Exhibit A

Land ESIM STA Application

ISAT US Inc. ("ISAT US") seeks Special Temporary Authority ("STA"), pursuant to Section 25.120(b)(3) for a period of 90 days, beginning May 1, 2019, to test and demonstrate a single unit of a new land earth station in motion ("ESIM") terminal, which if licensed could provide mobile communications services over Inmarsat's Ka-band Global Xpress satellite system. ISAT US already holds blanket license authority for ESIM that provide broadband communications on maritime and aeronautical platforms[1] ("GX Terminals") with the Inmarsat 5F2 and Inmarsat 5F3 satellite networks. These current licenses cover operations in the 29.5-30.0 GHz (Earth-to-space) and 19.7-20.2 GHz (space-to-Earth) frequency bands, which are the same frequencies requested in this application. If these tests and demonstrations are successful, ISAT may apply for a license to add the terminal for regular operations and at that time seek any waivers of FCC technical rules that may be necessary.

Land ESIM Terminal Description

This application seeks a 90 day STA for testing and demonstration of a single unit of the Taipan 48 terminal ("Land ESIM terminal") manufactured by EM Solutions for operation on land vehicles. The testing and demonstrations will take place in a controlled manner at the Inmarsat Government facility in Reston, VA, as well as fixed locations in Washington, DC, Atlanta, GA, and New York, NY metropolitan areas. While the STA is requested for a 90 day period, the terminal will not be operated continuously throughout that timeframe. Instead, testing and demonstration will be conducted on individual days throughout the STA period, for approximately one day every two weeks. The terminal, which employs a 0.48 meter antenna, will operate on the same frequencies as the GX Terminals already licensed by the Commission:

[1] *See* Call Signs E140114 and E140029.

19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space). Operations in the frequency bands requested in the application are subject to the U.S. Table of Frequency Allocations in Section 2.106 of the Commission's rules ("U.S. Table") and the Ka-band plan adopted by the Commission. The FCC's Ka-band plan designates the 19.7-20.2 GHz band and the 29.5-30.0 GHz band to GSO FSS on a primary basis. The Commission recently adopted rules for ESIM use of the Ka-band FSS frequency bands requested in this application,[2] but the rules are not yet effective because they have not yet been published in the Federal Register.

The technical data required in the Form 312 for the proposed earth station is provided in Exhibit B. This terminal type employs a 0.48 meter flat panel antenna and the half-power beamwidth required in Section 25.130(f) is 1.5 degrees. For blanket licensing of transmitting Earth stations in the 29.5-30.0 GHz band, the Commission adopted off-axis EIRP spectral density levels contained in Section 25.138(a). As illustrated in the off-axis EIRP spectral density plots in Exhibit B, the proposed terminal type meets the limits specified in Section 25.138(a) or falls within the 3 dB exceedance allowance of 25.138(a)(3). Although multiple NGSOs have been licensed this year for the Ka-band, all of them have been granted subject to not causing interference to or claiming protection from GSO FSS, and given that no licensed NGSO system actually will be operating in the 29.5-30.0 GHz band during the proposed limited duration STA period, any incidental exceedance of the levels would not cause any potential interference to other users of the band.

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[2] *Amendment of Parts 2 and 25 of the Commission's Rules to Facilitate the Use of Earth Stations in Motion Communicating with Geostationary Orbit Space Stations in Frequency Bands Allocated to the Fixed Satellite Service*, Report and Order and Further Notice of Proposed Rulemaking, FCC 18-138 (rel. Sept. 27, 2018).

