

**SERIES 76**  
**SPST Rocker**

**FEATURES**

- Raised and Recessed, Rocker and PIANO-DIP® Styles
- Sealed Base Standard
- Spring and Ball Contact
- Top Tape Seal Option



**DIMENSIONS** in inches (and millimeters)



**CIRCUITRY**



**ORDERING INFORMATION**

**Series**

**Switch Style:** SB = Raised Rocker  
RSB = Recessed Rocker  
PSB = Piano-DIP (Up is Off)  
PRB = Piano-DIP (Up is On)

**T** = RoHS compliant

**Sealed\***: S = Tape Seal

**Number of Positions:** 02 through 10, 12

| No. of Pos. | Length (Inches) | Length (Metric) | No./Tube |
|-------------|-----------------|-----------------|----------|
| 2           | 0.280"          | 7,1 mm          | 35       |
| 3           | 0.380"          | 9,7 mm          | 27       |
| 4           | 0.480"          | 12,2 mm         | 21       |
| 5           | 0.580"          | 14,7 mm         | 18       |
| 6           | 0.680"          | 17,3 mm         | 15       |
| 7           | 0.780"          | 19,8 mm         | 13       |
| 8           | 0.880"          | 22,4 mm         | 12       |
| 9           | 0.980"          | 24,9 mm         | 10       |
| 10          | 1.080"          | 27,4 mm         | 9        |
| 12          | 1.280"          | 32,5 mm         | 8        |

\*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" to 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 flourinert for 20 seconds minimum. Reference MIL-STD-202, Method 112.

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Тел: +7 (812) 336 43 04 (многоканальный)

Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)