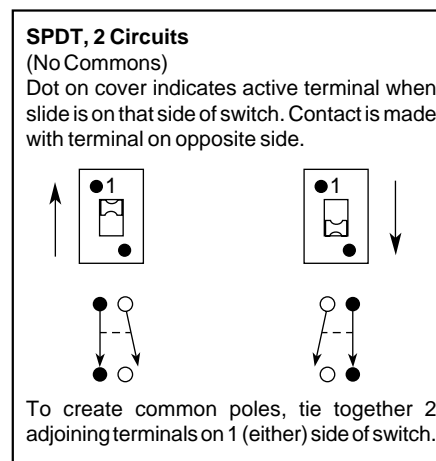
CIRCUITRY: Series 76



DIMENSIONS: Series 78 In inches (and millimeters)



CIRCUITRY: Series 78



ORDERING INFORMATION

| Circuitry | Positions | Length Inches | Length Metric | No./ Tube | Raised Type* | Recessed Rockers* | Toggle-DIP* |
|-----------------|-----------|---------------|---------------|-----------|--------------|-------------------|-------------|
| SPDT Form C | 2 | 0.380" | 9,7mm | 27 | 76SC02 | 76RSC02 | 76STC02 |
| | 3 | 0.580" | 14,7mm | 18 | 76SC03 | 76RSC03 | 76STC03 |
| | 4 | 0.780" | 19,8mm | 13 | 76SC04 | 76RSC04 | 76STC04 |
| SPDT 2 Circuits | 1 | 0.280" | 7,1mm | 35 | 78J01 | — | — |
| | 2 | 0.480" | 12,2mm | 21 | 78J02 | — | — |
| | 3 | 0.680" | 17,3mm | 15 | 78J03 | — | — |
| | 4 | 0.880" | 22,4mm | 12 | 78J04 | — | — |
| | 5 | 1.080" | 27,4mm | 9 | 78J05 | — | — |
| | 6 | 1.280" | 32,5mm | 8 | 78J06 | — | — |

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

ADDITIONAL INFORMATION

For Specifications, see page B-16. For Options and Accessories, see pages B-20 and B-21.

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

SPECIFICATIONS: Standard and Military Qualified Styles

| Ratings | 76 | 78 | 90B |
|---|-----------------|-----------------|-----------------|
| Mechanical Life: Operations per switch position | 20,000 | 20,000 | 5,000 |
| 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: | 10,000 | 10,000 | — |
| 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 |

DIP Switches

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 specification, 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: 76RSB, 90: 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 10 microinches minimum over nickel barrier.
Base Contacts: Copper alloy, gold-plated 10 microinches minimum over nickel barrier.
Terminals: Copper alloy, solder-plated over nickel barrier.
Non-Conductive Parts: Thermoplastic (UL94V-O)
Potting Material: Epoxy, 76,78 only.
Protective Cover: 76,78, only-Polycarbonate.

Tape and Reel Packaging

Tape Seal:
 76, 78: Polyester film
 90: Polyimide film or foil
Tape Seal Integrity: Passes gross leak test using 125°C flourinert for 20 seconds minimum. Reference MIL-STD-202, Method 112.