EXHIBIT B

Taipan Off-Axis EIRP Masks

Fig. 1.1. Co-Pol EIRP density in the Plane Tangent to the GSO Arc 29.5 GHz

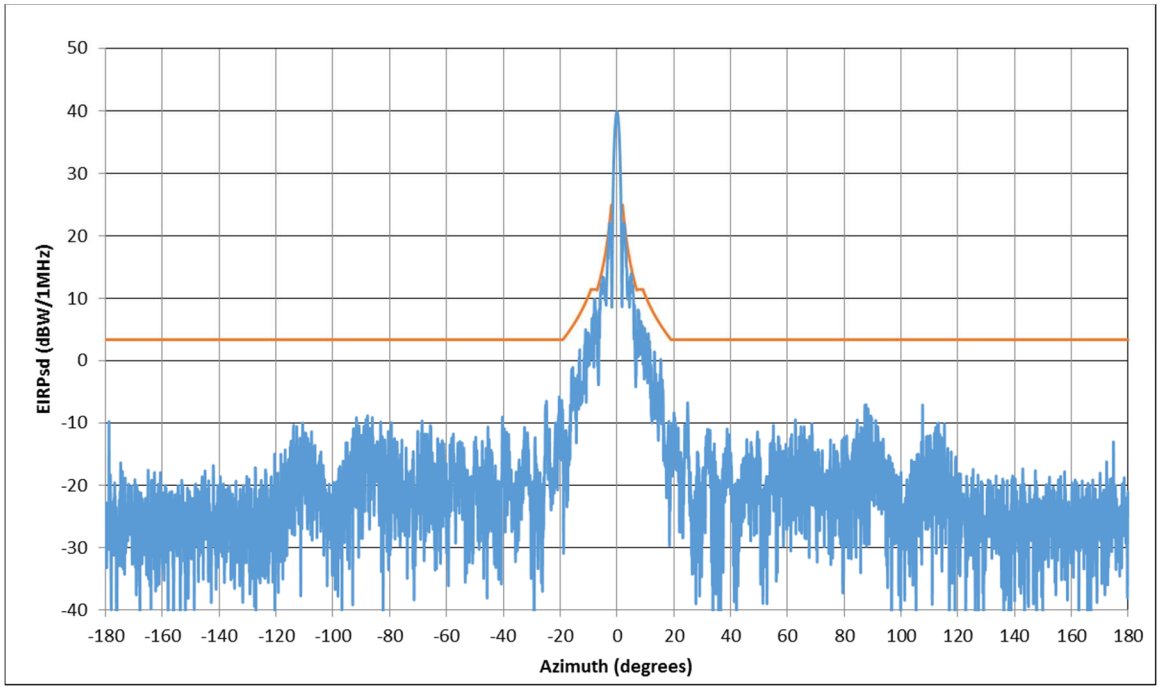


Fig. 1.2. Co-Pol EIRP density in the Plane Tangent to the GSO Arc 30.0 GHz

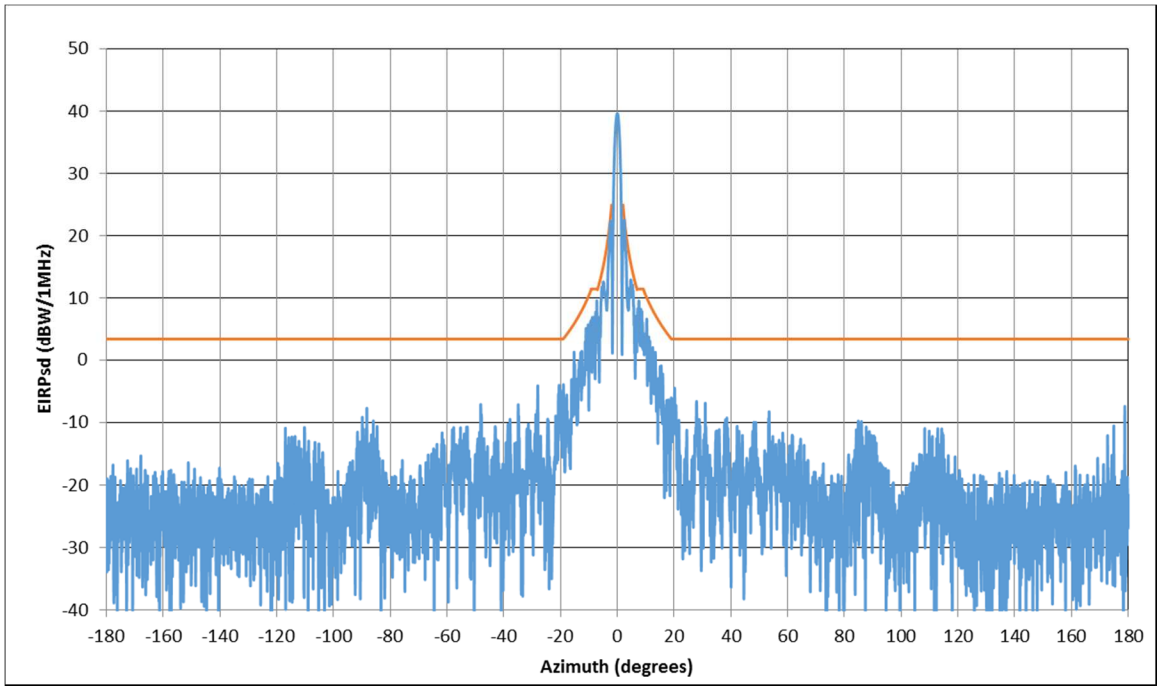


