

# DBS / VHF & UHF DIPLEXERS

Diplexers

## Features

- Superior filtering: .....prevents service calls
- Ultra-flat response: ..... ±0.1 dB in any 24 MHz
- Wideband: ..... 15 MHz to 2150 MHz
- Excellent Return Loss: .....Reduces reflections
- High Isolation: ... Filters DBS spurs from VHF/UHF output  
.....Filters VHF/UHF spurs from DBS output
- Precision threading:.....protected by end caps

## Description

Model HRD2 and HRD3 combine or separate DBS signals from terrestrial TV signals. Filtering of un-desired spurious interference and noise is extremely important when working with amplified signals containing both analog and digital signals. The frequency plots on the right illustrate the superior filtering of the HRD2 and HRD3 compared to typical diplexers.

In the top plot, the HRD2 provides 10 dB better rejection of VHF and UHF from the DBS input. This is important because DBS harmonics falling in the UHF spectrum will distort terrestrial TV signals.

Amplified terrestrial signals create harmonics that fall within the DBS band. Multiple DBS programs are lost when one of the harmonics lands on a DBS transponder. The lower plot illustrates the superior rejection of 950 to 2150 MHz harmonics from the VHF/UHF input.

## Specifications

<b>RF Specifications</b> .....	<b>HR D2</b> .....	<b>HR D3</b>
DBS Passband .....	950 to 2150 MHz	
Insertion Loss .....	3.0 dB.....	3.0 dB
VHF Rejection in DBS.....	30 dB.....	35 dB
VHF / UHF Passband .....	15 to 806 MHz	
Insertion Loss .....	2 dB.....	2 dB
DBS Rejection 15 -750 MHz.....	40 dB.....	40 dB
DBS Rejection @806 MHz.....	35 dB.....	35 dB
Input Return Loss .....	12 dB.....	12 dB
Output Return Loss .....	10 dB.....	10 dB
DBS Passive Current .....	600 mA	

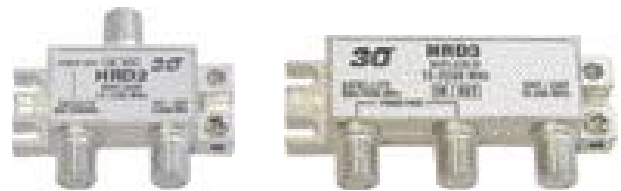
### Environmental Specifications

Operating Environment: .....Indoor / Outdoor  
Ambient Temperature..... -35°C to +70°C

### Mechanical Specifications

HRD2 Dimensions.....	0.75" x 2.2" x 2"
HRD3 Dimensions.....	0.75" x 1.5" x 3"
Master Carton (50 units) .....	4" x 4" x 8"
Master Carton Weight.....	10 lb (4.5) kg

*Sonora reserves the right to modify their designs or specifications without prior notice. (Rev ac)*



Revised by Son  
09\_27\_04

