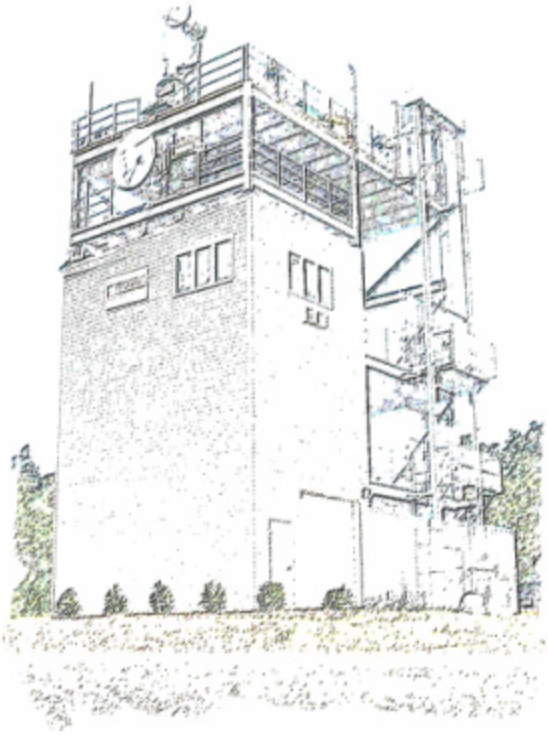
GENERAL DYNAMICS
SATCOM Technologies

Antenna Test Report

Test No. 1795

Project: 3.8M Series 1385 C-Band F1 CP Rx/Tx System.



General Dynamics SATCOM Technologies
East Maiden Antenna Test Facility
4488 Lawing Chapel Church Road
Maiden, North Carolina 28650
828-428-1485 / 828-428-1488 fax

Test report prepared by Keny Poovey

General Dynamics SATCOM Technologies

Table of Contents

1.0 Gain & Efficiency

1.1 Gain and Efficiency

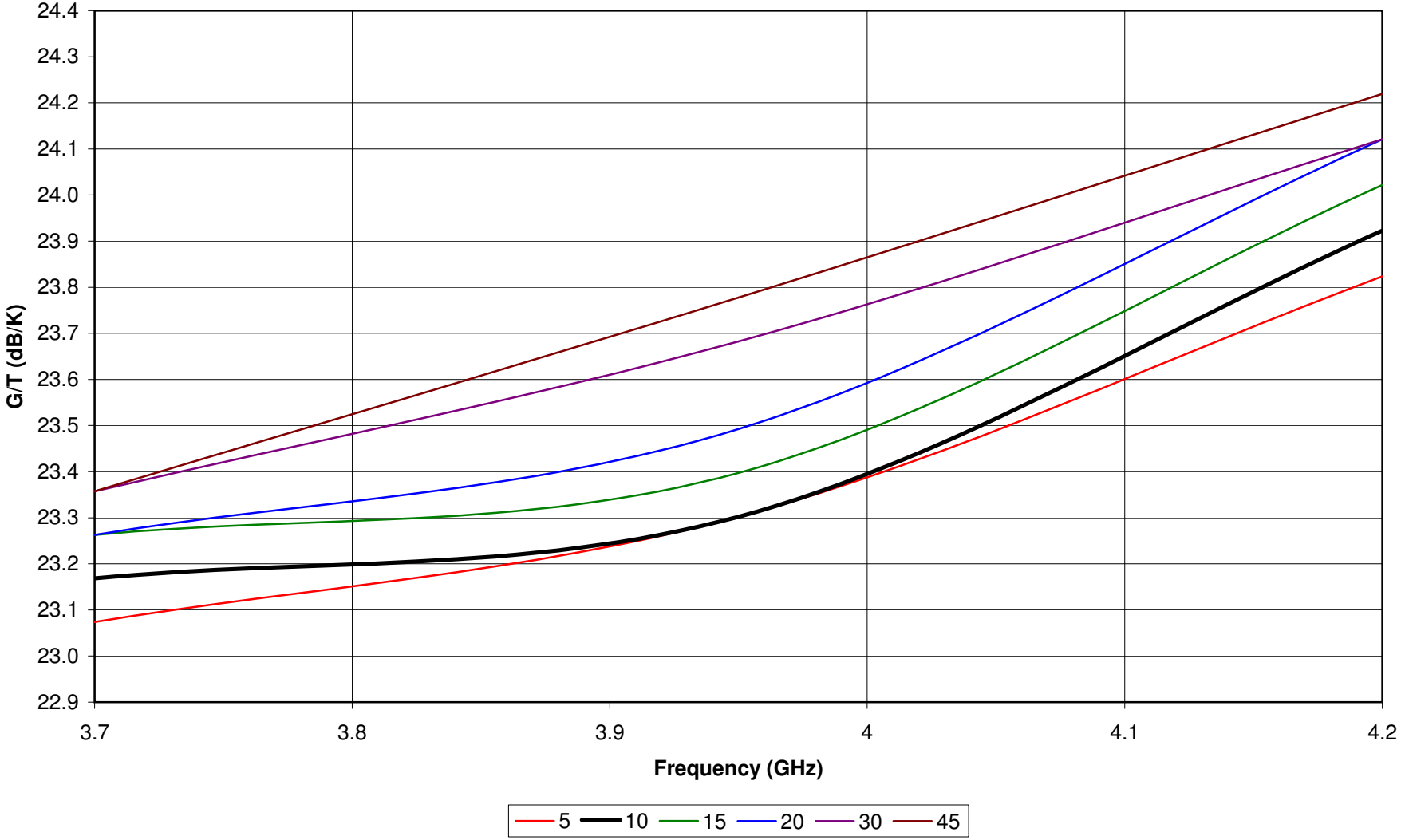
Freq. (GHz)	LHCP	RHCP	Average Gain (dB)	Efficiency (%)
3.625	41.9	41.8	41.8	73%
3.825	42.2	42.1	42.1	70%
4.025	42.4	42.4	42.4	67%
4.200	42.8	42.7	42.7	67%
5.845	45.8	45.8	45.8	70%
6.045	46.0	46.0	46.0	69%
6.245	46.3	46.3	46.3	69%
6.425	46.6	46.7	46.7	71%

* 46.00dB Gain used for 29-25 Log theta Specification Line On TX Patterns

* 42.10dB Gain used for 29-25 Log theta Specification Line On RX Patterns

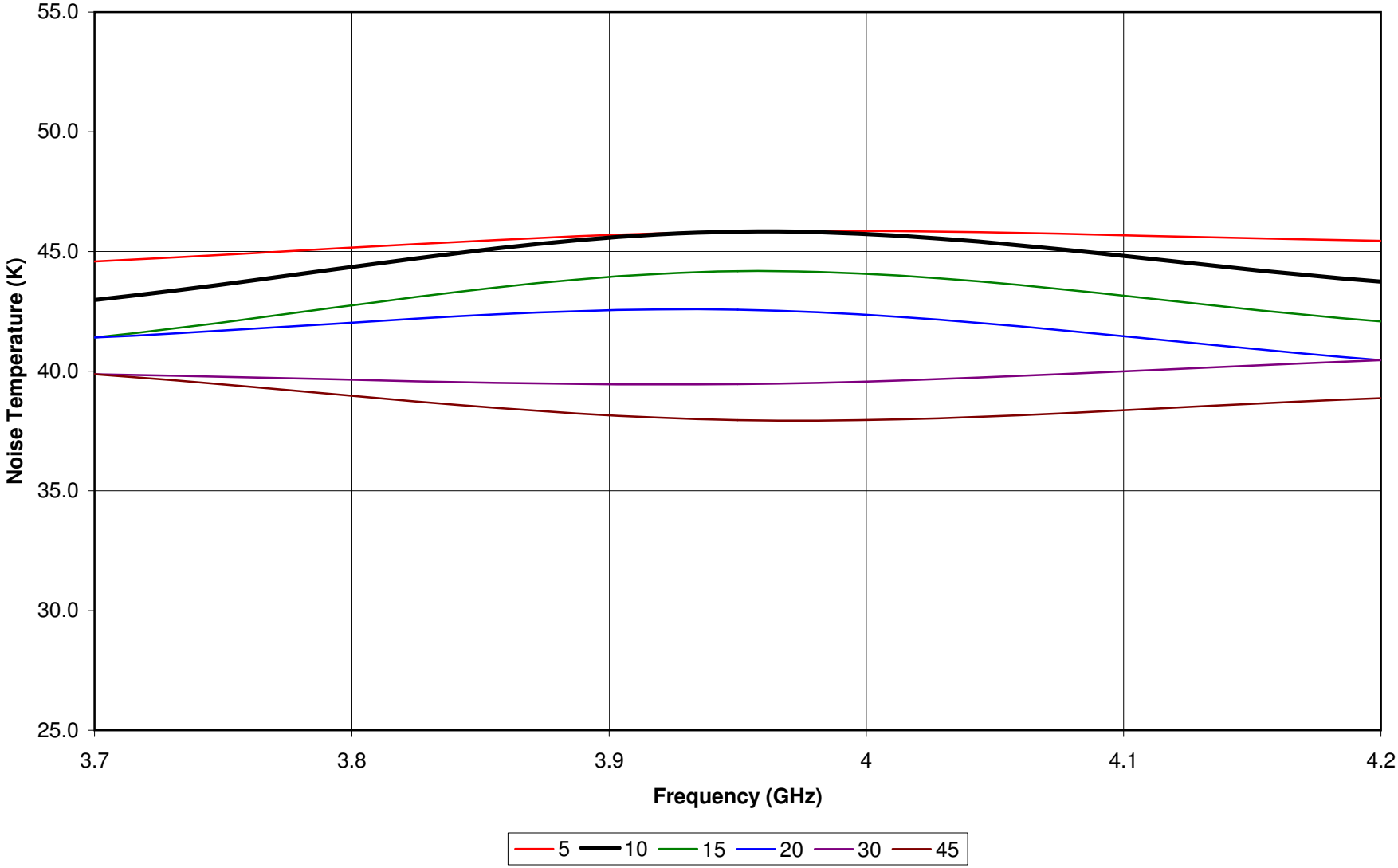
1.2 G/T - Noise Temperture

3.8m G/T Circular Polarity
(30K LNB)



GENERAL DYNAMICS
SATCOM Technologies

3.8m Noise - Circular Polarity



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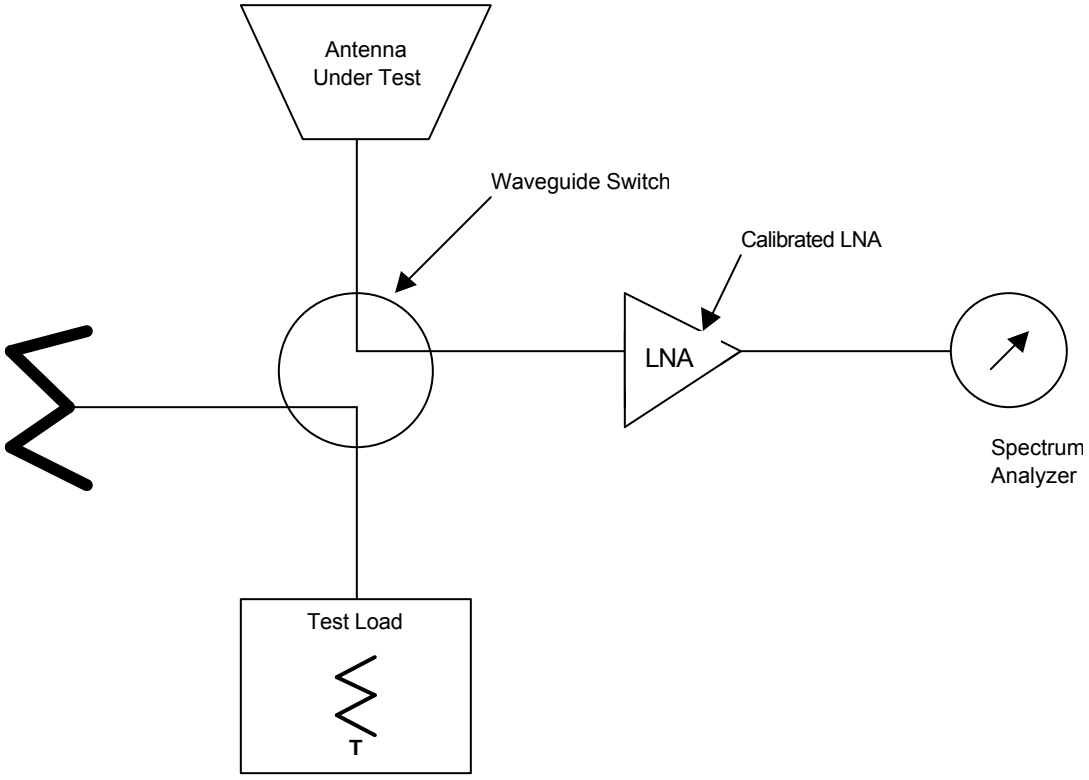
Antenna noise temperature was measured based on System Power Test Method *(Y-Factor Method)* recommended by Intelsat document SSOG 210 Section 5.