Fig. 2.1. Co-Pol EIRP density in the Plane Tangent to the GSO Arc 29.5 GHz (-10 to +10 degrees)

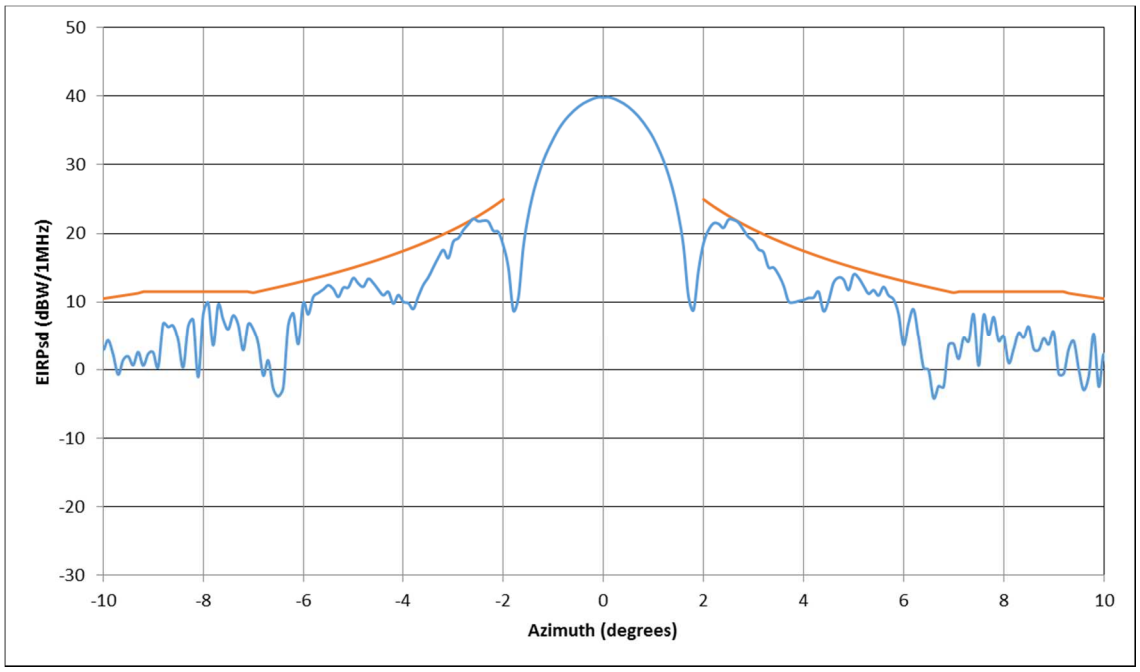


Fig. 2.2. Co-Pol EIRP density in the Plane Tangent to the GSO Arc 30.0 GHZ (-10 to +10 degrees)

