

Lightweight Waveguide Switches

WR-62, WR-75, WR-90, WR-112

WR62T1-4321	WR62T2-4321
WR75T1-4321	WR75T2-4321
WR90T1-4321	WR90T2-4321
WR112T1-4321	WR112T2-4321

Description

Dow-Key's latching Lightweight Waveguide Switches are superior to previous designs in terms of weight, size, and current consumption. In addition, these switches are equipped with Indicator Circuitry and with Transient Suppression Diodes.

The total weight for the WR-62 has been reduced by 49% and by 52% for both WR-75 and WR-90 waveguide models, which corresponds to 300 grams for each model. The weight for WR-112 has been reduced by 53% which is equivalent to 500 grams. The overall dimensions are slightly smaller when compared to earlier Dow-Key designs and they draw now 65% less current corresponding to 350 mA. Hence, this series of waveguide switches consumes less power.

These transfer waveguide switches are excellent for use in applications where size and weight are critical in such as military and commercial airborne programs. For Space Qualified requirements consult with factory for Dow-Key's Hi-Rel Waveguide Switch product line, ranging in sizes from WR-15 to WR-112.

Frequency Ranges

WR62Tx*-4321	12.4 - 18.0 GHz
WR75Tx*-4321	10.0 - 15.0 GHz
WR90Tx*-4321	8.2 - 12.4 GHz
WR112Tx*-4321	7.05 - 10.0 GHz

* Available Flange Types: T1 = Cover Flange T2 = Choke Flange

RF Characteristics

VSWR (max)	1.10:1
Insertion Loss (max)	0.10 dB
Isolation (min)	60 dB

Actuation Data

Operating Voltage (range)	24 - 30 Vdc
Operating Voltage (nominal)	+28 Vdc
Operating Current (max) *	0.35 A
Switching Time (max)	100 ms
Operating Mode	Latching Self Cut-Off

* At +28 Vdc and 20 °C

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Mechanical

Weight (max)*	300 grams (10.6 oz.)
Design Life	200,000 Cycles

* 500 grams for WR-112

Materials and Finishes

RF Waveguide Housing	Aluminum, Chem Film
Actuator Housing	Aluminum, Electroless Nickel

Environmental

Operating Temperature	-54 °C to +85 °C
Storage Temperature	-54 °C to +85 °C