The noise temperature formula is defined as:

T (system) dB = 10log [T(test load) (K) + T (LNA) (K)] - Y(dB)

Where,
T(system) is the system noise temperature in dB
T(Test Load) is given noise temperature of the matched load used in the measurement
T(LNA) = is the calibrated LNA noise temperature



- Test Equipment Arrangement for Receive System Noise Power Measurement *(Y-Factor Method)*

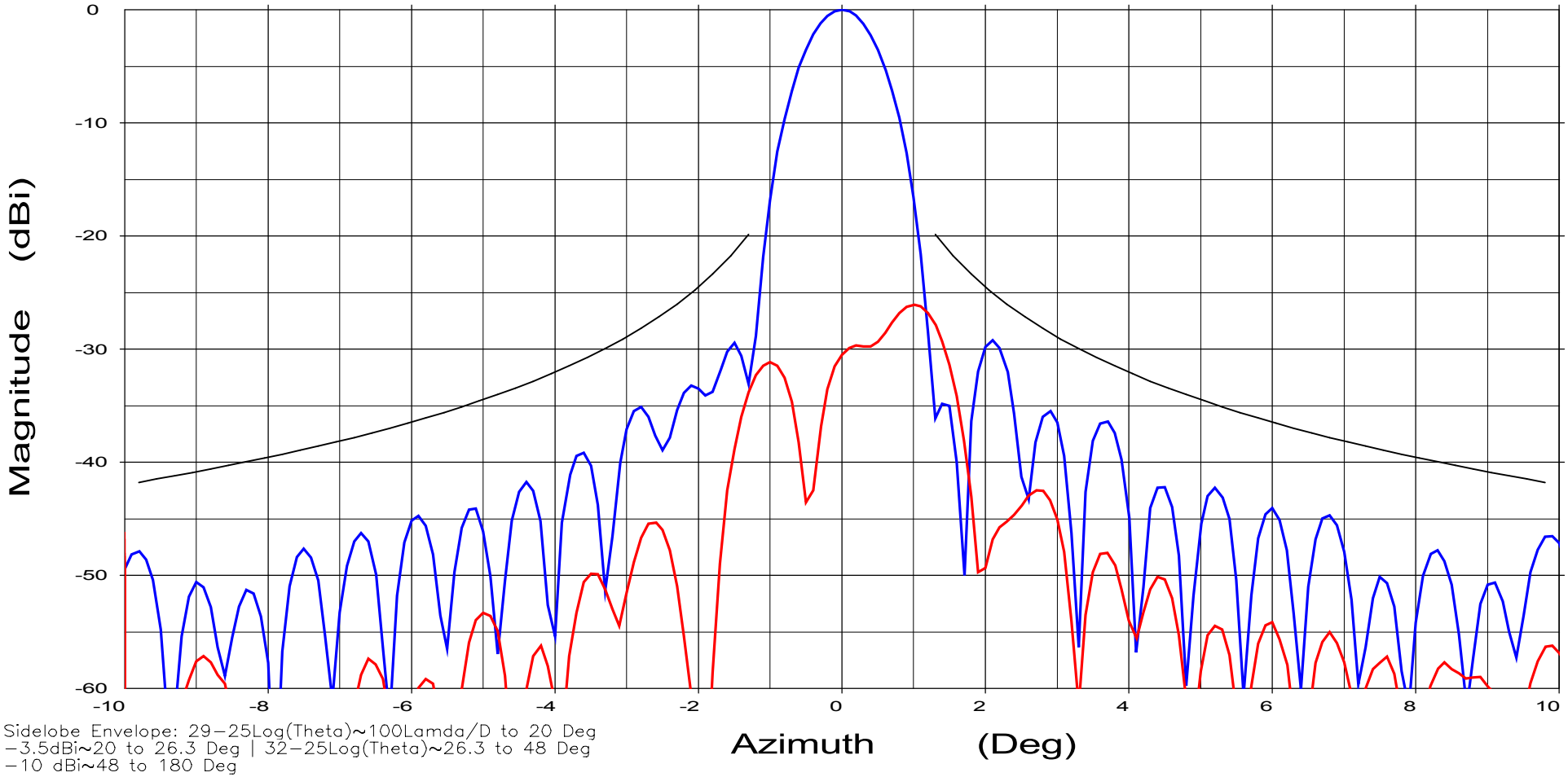
2.0 Transmit Antenna Pattern Measurements

2.1 RHCP Polarization Transmit +/-10 Degree Co & Cross Pol Patterns

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi
1769 03.dat-ant_under_test	1769 03.dat	SGA-70	ch1	dBi

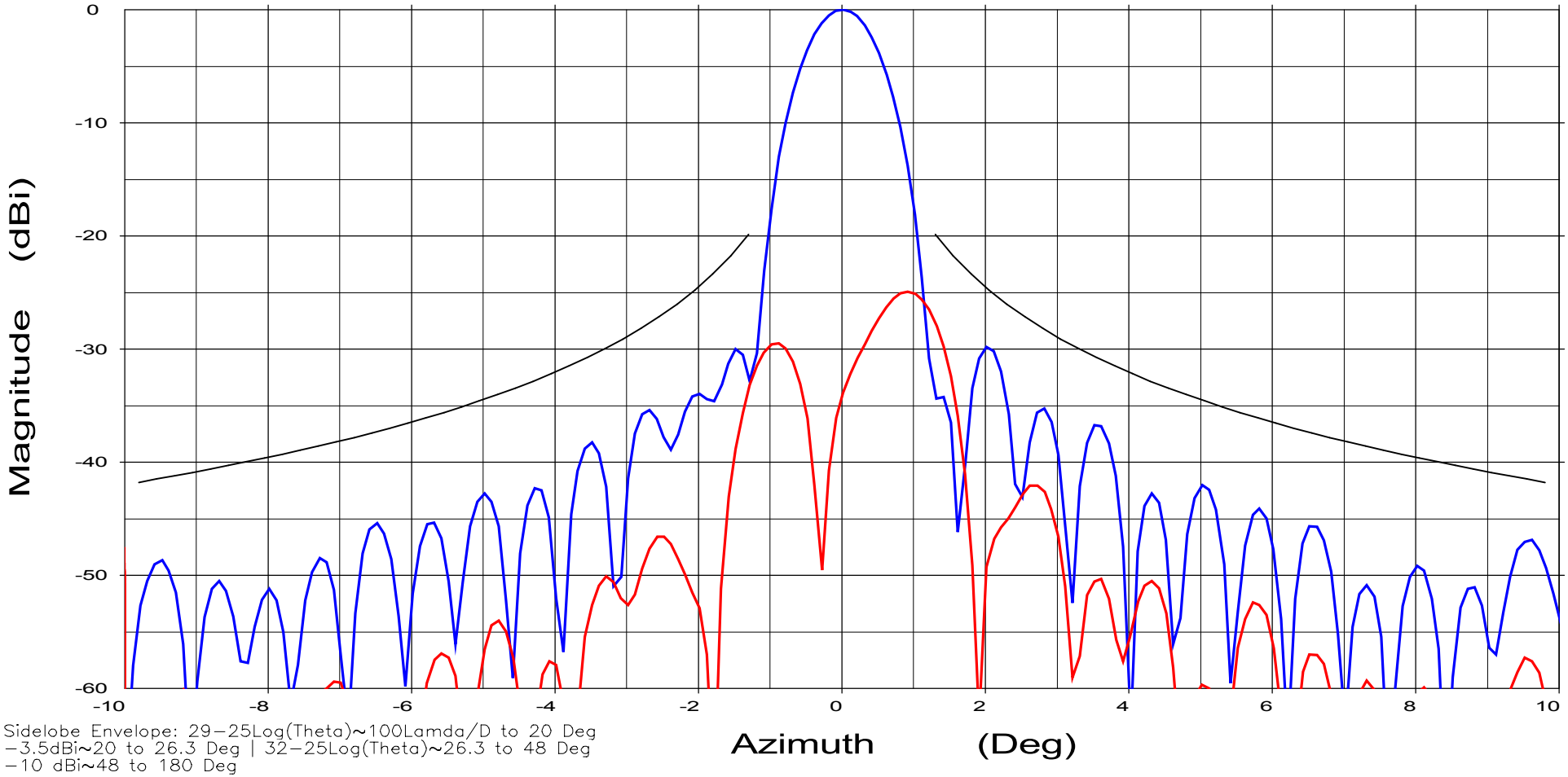
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi
1769 03.dat-ant_under_test	1769 03.dat	SGA-70	ch1	dBi

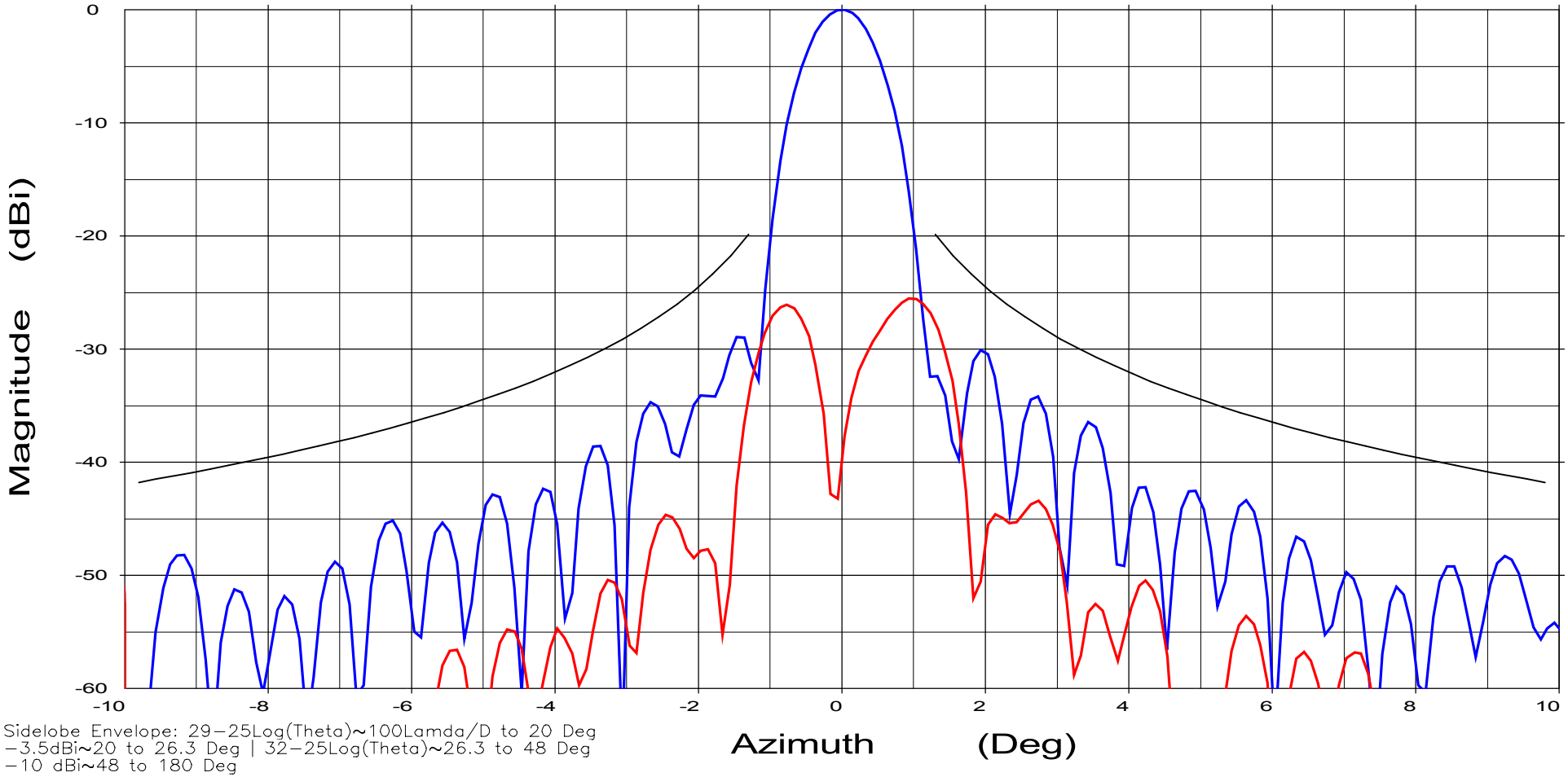
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi
1769 03.dat-ant_under_test	1769 03.dat	SGA-70	ch1	dBi

