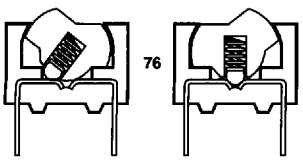
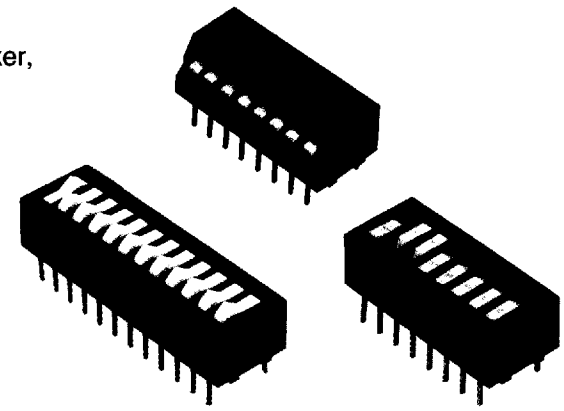
SPST ROCKER DIP SWITCHES

SERIES 76



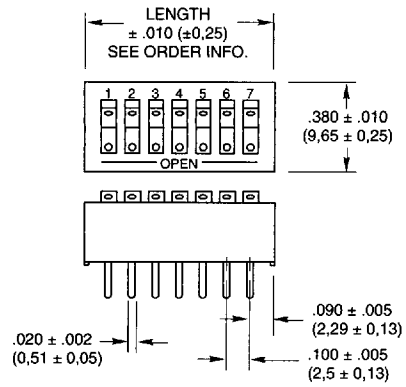
FEATURES

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



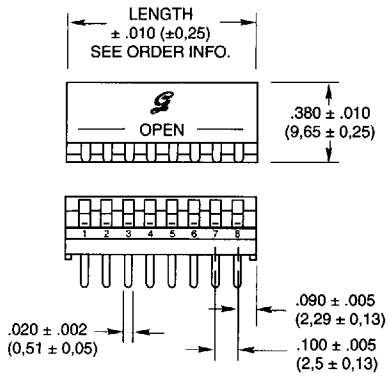
DIMENSIONS In inches (and millimeters)

Rocker and Recessed Rocker



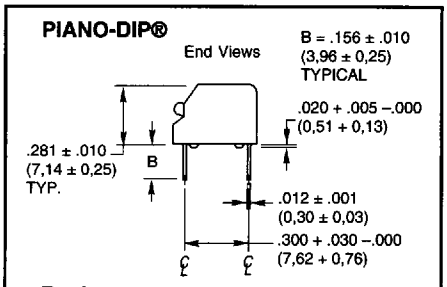
See also end view.

Side Aactuated PIANO-DIP®

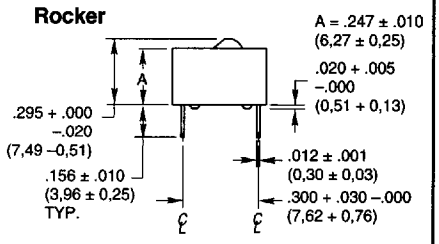


See also end view.

PIANO-DIP®



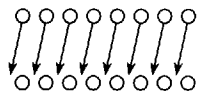
Rocker



For recessed rockers, delete .295 dimension.

CIRCUITRY

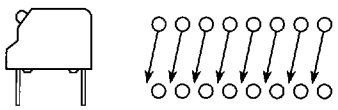
Styles 76SB and 76RSB



Typical circuit diagram with actuator as shown in the dimension drawing.

Style 76PSB

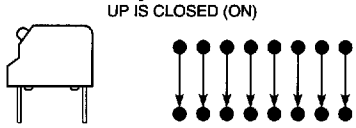
UP IS OPEN (OFF)



Actuator shown in the up position.

Styles 76PRB

UP IS CLOSED (ON)



Actuator shown in the up position.

ORDERING INFORMATION

No. Of Positions	Length Inches	Length Metric	No./ Tube	Raised Rocker	Recessed Rocker	PIANO-DIP® Up is Off	PIANO-DIP® Up is On
2	0.280"	7,1mm	35	76SB02	76RSB02	76PSB02	76PRB02
3	0.380"	9,7mm	27	76SB03	76RSB03	76PSB03	76PRB03
4	0.480"	12,2mm	21	76SB04	76RSB04	76PSB04	76PRB04
5	0.580"	14,7mm	18	76SB05	76RSB05	76PSB05	76PRB05
6	0.680"	17,3mm	15	76SB06	76RSB06	76PSB06	76PRB06
7	0.780"	19,8mm	13	76SB07	76RSB07	76PSB07	76PRB07
8	0.880"	22,4mm	12	76SB08	76RSB08	76PSB08	76PRB08
9	0.980"	24,9mm	10	76SB09	76RSB09	76PSB09	76PRB09
10	1.080"	27,4mm	9	76SB10	76RSB10	76PSB10	76PRB10
12	1.280"	32,5mm	8	76SB12	76RSB12	76PSB12	76PRB12

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

For Specifications, see page B-17.
For Options and Accessories, see page B-24.