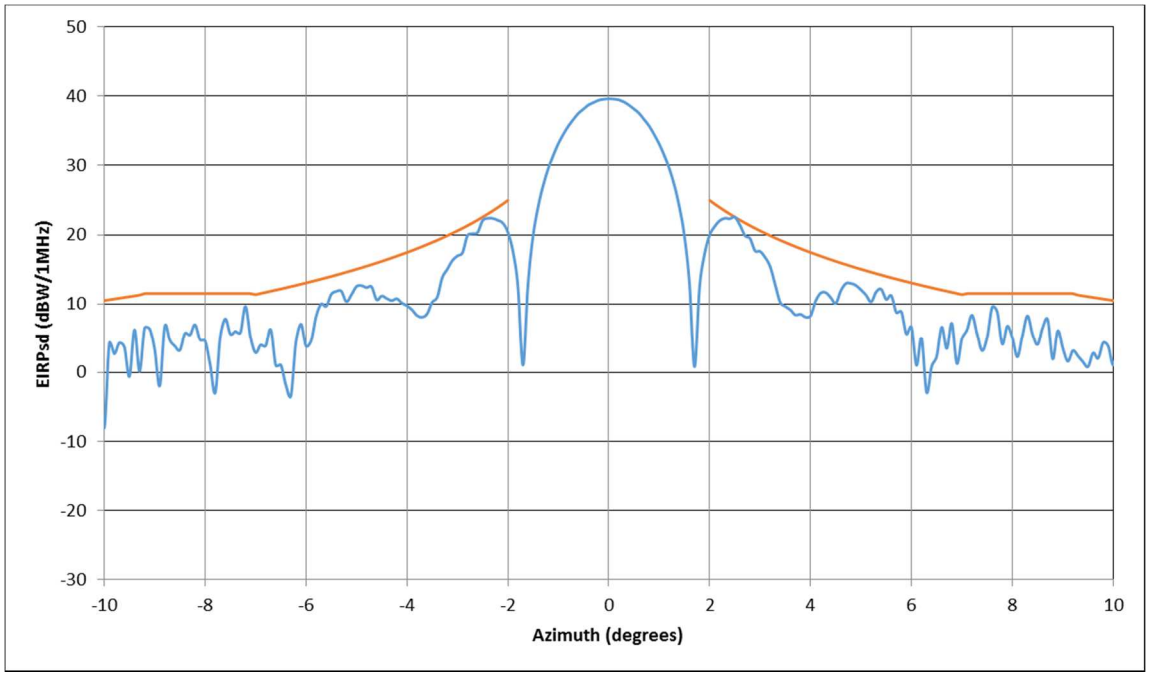


Fig. 3.1. Co-Pol EIRP density in the Perpendicular to the GSO Arc 29.5 GHz (0 to +30 degrees)