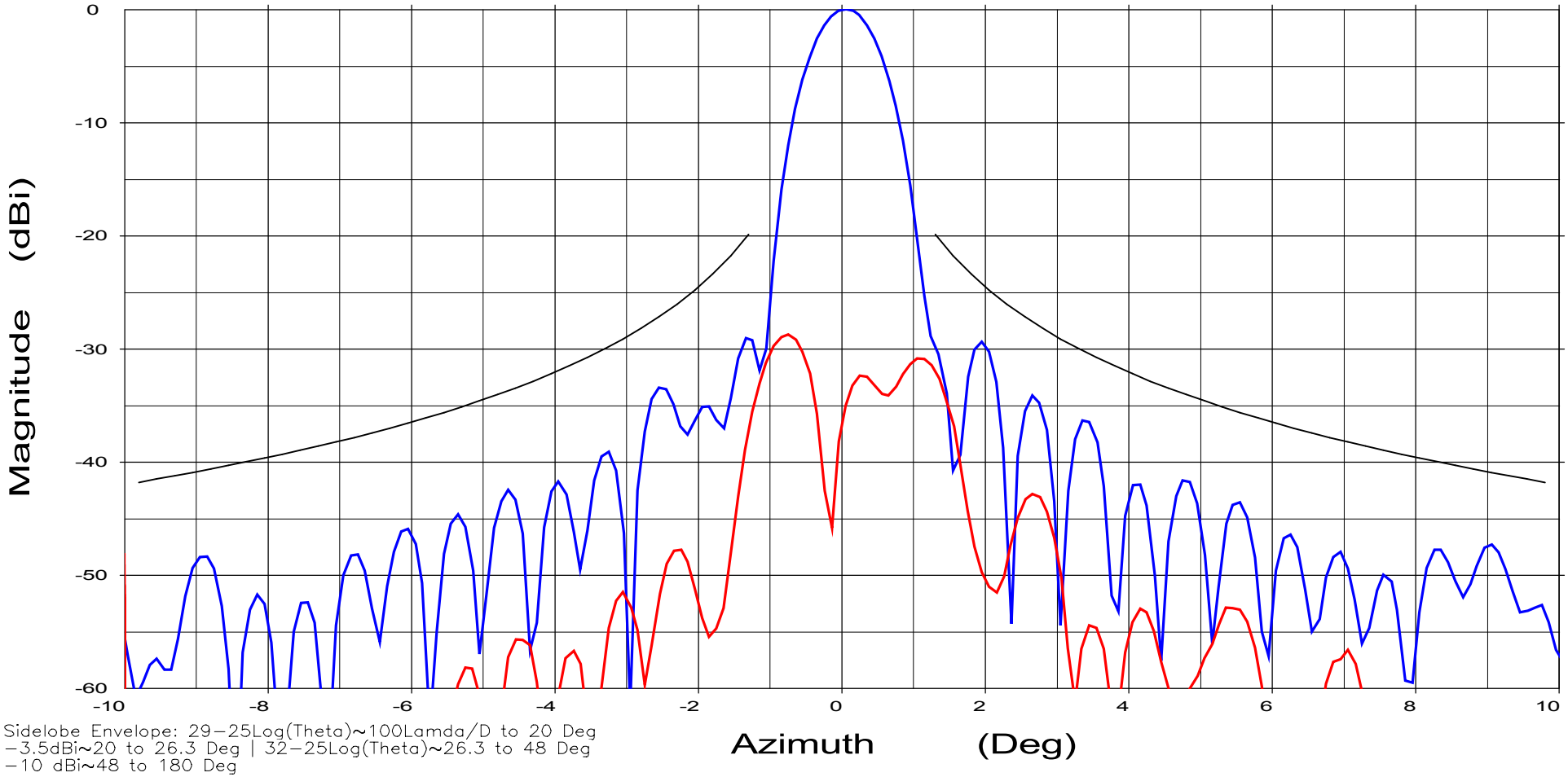
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi
1769 03.dat-ant_under_test	1769 03.dat	SGA-70	ch1	dBi

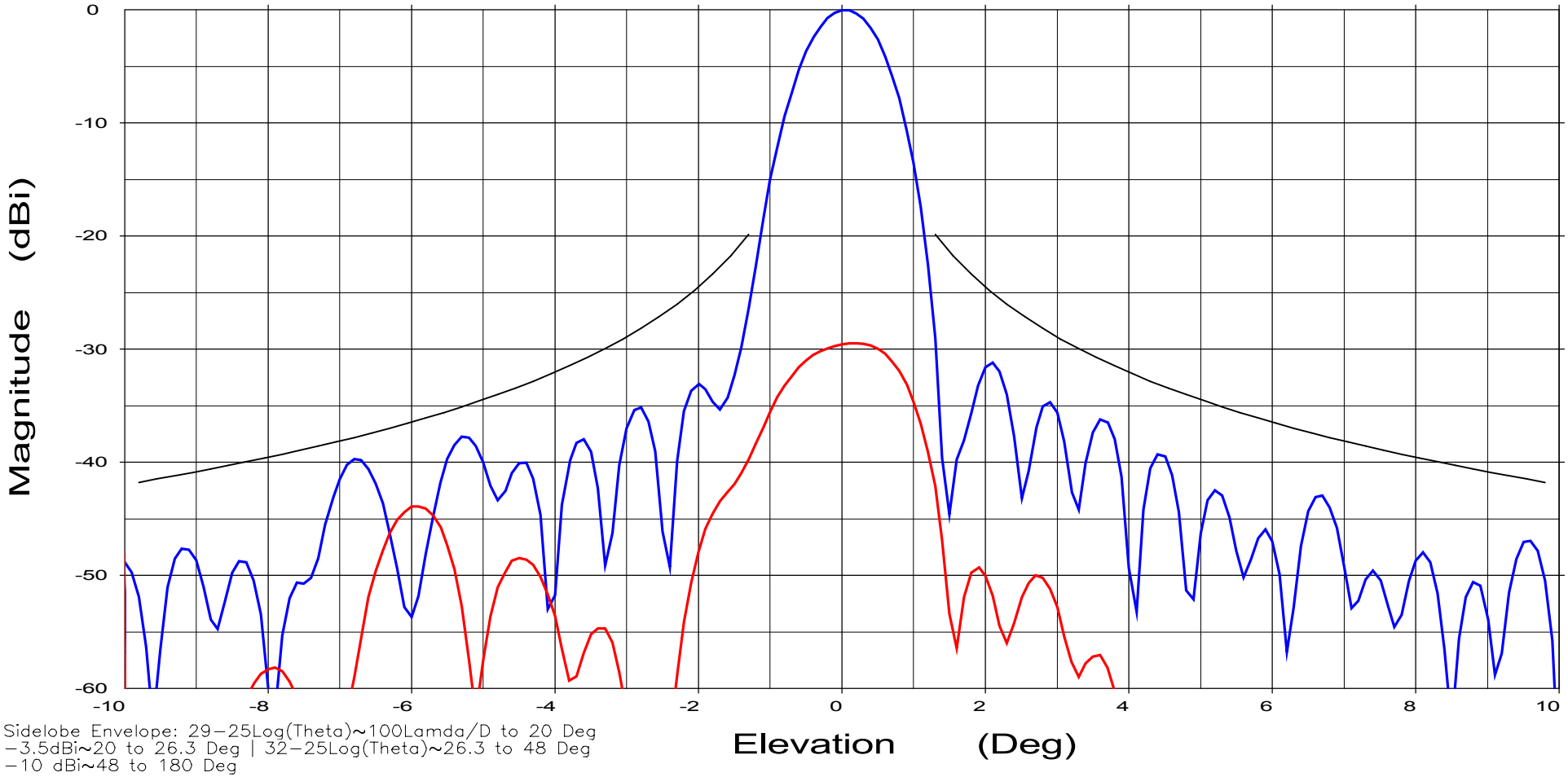
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 09.dat-ant_under_test	1769 09.dat	SGA-70	ch1	dBi
1769 11.dat-ant_under_test	1769 11.dat	SGA-70	ch1	dBi

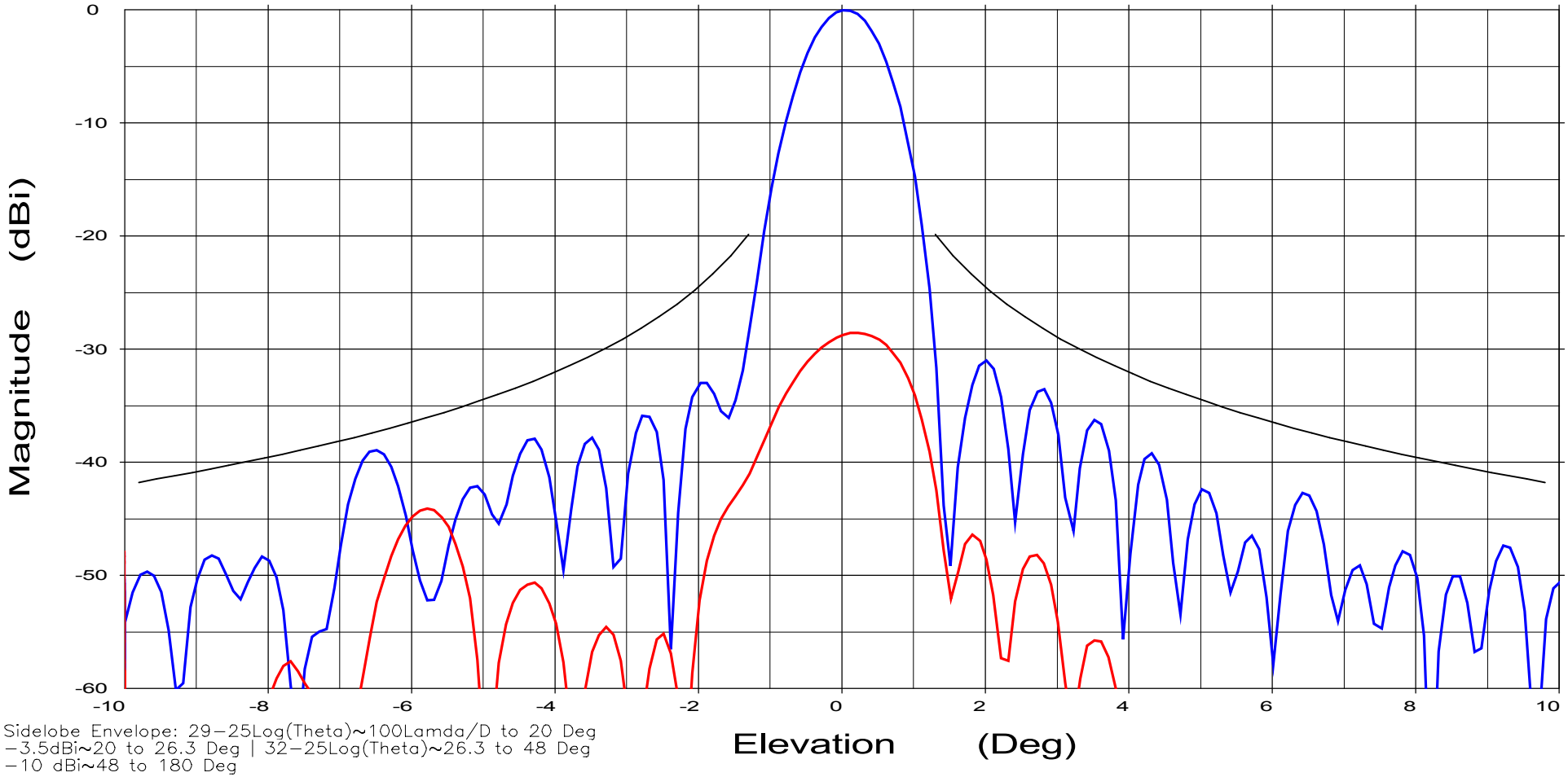
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 09.dat-ant_under_test	1769 09.dat	SGA-70	ch1	dBi
1769 11.dat-ant_under_test	1769 11.dat	SGA-70	ch1	dBi

