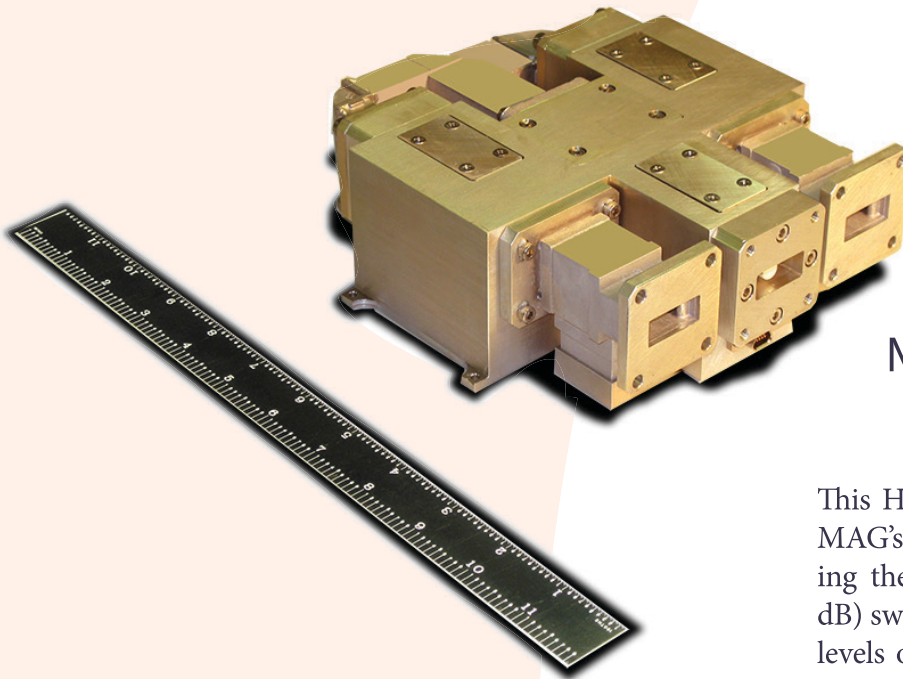


## Compact High Isolation Waveguide Switch

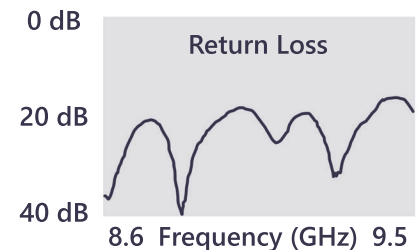
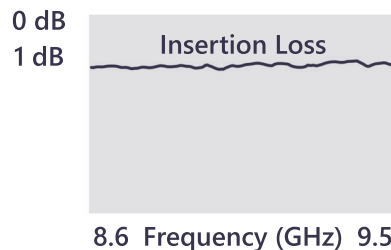
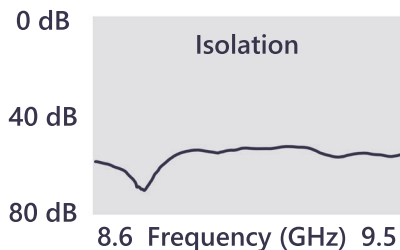
- High Isolation
- Small Size
- Lightweight
- Low Insertion Loss
- Moderate Power Handling



This High Isolation Waveguide Switch builds on MAG's successful Single Element Switch, cascading these devices to yield a high isolation (>50 dB) switch that still handles moderate peak power levels of 50 kW and average power levels of 200 W in a compact, cost effective construction. This switch provides a nominal 1 dB of insertion loss over a bandwidth in excess of 10% at X-Band. The architecture uses tandem rotators, operating in opposition or in summation, to drive either the horizontal or vertical arm of an orthomode transducer, and provides 25 microsecond switching time with high isolation. This architecture can be scaled to operate at other frequency bands as well. MAG's experience with ferrite components allows leverage of proven high reliability design philosophies yielding building block products with functionality that can be incorporated into any system.

Specifications of MAG's High Isolation Waveguide Switch are presented on the back.

### Measured values taken at lab ambient

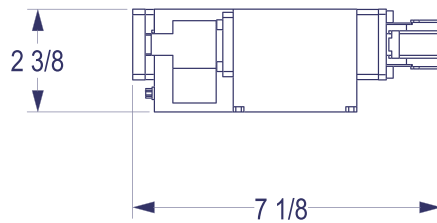
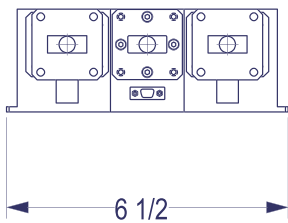
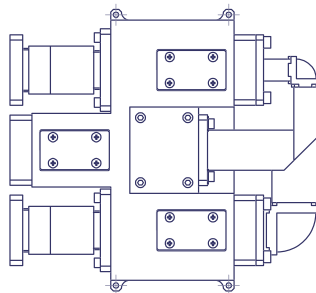


# Compact High Isolation Waveguide Switch

PARAMETER	VALUE
Frequency	X-Band
Isolation (dB)	>50
Insertion Loss, Peak (dB)	<1.2
Return Loss (dB)	>16.0
Peak RF Power (Kilowatts)	50
Average RF Power (Watts)	200
Switching Time (Microseconds)	25
Size (Inches)	6 1/2 x 7 1/8 x 2 3/8
Weight (Pounds)	4
Operating Temperature Range (Degrees C)	-30 to 60

## Outline Drawing

DIMENSIONS IN INCHES



## Sample of programs supported by MAG as OEM:

APQ-164 B-1B ORS  
 APQ-181 B-2  
 APS-143 CP-140 Imaging  
 APY-1/2 E-3 AWACS  
 AR320 3D Air Defense  
 ARTS-V1 / CLPS  
 ARTS-V2  
 ASARS-2 Synthetic Aperture  
 ARSR-4 FAA Long Range  
 ASTOR  
 DWSR-2501C Doppler Weather  
 Global Hawk Synthetic Aperture  
 I-15/23 Reflectarray  
 I-30 Simulator  
 MPN-14K Landing Control  
 PAAS Test Range  
 Princeton Plasma Physics Laboratory  
 RAC 3D Air Defense  
 Skyshield 35 Air Defense  
 Smart-L 3D Air Defense  
 SPN-35C Approach Control  
 SPQ-9B Surveillance / Tracking  
 TPAAS Test Range  
 TRS-3D Multimode  
 TRS22XX 3D Air Defense  
 ZPQ-1 Predator TESAR

## MAG DMSMS program support:

MPQ-64 Sentinel SHORAD  
 APY-1/2 E-3 AWACS  
 BMEWS / PAVE PAWS  
 HAWK  
 SPN-35C Approach Control  
 MSQ-T43 MTE System

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