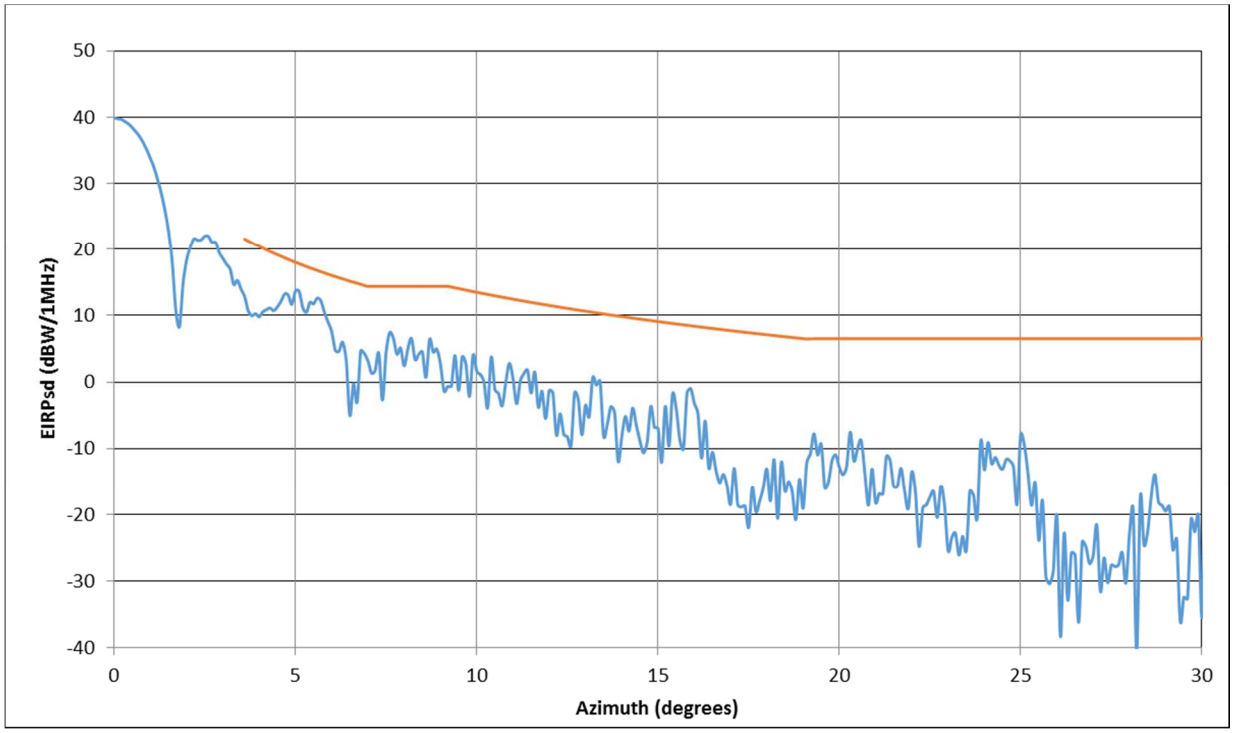


Fig. 3.2. Co-Pol EIRP density in the Perpendicular to the GSO Arc 30.0 GHz (0 to +30 degrees)

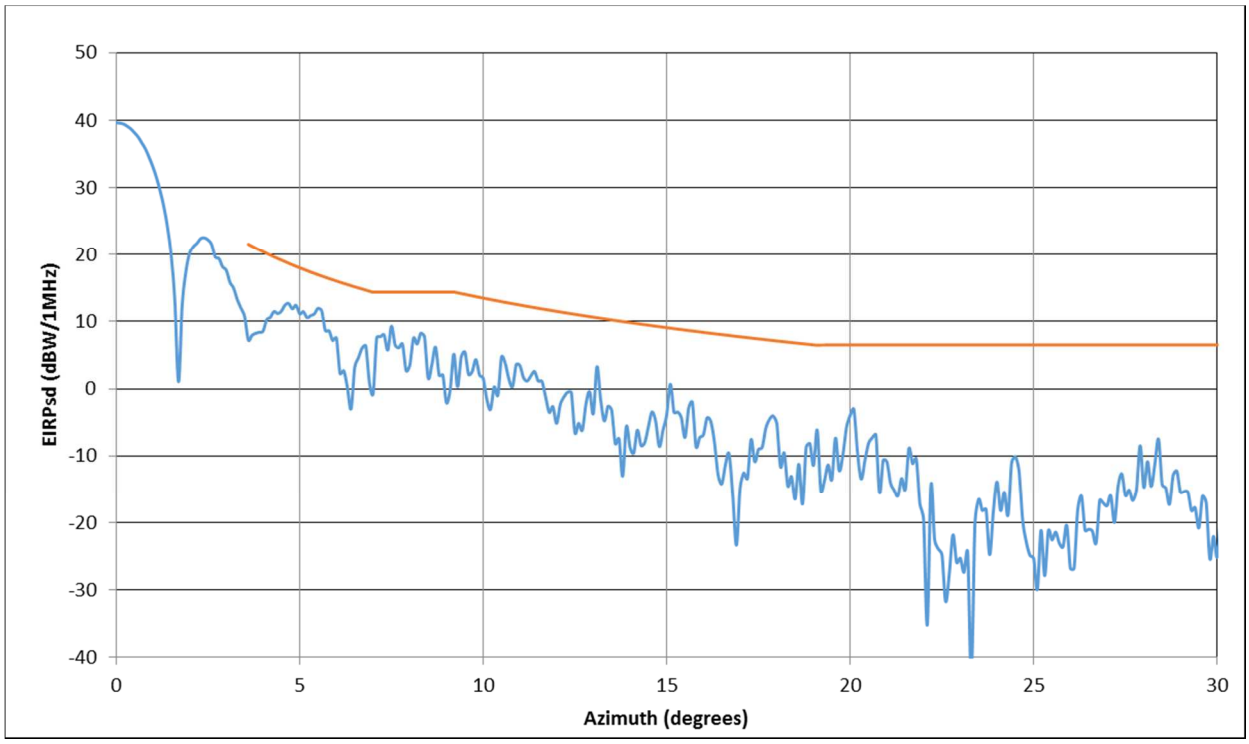


Fig. 4.1. X-Pol EIRP density in the plane tangent to the GSO Arc 29.5 GHZ (-7 to +7 degrees)