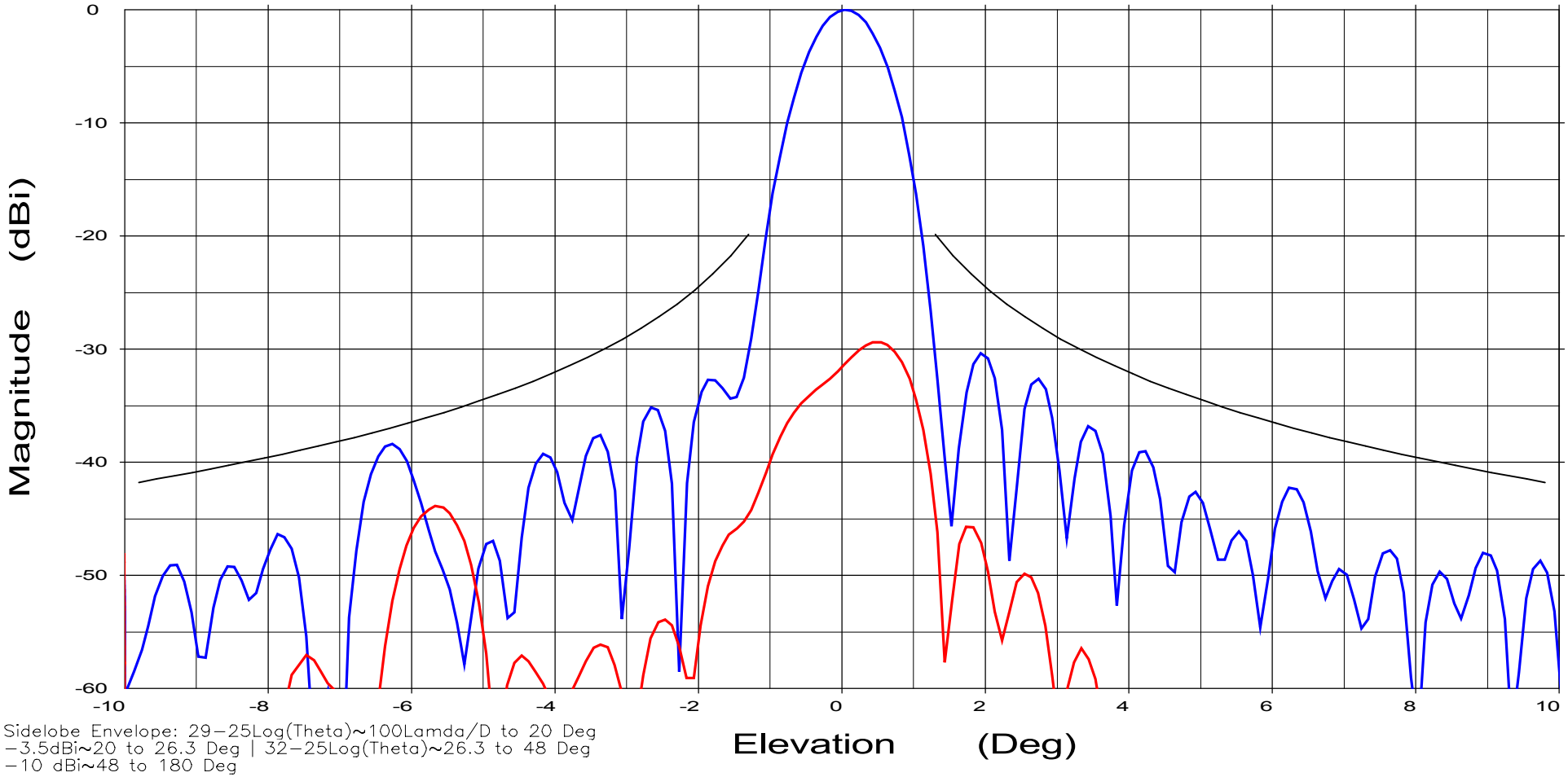
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 09.dat-ant_under_test	1769 09.dat	SGA-70	ch1	dBi
1769 11.dat-ant_under_test	1769 11.dat	SGA-70	ch1	dBi

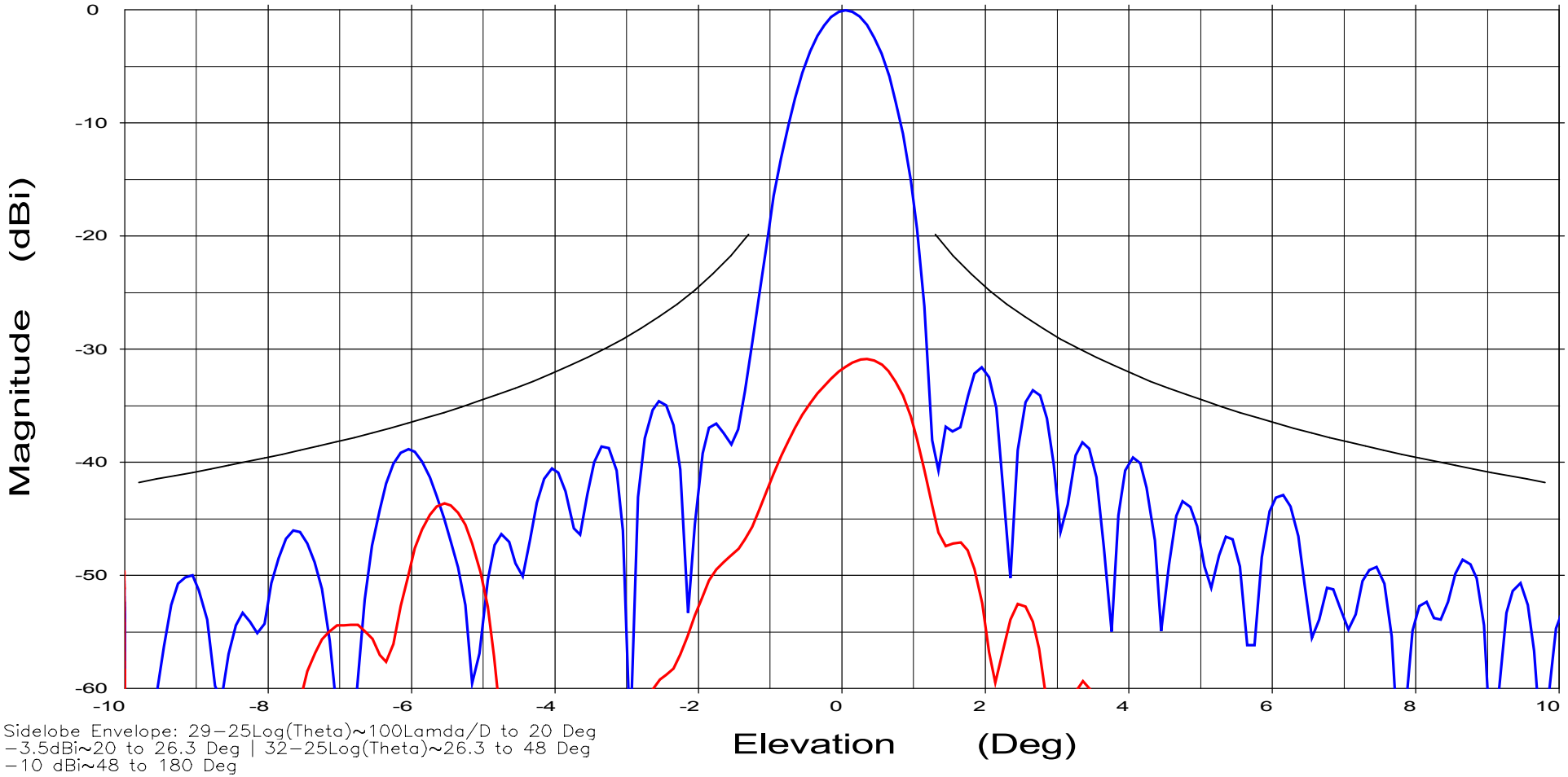
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 09.dat-ant_under_test	1769 09.dat	SGA-70	ch1	dBi
1769 11.dat-ant_under_test	1769 11.dat	SGA-70	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

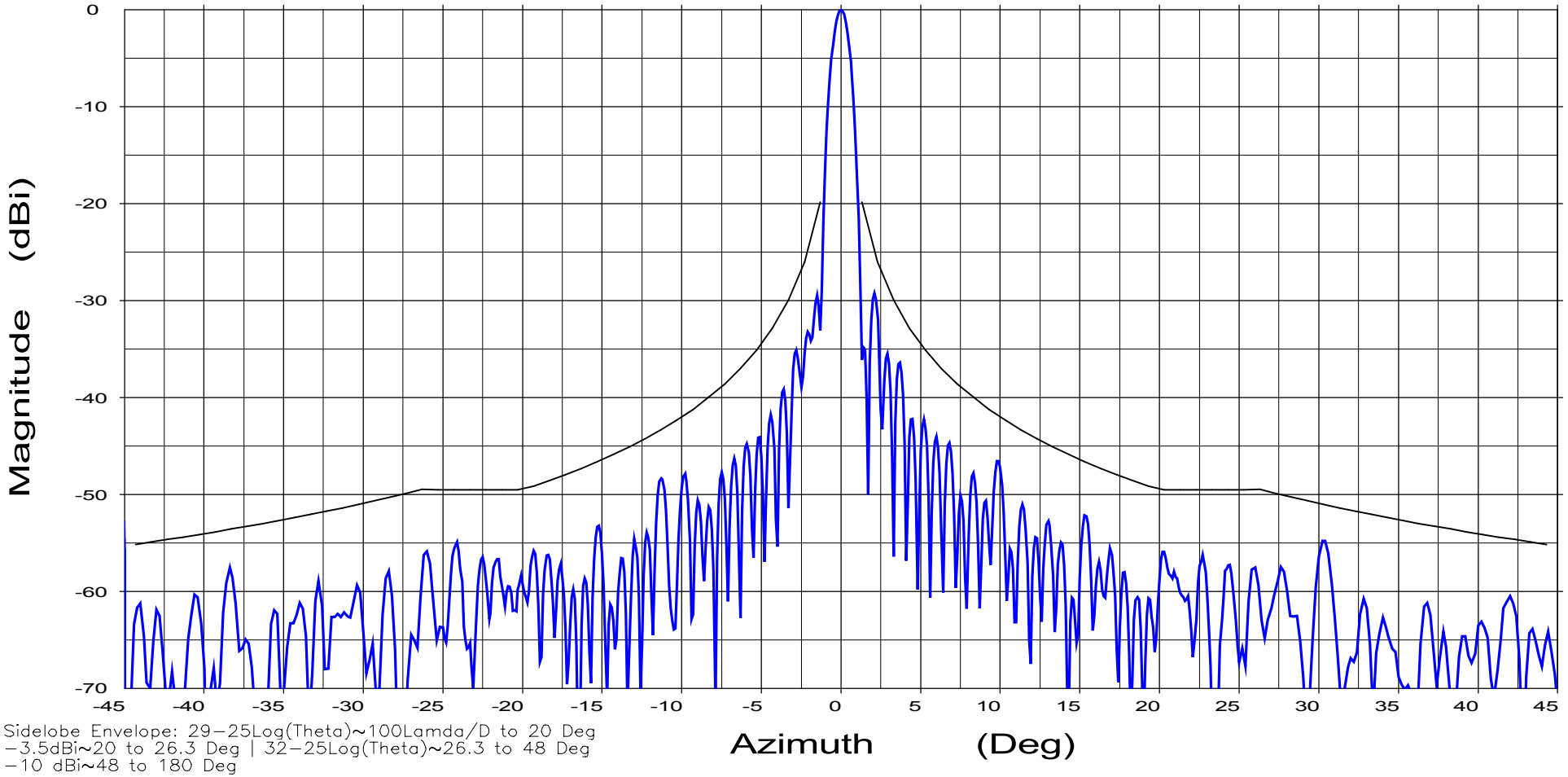
2.2 RHCP Polarization Transmit +/-45 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

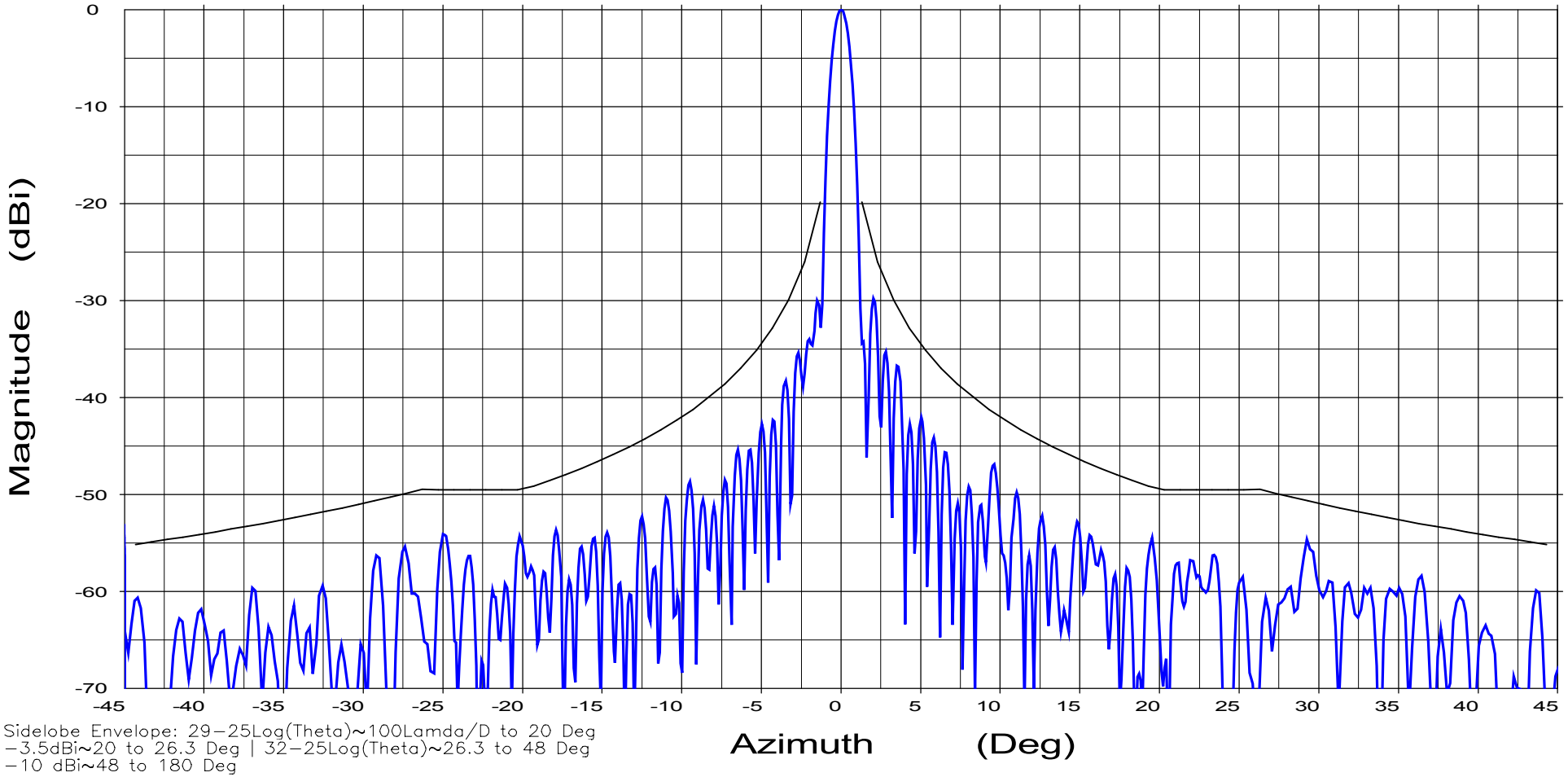
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