DIP SWITCH SPECIFICATIONS

SPECIFICATIONS–Standard and Military Qualified Styles

Ratings	76	78	90B	90HB
Mechanical Life: Operations per switch position	20,000	20,000	5,000	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	≤ 20 mΩ
After life, at 10 mA, 50 Vdc, open circuit	≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ	≤ 100 mΩ
Insulation Resistance: Minimum, at 100 Vdc between adjacent closed contacts and also across open switch contacts				
Initially (megohms)	5,000	5,000	5,000	5,000
After life (megohms)	1,000	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	500 V
After life	500 V	500 V	500 V	500 V
Current Carry Rating: Maximum rise of 20°C	5 A	4 A	3 A	3 A
Switch Capacitance: At 1 megahertz	2 pF	2 pF	2 pF	2 pF
Operating Temperature:	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C	-40°C to + 85°C
Storage Temperature:	-55°C to + 85°C	-55°C to + 85°C	-55°C to + 85°C	-40°C to + 85°C
SMT Processing Temperature (90HB):	—	—	—	260°C Max.

Environmental

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

Vibration: Per method 204, Test Condition B 1 microsecond opening (10 microseconds allowed)

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

Moisture Resistance: Per specification, Method 106.

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

Terminal Strength: Per specification

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

Surface Mount Switches (90HBW) Additional Information

Recommended Processing Temperature: 220°C–230°C

Processing Position: Switch is to be processed with all actuators in the closed (on) position as shipped.

Machine Soldering

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.

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

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

Cleaning: 76RSB, 90—Passes immersion test using water/detergent.

Cleaning Solutions: 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.

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

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.

Solderability: Per MIL-STD-202, Method 208

Non-Conductive Parts: Thermoplastic, UL94V–O rating.

Potting Material: 76,78 only—Epoxy.

Tape Seal:

76, 78	Polyester film
90	Polyimide film

Protective Cover: 76,78, only-Polycarbonate.

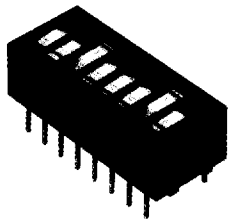
OPTIONS

Position Identification Line Option

For Series 76RSB, 76RSC, 76RSD, & 90B
A line can be added to the recessed rocker or Series 90 slide actuator to provide positive identification of the actuator position. To order, add L as a final suffix to the part number. For example, 76RSB08 becomes 76RSB08L; and, 90B08S becomes 90B08SL.
Available from a local Grayhill Distributor

Other Switch Marking

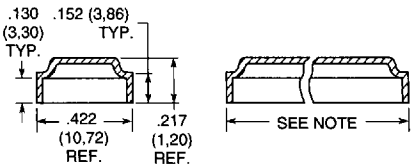
For Series 76, 78, & 90
We can mark your part number or other wording on the switch, often at no charge. For some markings there will be a nominal charge for tooling plus a set-up charge. In addition, there is a marking charge per side per switch. Add it to the unit price and discount it accordingly.
To order, contact Grayhill.



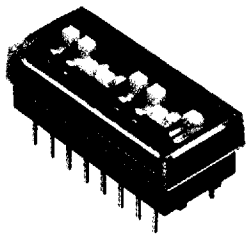
ACCESSORIES

Protective Cover Accessory

For Series 76, & 78
Rigid, clear plastic cover fits all but toggle actuated switches. It provides a top cover for less strenuous cleaning, serves as a dust cover in dirty environments, and provides protection against accidental actuation.
Material: 76,78, only-Polycarbonate.
Purchase as a separate item. Check length of the desired DIP Switch, and then select from the ordering information on this page.
Available from a local Grayhill Distributor



Note: For length, add .042 "(1,07 MM) to length of DIP switch.



DIPSTICK Accessory

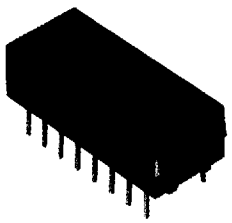
For all series
Pen sized plastic DIPSTICK has a tapered end for actuating DIP Switches.

Part Number **90-DIPSTICK**

Available from a local Grayhill Distributor

User Applied Tape Seals

For Series 76 & 78
If you prefer to seal switches after your incoming inspection, order a card of 23 (or 46) tape seals. Hand application of these tapes provides less secure seal integrity than factory addition of seals. Check the length of the desired DIP Switch, then select the card of tapes from the chart below.
Available from a local Grayhill Distributor



ORDERING INFORMATION

Length Inches	Tape Seals Part Number	No./ Card
0.280	SHH1127-2	46
0.380	SHH1127-3	46
0.480	SHH1127-4	46
0.580	SHH1127-5	23
0.680	SHH1127-6	23
0.780	SHH1127-7	23
0.880	SHH1127-8	23
0.980	SHH1127-9	23
1.080	SHH1127-10	23

Length Inches	Protective Cover Part Number
0.280	76P02
0.380	76P03
0.480	76P04
0.580	76P05
0.680	76P06
0.780	76P07
0.880	76P08
0.980	76P09
1.080	76P10
1.180	79P10
1.780	79P16

Available from your local Grayhill Distributor
Priced competitively. For price, contact Grayhill.