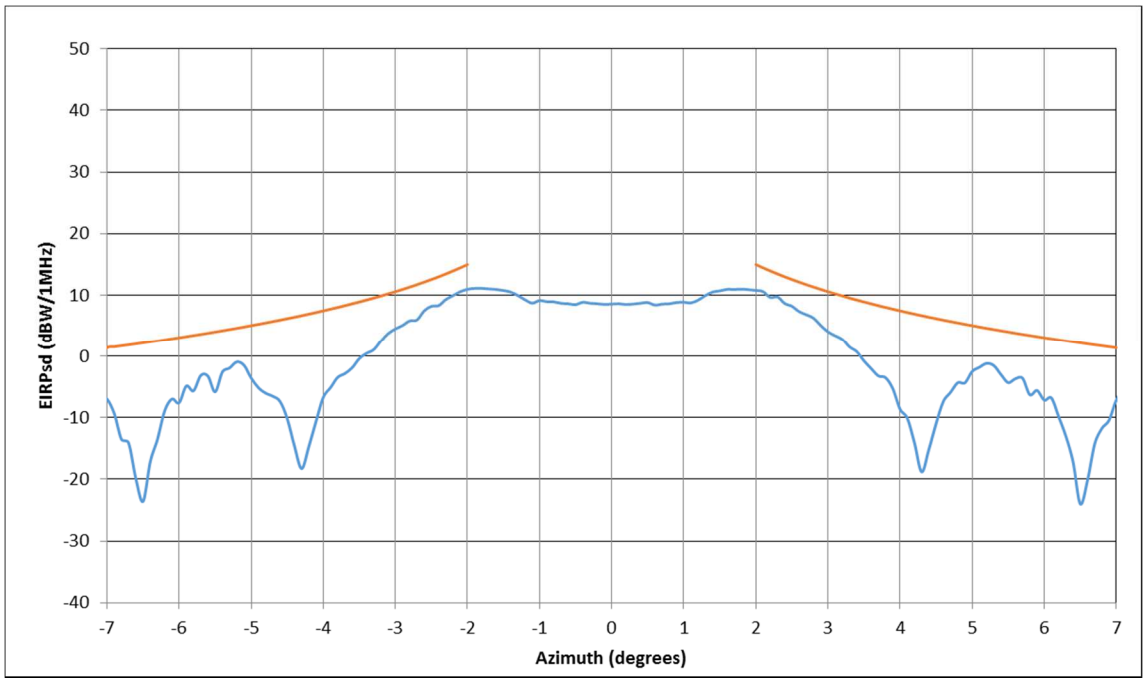


Fig. 4.2. X-Pol EIRP density in the plane tangent to the GSO Arc 30 GHZ (-7 to +7 degrees)