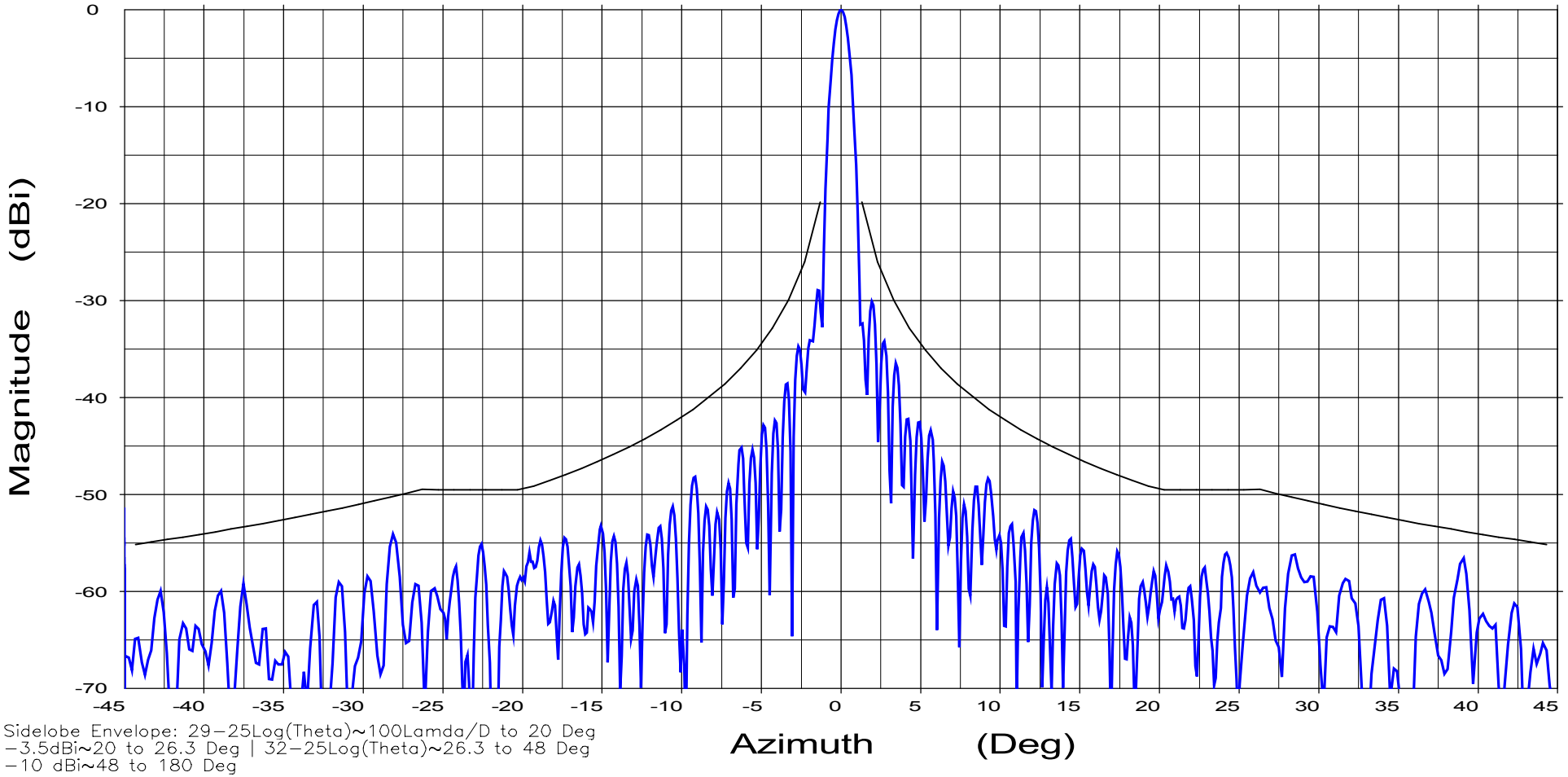
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

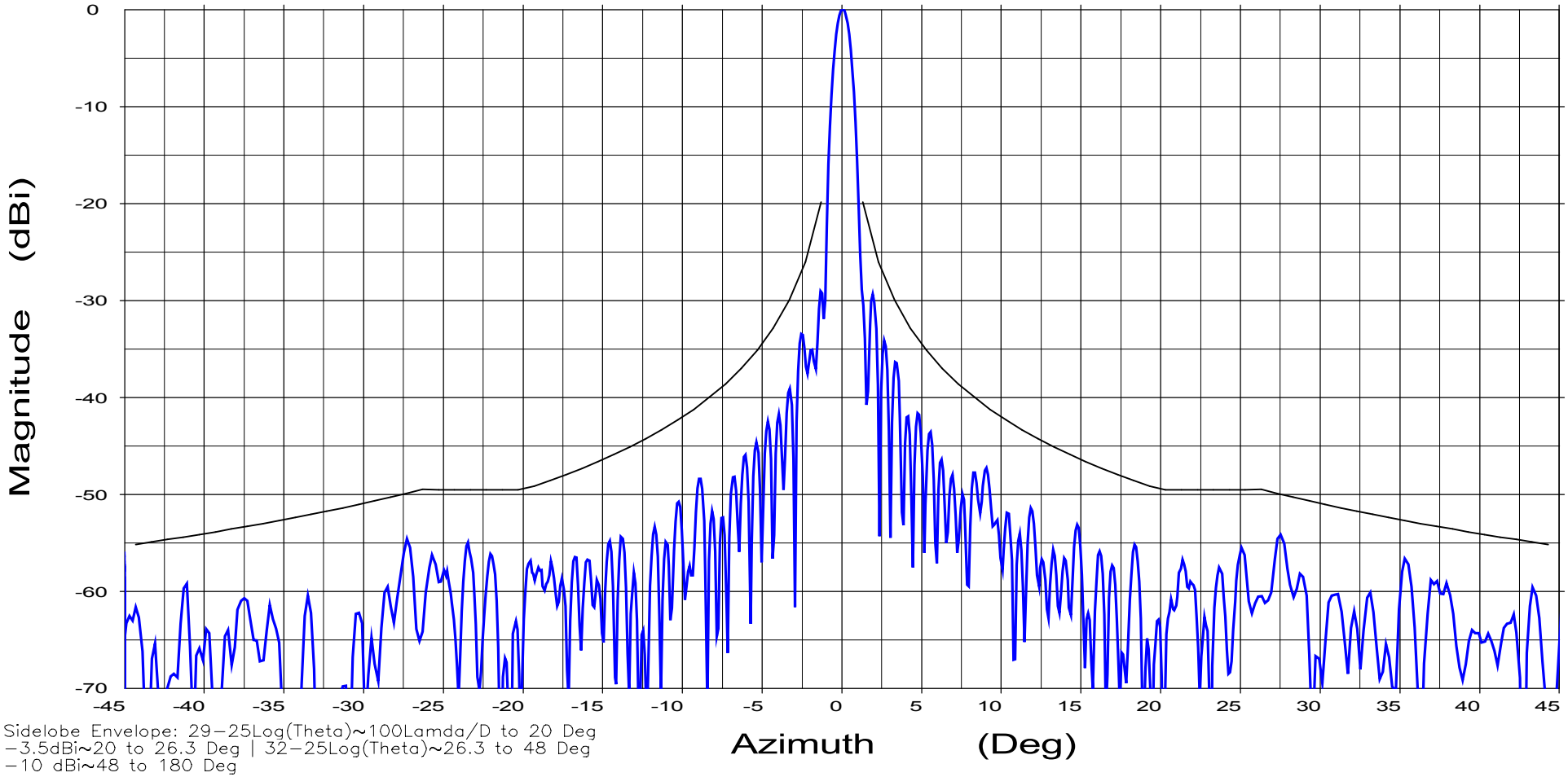
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

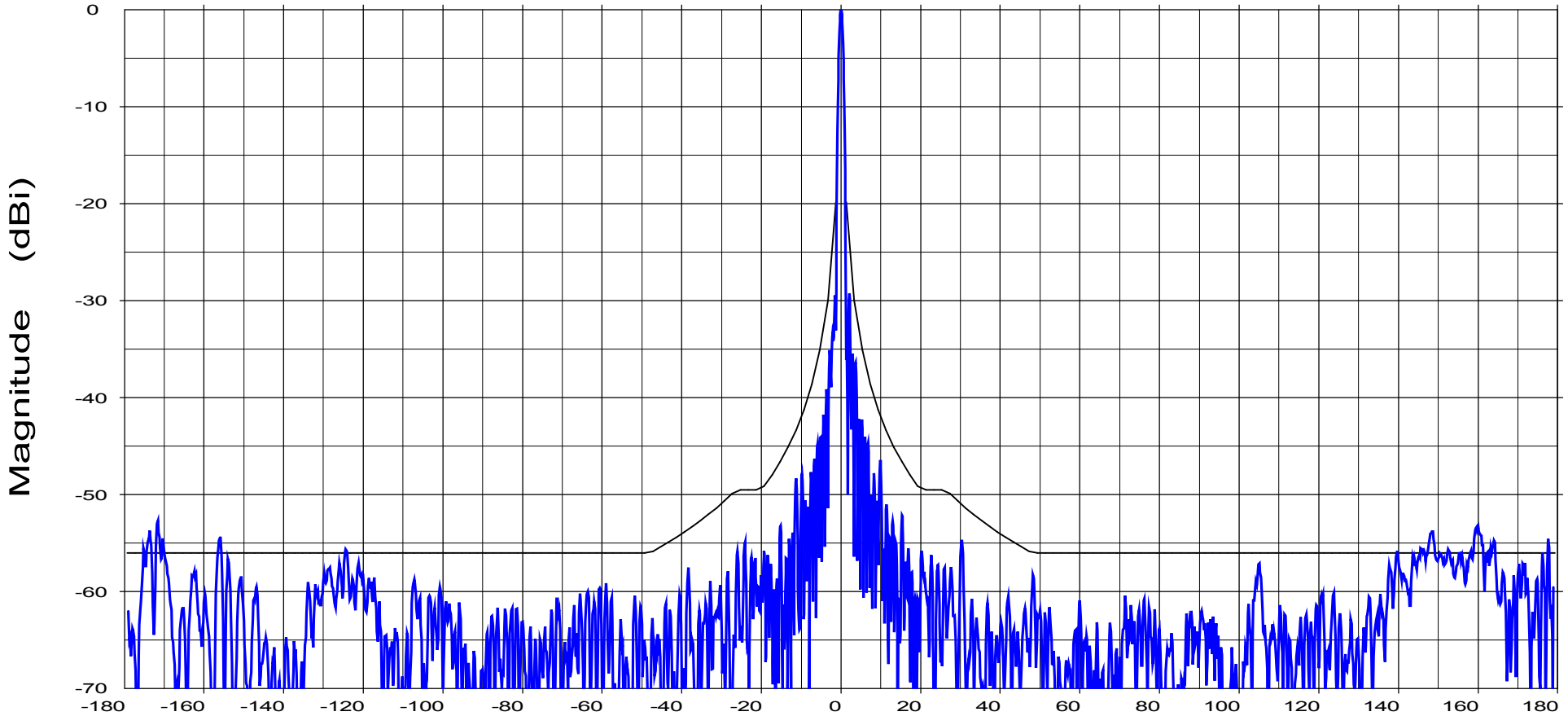
2.3 RHCP Polarization Transmit +/-180 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

