

Purpose of Modification

February 9, 2006

The purpose of this modification is to add another antenna type to our existing experimental license. We have previously identified the "Titan DATD FSS-4180" as part of our filing. We request to add the following antenna to the license:

L3/Titan/Datron 13.5"x18" antenna.
Gain at 14.125 Ghz = 34 dB
Minimum cross pol = 30 dB
Section 25.209 Compliant in Azimuth above 7 degrees
Worst case azimuth gain non-compliance = 5.2 dB
Antenna plots follow.

This antenna is mechanically and electrically equivalent to the "Titan DATD FSS-4180" in azimuth. In order to meet the critical military requirements to reduce the vertical profile of the antenna, vertical dimensions have been reduced from 18" to 13".

For our experimental testing, we intend to decrease the antenna flange power spectral density from -14 dBW/4 kHz by the amount of the worst case azimuth gain non-compliance. By reducing the antenna flange power spectral density, adjacent satellite interference will be met the intent of Section 25.209 and the SES Americom affidavit previously filed.

We request an expedited approval as testing for the government CONDOR program is planned to start at the end of February.

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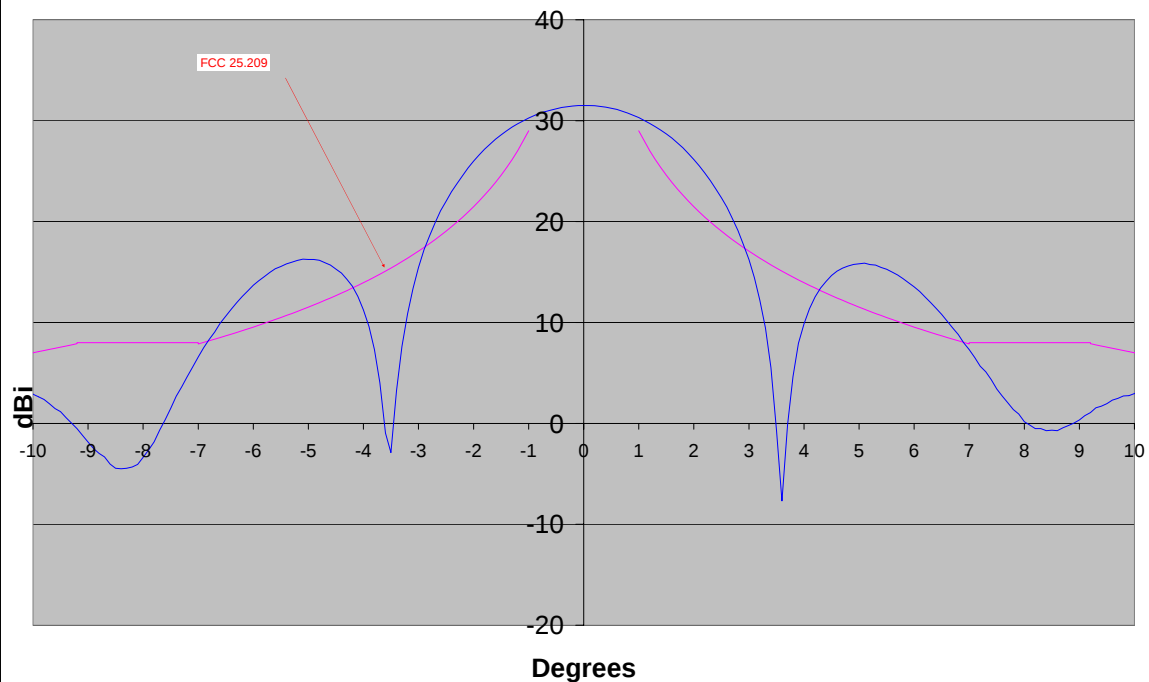
Titan/Datron Antenna Gain Plotted Against FCC Antenna Performance Standards 25.209

2/9/2006

Frequency 14.125 GHz
Polarization HORIZ
Axis AZ
Plane E

Antenna 13"x18" (0.46 m)
Peak Gain 31.5 dB
XPOL -32.1 dB
Max Difference between antenna and FCC209 5.1 dB

