



**R.F.Specification**  
 for  
**VertexRSI 2.60 Meter DMK Antenna**  
**With Four Port Linearly Polarized Feed**  
**Preliminary Spec**  
**Receive      Transmit**

Frequency in GHz-----	10.950-12.750	14.000-14.500
Port Type-----	Rx1/Rx2	Tx1/Tx2
Polarization-----	Linear	Linear
Feed Port Polarizations-----	VLP/HLP	HLP/VLP
Antenna Gain (+/- 0.2 dB)		
10.950 / 14.000 GHz-----	46.80 dBi	49.00 dBi
11.850 / 14.250 GHz-----	47.50 dBi	49.10 dBi
12.750 / 14.500 GHz-----	48.10 dBi	49.30 dBi

Antenna Noise Temperture		
5 degree Elevation-----	74 K	
10 degree Elevation-----	60 K	
20 degree Elevation-----	51 K	
40 degree Elevation-----	48 K	

Typical G/T at 20 deg Elevation    11.850 GHz            , clear horizon		
70 degree K LNA -----	26.7 dB/K	
90 degree K LNA -----	26.0 dB/K	

Pattern Beamwidth in degrees at    11.850 / 14.250    GHz		
-3 dB Beamwidth-----	0.68	0.58
-15 dB Beamwidth-----	1.43	1.22

Sidelobes

For Angle A from 1 to 48 Degrees----- Meets FCC 25.209,Eutelsat,  
 For Angles from 48 to 180 Degrees----- IEES(Intelsat) or ITU-RS-580

Cross Polarization Isolation		
On Axis -----	35.0 dB	35.0 dB
Within 1.0 dB Beamwidth -----	35.0 dB	35.0 dB



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VSWR (Return Loss)-----	1.30:1(17.7dB)	1.30:1(17.7dB)
Feed Insertion or Ohmic Loss-----	0.45 dB	0.30 dB
Port to Port Isolation (Rx to Rx, Tx to Tx, Same Band)-----	30.0 dB	30.0 dB
Port to Port Isolation-----	0.0 dB (Input)	-50.0 dB
Port to Port Isolation-----	-85.0 dB	0.0 dB (Input)
Output Waveguide Flange Interface-----	WR-75Flat	WR-75Flat
Total Power Handling Capability-----		2.00 kW CW

Notes - Other operational frequencies available

- 10% of sidelobes may exceed the sidelobe specifications where applicable.
- Power handling capability is based on and limited by the physical characteristics in the feed components. Microwave power at these levels may contribute to the radiation hazard or exceed certain offaxis EIRP specifications.

-G/T is calculated by bolting single LNA directly to the feed.It does not allow for any post LNA effects.

All values are at the rear feed output flange.