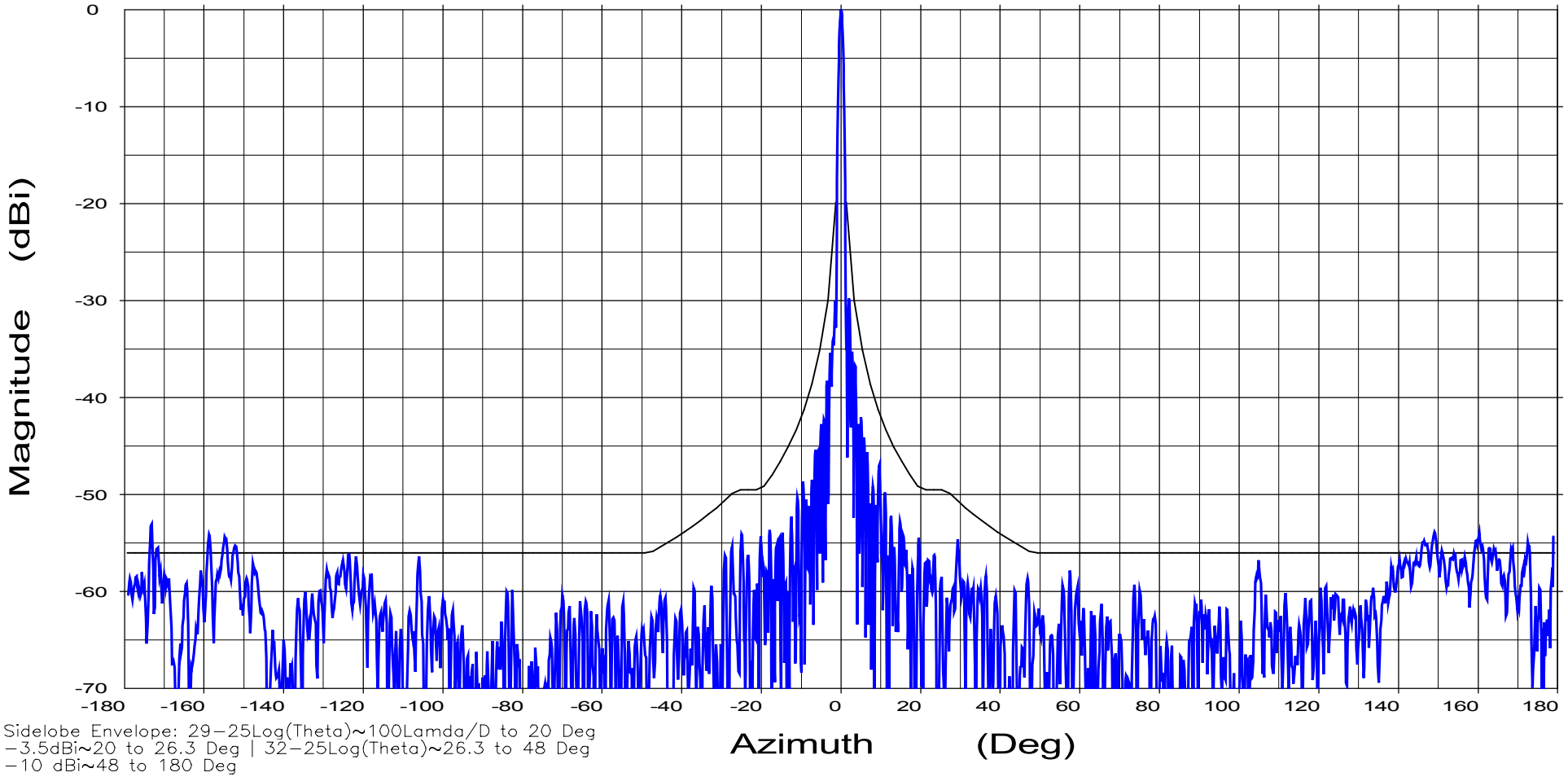
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

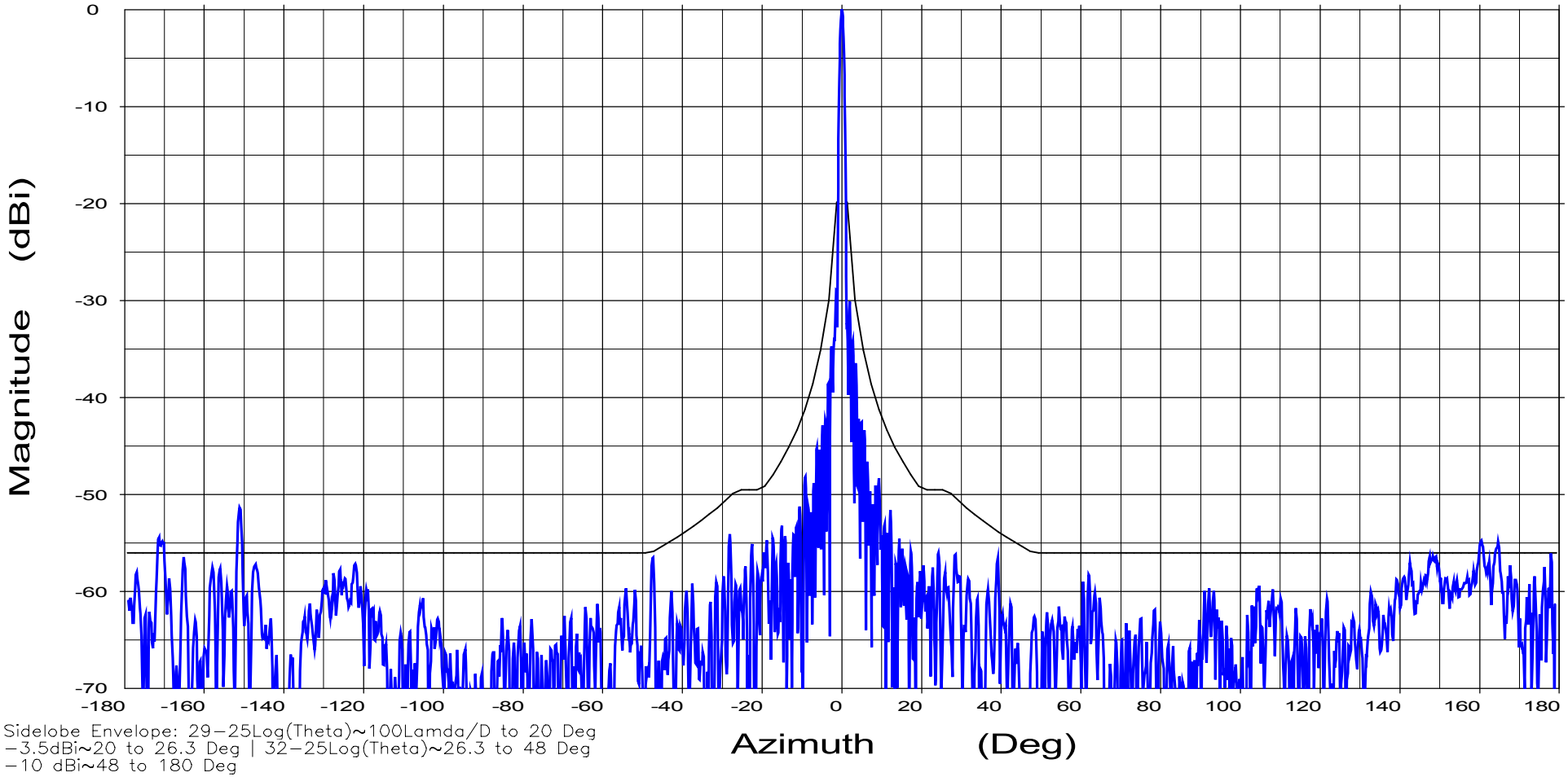
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

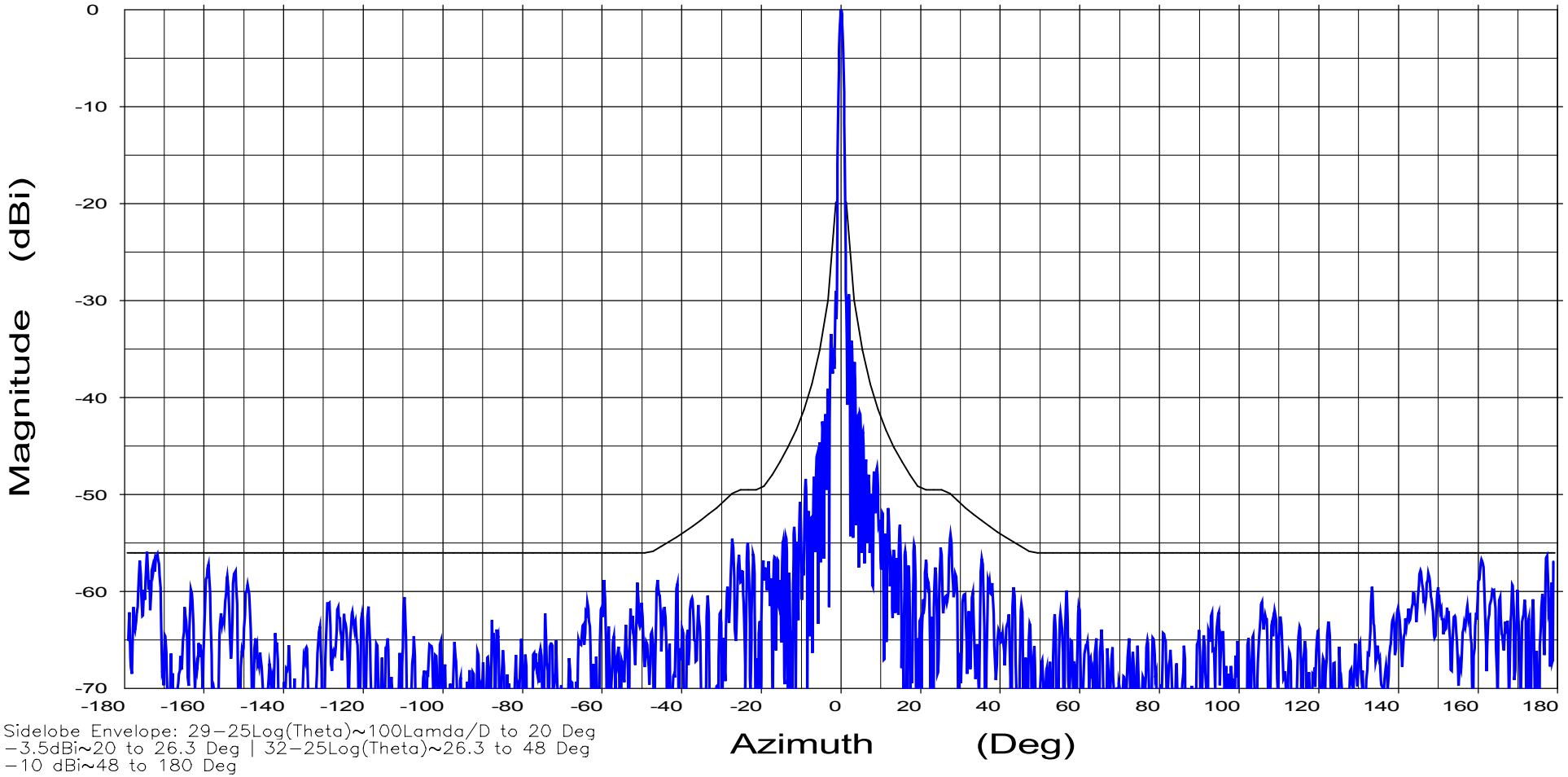
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 00.dat-ant_under_test	1769 00.dat	SGA-70	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

