

# DIELECTRIC COMMUNICATIONS ANTENNAS

Proposal #: Antenna Type: **TFU-10DSC-R C170** Channel: **23 DTV**  
 Call Letters: **WHSH-DTV** Location: **Marlborough, MA**

Electrical Specifications		Value		Remarks
		Ratio	dB	
RMS Gain at Main Lobe over Halfwave Dipole	Hpol	9.6	9.82	
RMS Gain at Horizontal over Halfwave Dipole	Hpol	8.3	9.19	
Peak Directional Gain over Halfwave Dipole	Hpol	16.3	12.12	Hpol ERP: 50 kW
Peak Directional Gain at Horizontal over Halfwave Dipole	Hpol	14.1	11.49	
Circularity		dB		
Axial Ratio		dB		
Beam Tilt		1.00 deg		
Average Power		34 kW	15.31 dBk	
Antenna Input: T/L		6 1/8 in	75.0 ohm	Type: EIA
Maximum Antenna Input VSWR		Channel 1.08 : 1		
Patterns	Azimuth	C170		
	Elevation	10Q096100	10Q096100-90	
	Field Strength			
Mechanical Specifications		Metric	English	
Height with Lightning Protector	H4	m	ft	Side mounted
Height Less Lightning Protector	H2	7.4 m	24.4 ft	
Height of Center of Radiation	H3	3.7 m	12.2 ft	
Basic Wind Speed	V	145 km/h	90 mi/h	TIA/EIA-222-F
Force Coeff. x Projected Area	Ca Ac	3.62 m <sup>2</sup>	39.0 ft <sup>2</sup>	
Moment Arm	D1	m	ft	
Force Coeff. x Projected Area	Ca Ac	m <sup>2</sup>	ft <sup>2</sup>	
Moment Arm	D3	m	ft	
Pole Bury Length	D2	m	ft	
Weight	W	0.30 t	664 lbs	
Radome				
Antenna designed in accordance with AISC specifications for design of structural steel for building as prescribed by TIA/EIA-222-F.				

Prepared By : JSM  
Date : 22-Jan-98

NOTE:

Approved By : AJS