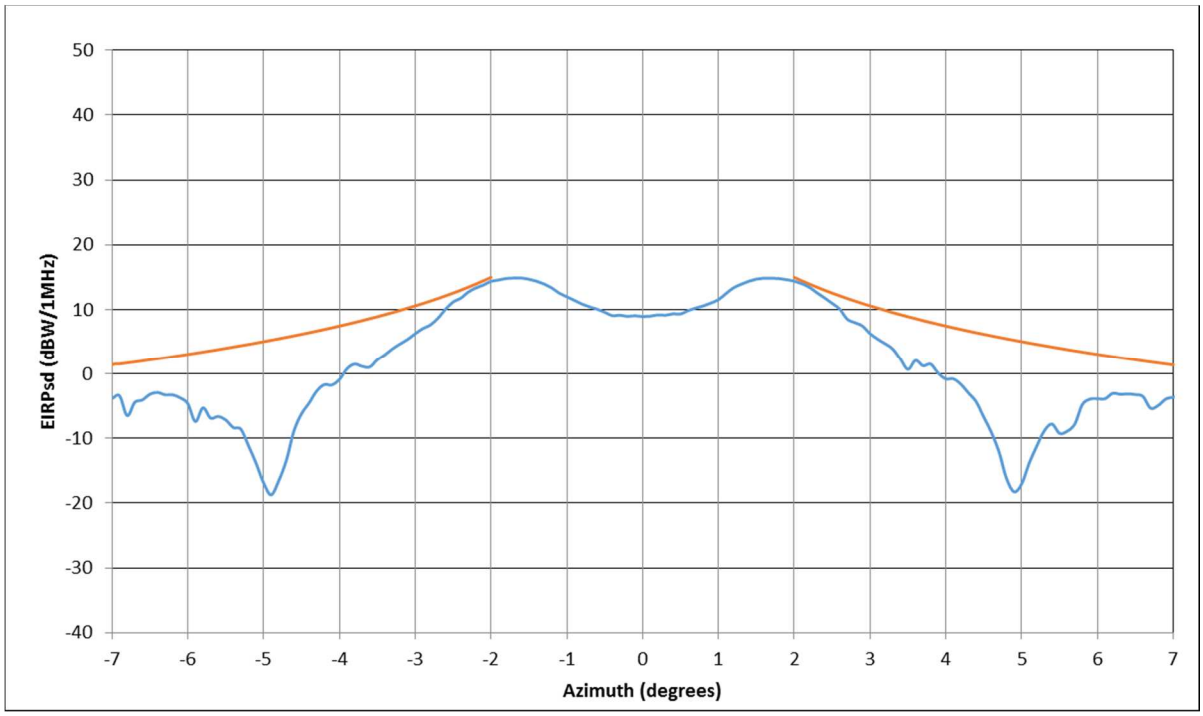


Fig. 5.1. X-Pol EIRP density in the plane perpendicular to the GSO Arc 29.5 GHZ (-7 to +7 degrees)

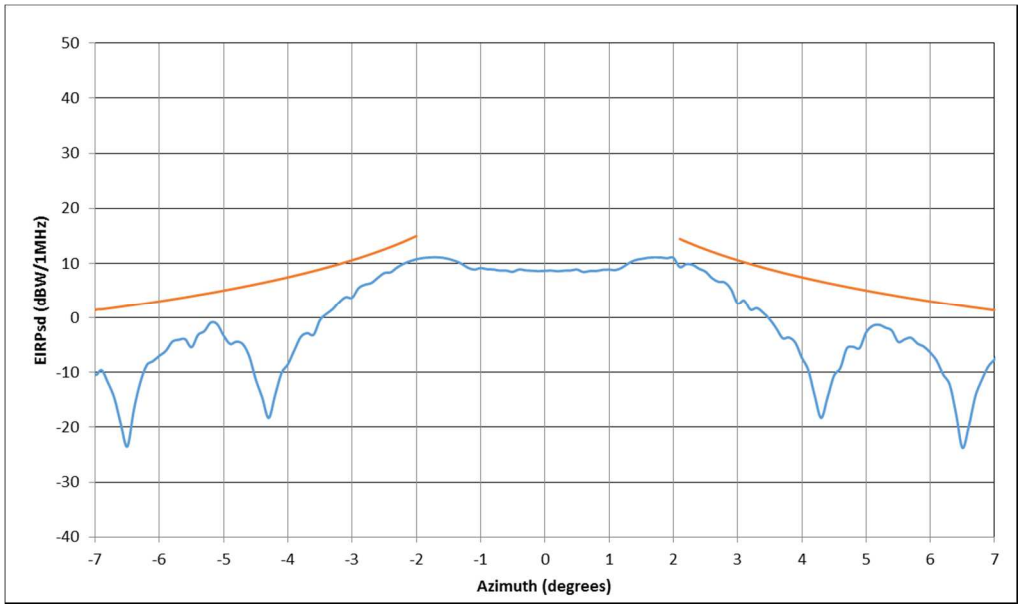
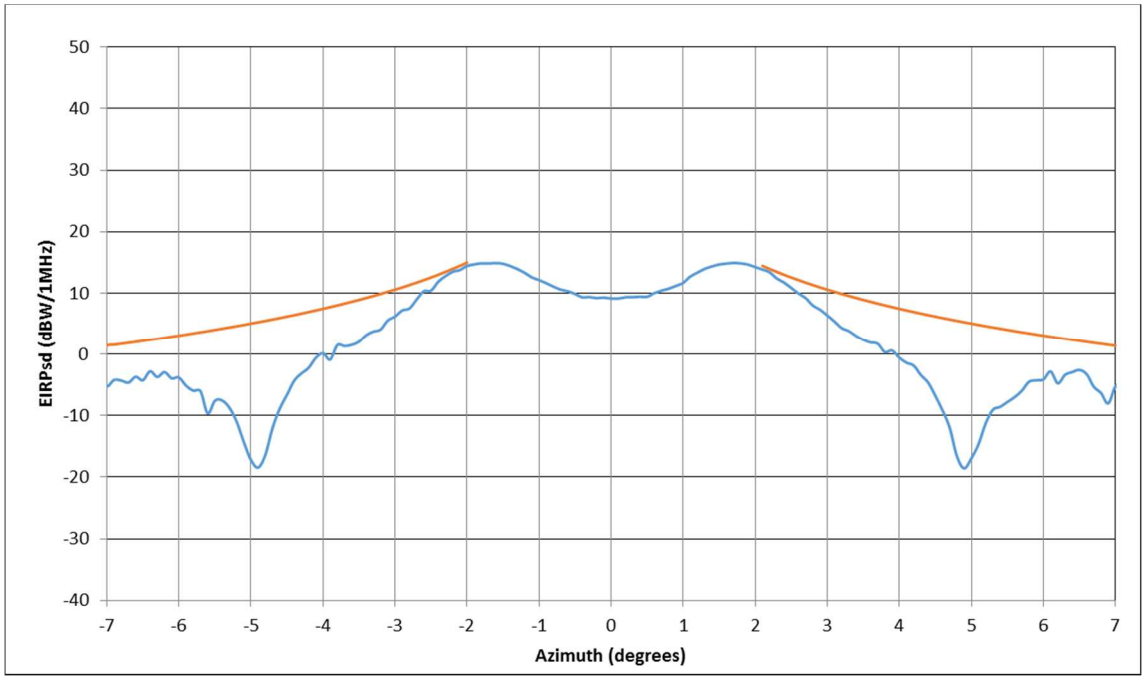