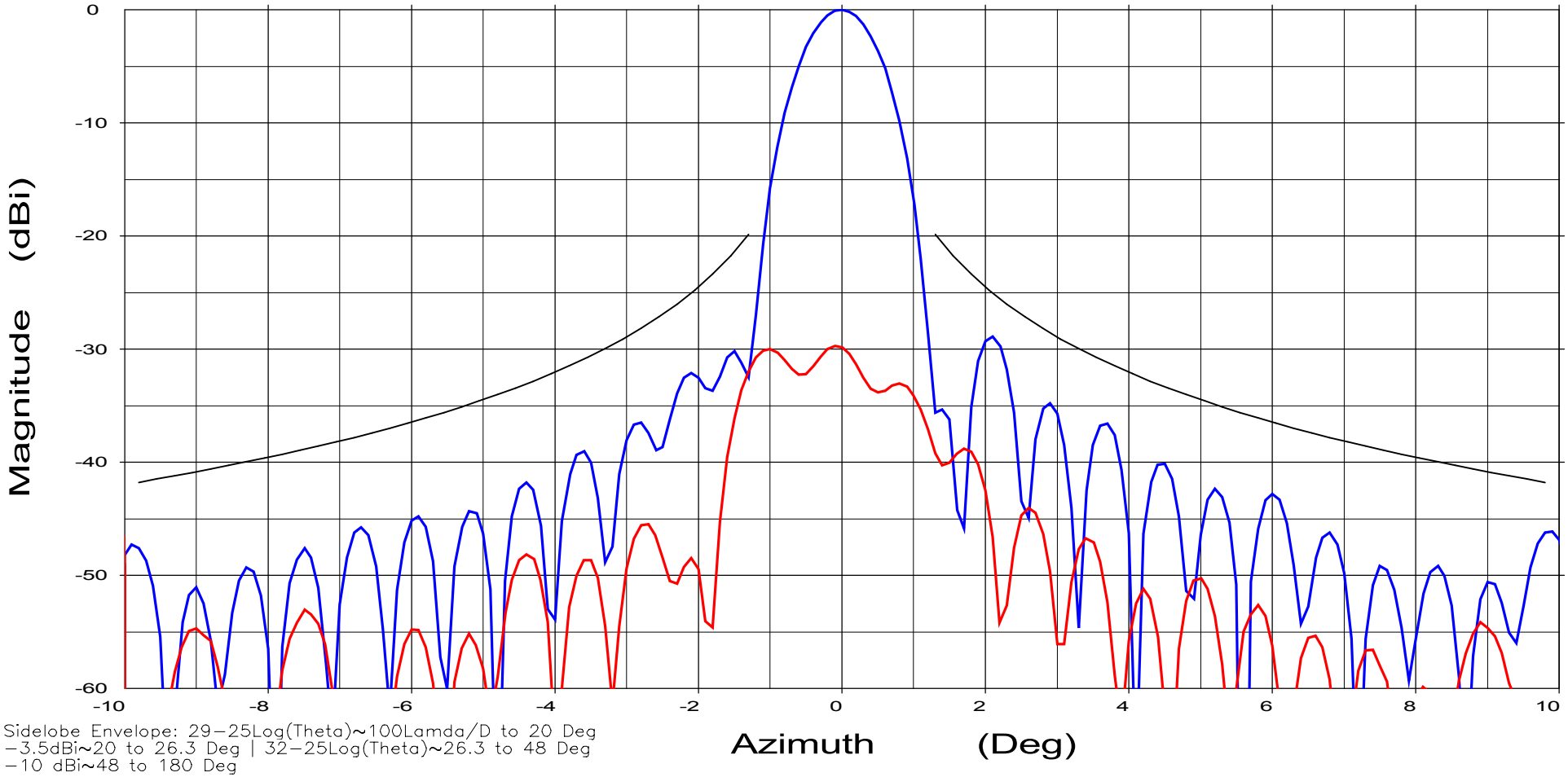
2.4 LHCP Polarization Transmit +/-10 Degree Co & Cross Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Overlays	Cal. file	table	channel	units
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1769 16.dat-ant_under_test	1769 16.dat	SGA-70	ch1	dBi

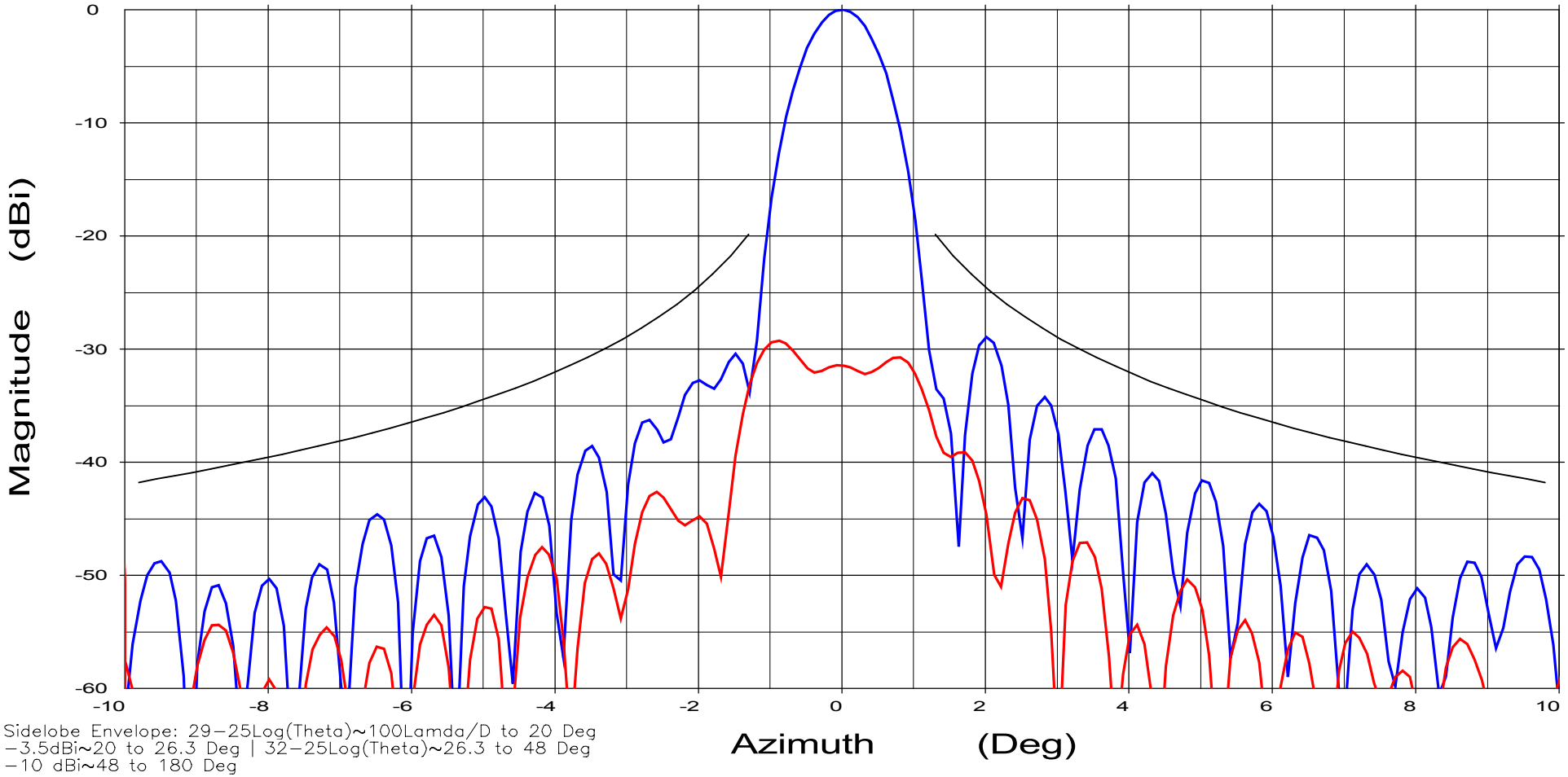
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi
1769 16.dat-ant_under_test	1769 16.dat	SGA-70	ch1	dBi

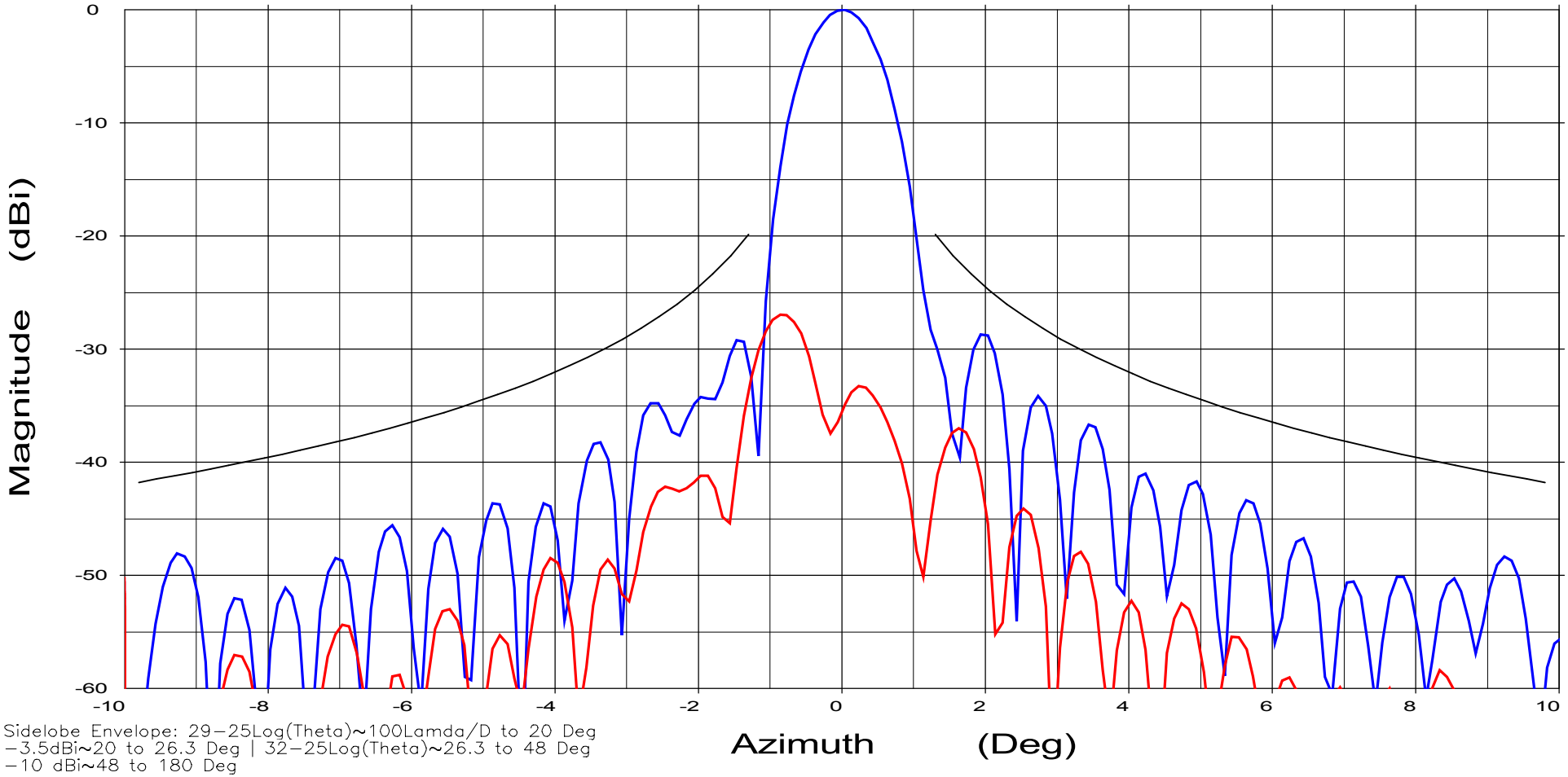
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi
1769 16.dat-ant_under_test	1769 16.dat	SGA-70	ch1	dBi

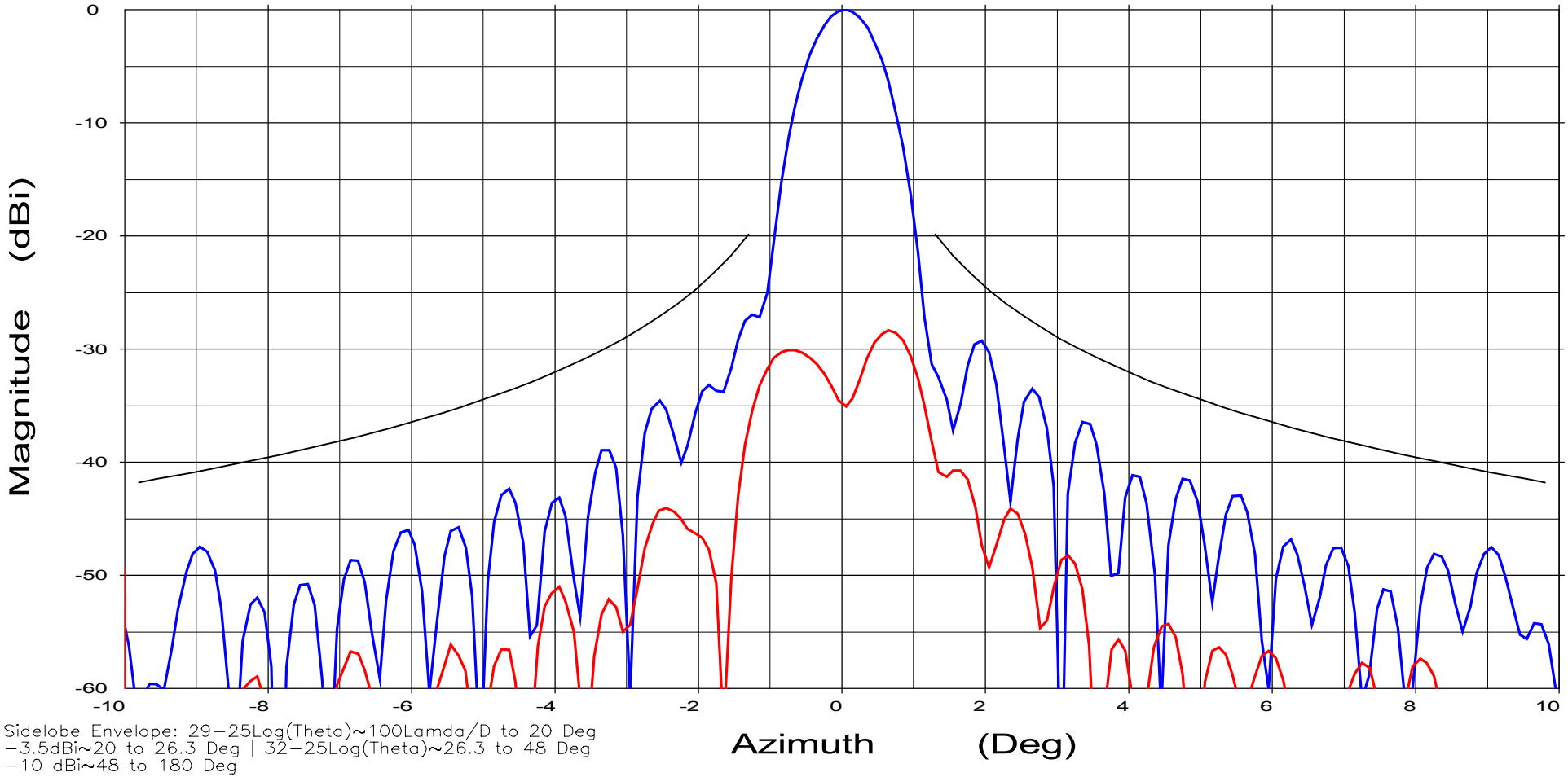
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi
1769 16.dat-ant_under_test	1769 16.dat	SGA-70	ch1	dBi

