SERIES 78H
SPDT and DPST

## FEATURES

- Compatible with SMT Assembly Including Infrared Reflow and Vapor-Phase
- Reliable Spring and Ball Contact


DIMENSIONS In inches (and millimeters)


## CIRCUITRY

SPDT 2 Circuits (no common)



DPST


- Dot indicates



## SPECIFICATIONS

## Electrical Ratings

Make-and-break Current Rating: 2,000 operations per switch position at $1 \mathrm{~mA}, 5 \mathrm{Vdc}$; $50 \mathrm{~mA}, 30 \mathrm{Vdc}$; or $150 \mathrm{~mA}, 30 \mathrm{Vdc}$
Contact Resistance: Initial: 30 mohms max. After Life: 100 mohms max. ( 10 mA at 50 Vdc , open circuit)
Insulation Resistance: Minimum, at 100 Vdc between adjacent closed contacts and also across open switch contacts. Initial: 2,000 Mohms; After Life: 1,000 Mohms
Dielectric Strength: Minimum voltage (AC, RMS) measured between adjacent closed contacts and also across open switch contacts. Initial: 750 volts; After Life: 500 volts
Current Carry Rating: 4 amps, maximum rise of $20^{\circ} \mathrm{C}$
Switch Capacitance: 2 pF at 1megahertz

## Mechanical Ratings

Mechanical Life: 2,000 operations per switch position
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)

Terminal Strength: Per specification
Thermal Aging: 1,000 hours at $85^{\circ} \mathrm{C}$; no failures Thermal Shock: Per specification; no failures; passes contact resistance

## Environmental Ratings

Meets all requirements of MIL- S-83504. Where Grayhill performance is superior, the MIL spec is listed in parentheses.
Operating Temperature Range: $-40^{\circ} \mathrm{C}$ to + $85^{\circ} \mathrm{C}$
Storage Temperature Range: $-55^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ Moisture Resistance: Per MIL-STD-202, Method 106

## Soldering Information

Solderability: Per MIL-STD-202, Method 208 Soldering Heat Resistance: Per MIL-S-83504, six second test
Recommended Processing Temperature: $220^{\circ} \mathrm{C}-230^{\circ} \mathrm{C}$ ( 1 pass- $260^{\circ} \mathrm{C}$ maximum)
Processing Position: Switch is to be processed with all actuators in the closed (on) position as shipped.

ORDERING INFORMATION: Tube Packaging

| No. of Positions | Length (inches) | Length (metric) | Carrier Width Dim. A | Part Number* |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | SPDT | DPST |
| 1 | 0.280" | 7,1 mm | 24 mm | 78HJ01GWT | 78HF01GWT |
| 2 | 0.480" | $12,2 \mathrm{~mm}$ | 24 mm | 78HJ02GWT | 78HF02GWT |
| 3 | 0.680" | $17,3 \mathrm{~mm}$ | 32 mm | 78HJ03GWT | 78HF03GWT |
| 4 | 0.880" | $22,4 \mathrm{~mm}$ | 44 mm | 78HJ04GWT | 78HF04GWT |
| 5 | 1.080" | 27,4 mm | 44 mm | 78HJ05GWT | 78HF05GWT |

[^0] Available from your local Grayhill Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

## Materials and Finishes

Shorting Member: 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: Cover is natural color thermoplastic, actuators are white thermoplastic (UL94V-O)

## TAPE AND REEL PACKAGING



Each reel has a 15.750 inch ( 390 mm ) minimum leader and a 6.30 inch ( 160 mm ) minimum trailer.


[^0]:    * Insert "R" before the "T" in the Grayhill part number for tape and reel packaging ( 500 switches/reel).