Fig. 5.2. X-Pol EIRP density in the plane perpendicular to the GSO Arc 30 GHZ (-7 to +7 degrees)



FORM 312 INFORMATION

Site ID	E28 Antenna ID	E29 Quantity	E30 Manufacturer	E31 Model	E32. Antenna Size	E41/42. Antenna Gain Transmit and or Receive
	Taipan	1	E.M. Solutions	Taipan	0.48	38.34 dBi at 19.7
					0.48	38.95 dBi at 19.95
					0.48	38.57 dBi at 20.2
					0.48	39.86 dBi at 29.5
					0.48	39.64 dBi at 30.0

	E33/34 Diameter Minor/Major (meters)	E35	E36	E37	E38 Total Input Power at antenna flange (watts)	E39	E40 Total EIRP for all carriers dBW
	0.48	0.0	0.0	0.0	16		50.6

	E43/44	E45 T/R Mode	E46 Antenna Polarization	E47 Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E.49 Maximum EIRP Density per Carrier (dBW/4kHz)
	19700 20200	R	LHC	32M0G7W	0.0	0.0
	29500 30000	T	RHC	460KG7W	50.6	29.99
	29500 30000	T	RHC	5M00G1W	50.6	19.63

	E52/53. Frequency Limits(MHz)	**E54/55.Range of Satellite Arc Eastern/ Western Limit**	**E56. Earth Station Azimuth Angle Eastern Limit**	**E57. Antenna Elevation Angle Eastern Limit**	**E58. Earth Station Azimuth Angle Western Limit**	**E59. Antenna Elevation Angle Western Limit**	E60. Maximum EIRP density toward the Horizon (dBW/4kHz)
	19700 20200	0.0/360.0	0.0	5.0	0.0	5.0	0.0
	29500 30000	0.0/360.0	0.0	5.0	0.0	5.0	-9.0