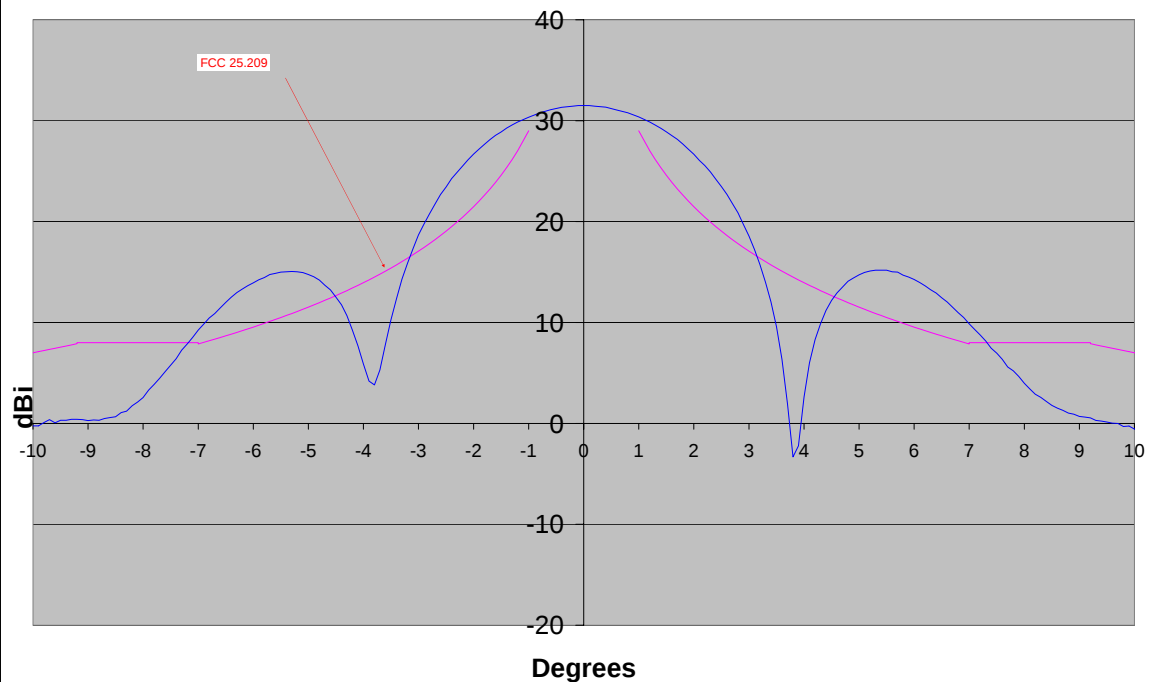
Plot Ref# L0167A.071



Titan/Datron Antenna Gain Plotted Against FCC Antenna Performance Standards 25.209

2/9/2006

Frequency	14.125 GHz	Antenna	13"x18" (0.46 m)	Plot Ref#	L0167A.047
Polarization	VERT	Peak Gain	31.5 dB		
Axis	AZ	XPOL	-29.3 dB		
Plane	H	Max Difference between antenna and FCC209	5.2 dB		



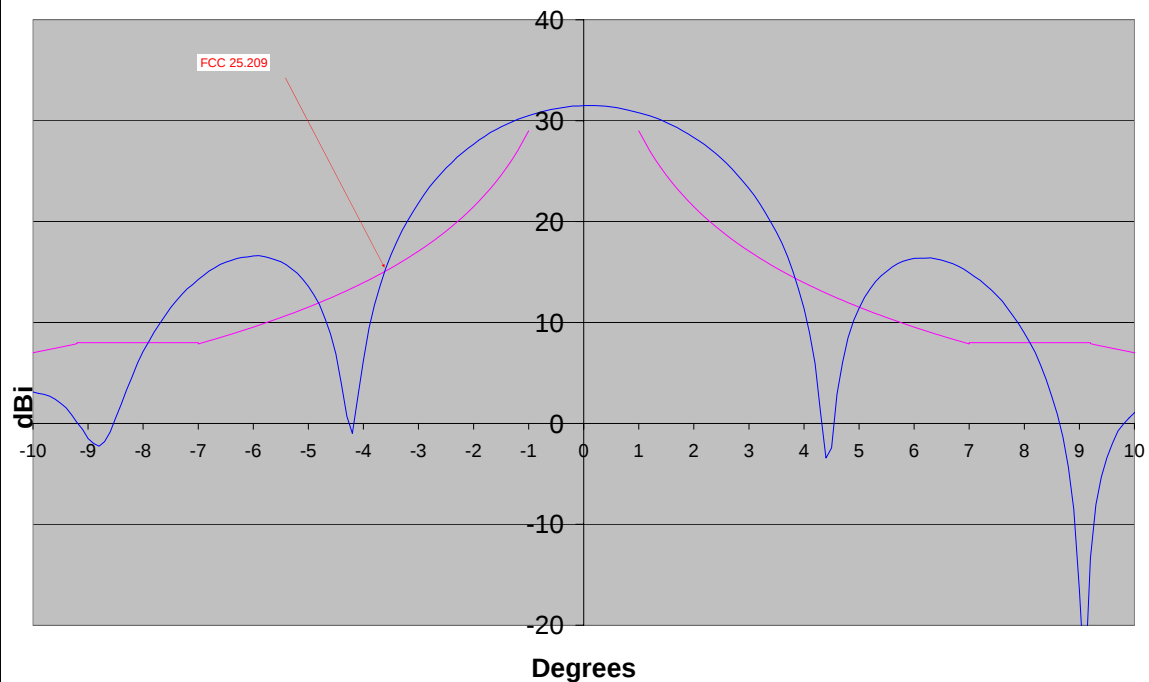
Titan/Datron Antenna Gain Plotted Against FCC Antenna Performance Standards 25.209

2/9/2006

Frequency 14.125 GHz
Polarization HORIZ
Axis EL
Plane H

Antenna 13"x18" (0.46 m)
Peak Gain 31.5 dB
XPOL -33.9 dB
Max Difference between antenna and FCC209 7.5 dB

Plot Ref# L0167A.059



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Titan/Datron Antenna Gain Plotted Against FCC Antenna Performance Standards 25.209

2/9/2006

Frequency	14.125 GHz	Antenna	13"x18" (0.46 m)	Plot Ref#	L0167A.083
Polarization	VERT	Peak Gain	31.5 dB		
Axis	EL	XPOL	-31.1 dB		
Plane	E	Max Difference between antenna and FCC209	8.6 dB		