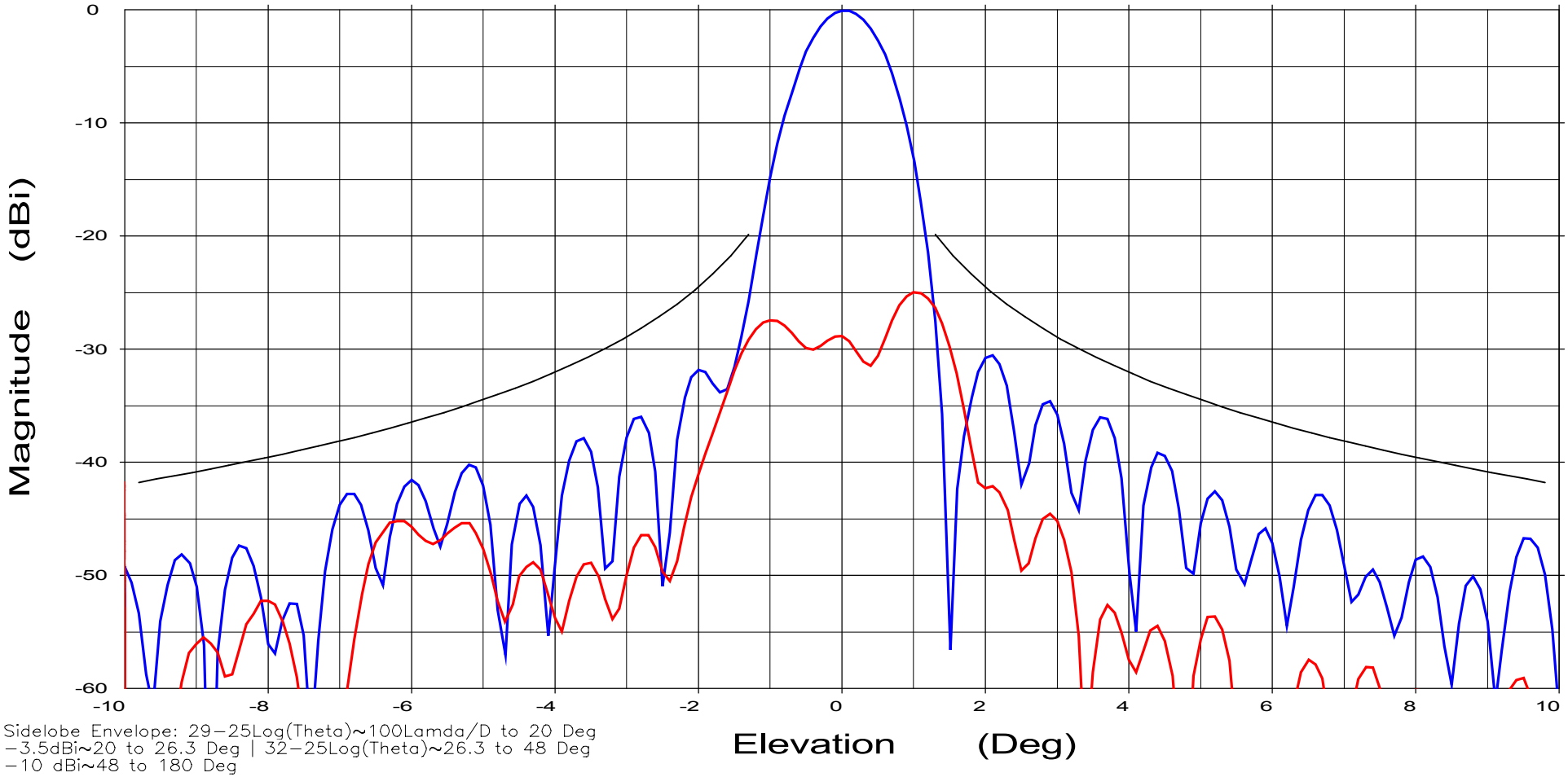
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 13.dat-ant_under_test	1769 13.dat	SGA-70	ch1	dBi
1769 14.dat-ant_under_test	1769 14.dat	SGA-70	ch1	dBi

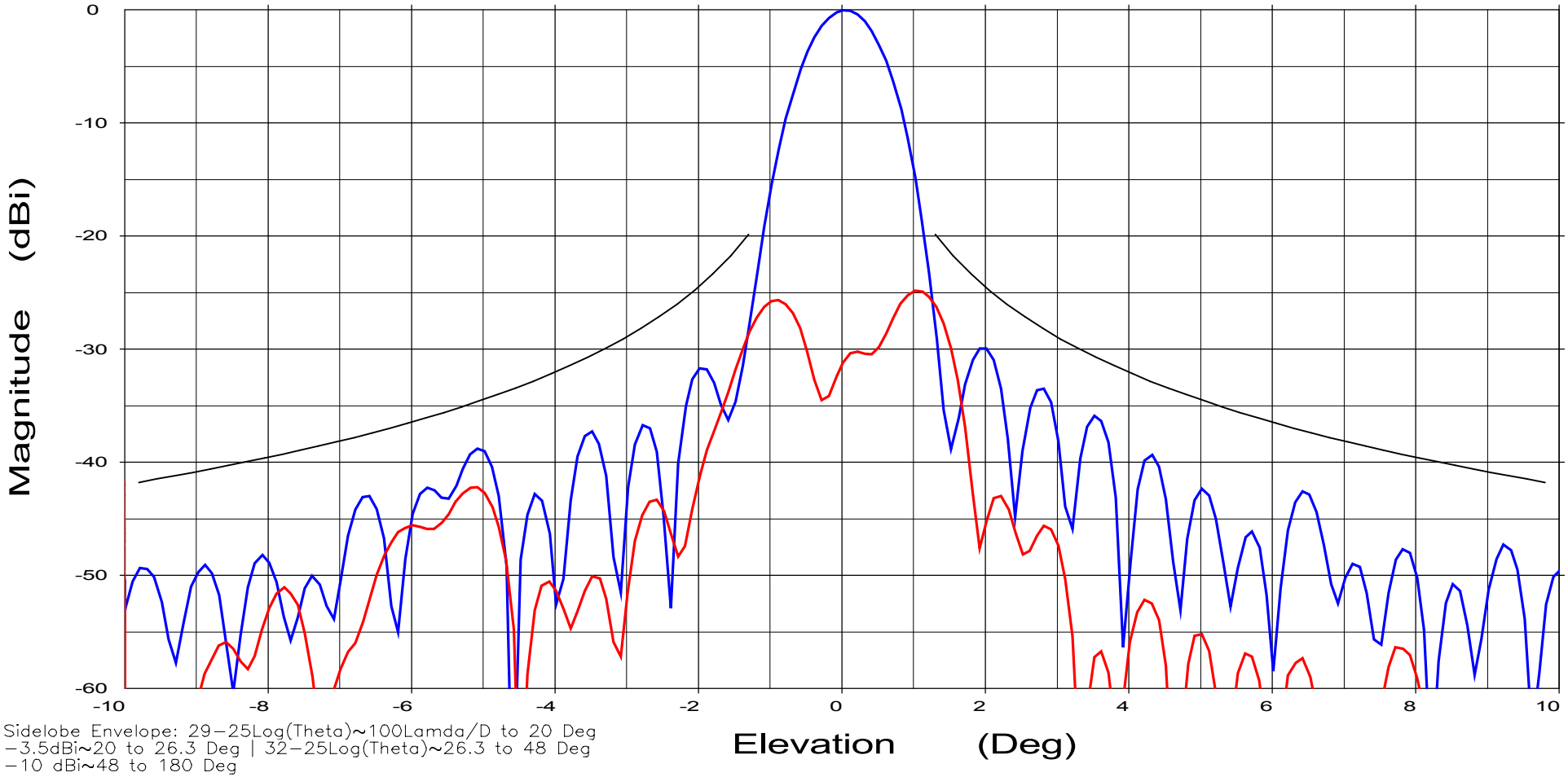
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 13.dat-ant_under_test	1769 13.dat	SGA-70	ch1	dBi
1769 14.dat-ant_under_test	1769 14.dat	SGA-70	ch1	dBi

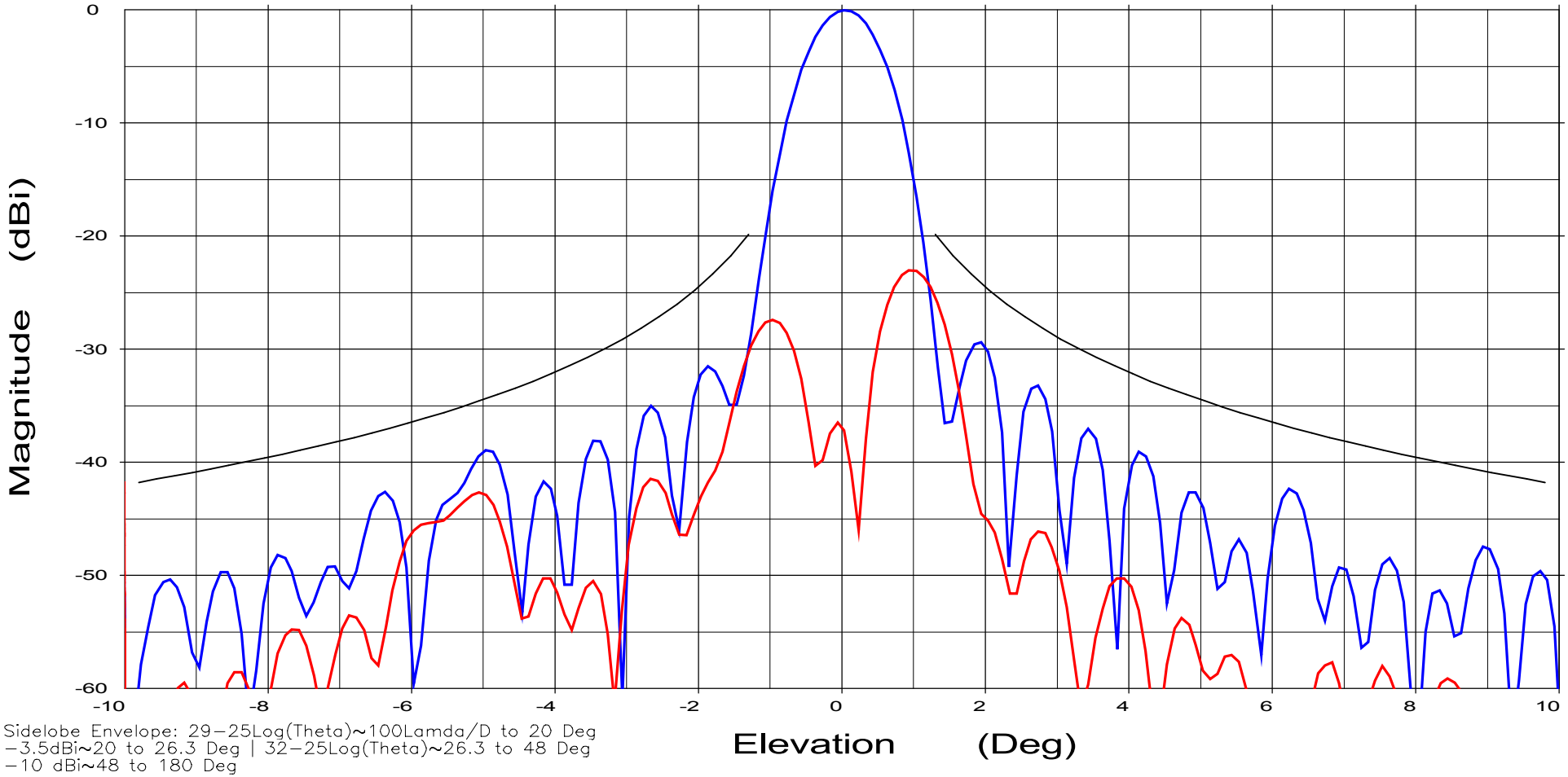
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 13.dat-ant_under_test	1769 13.dat	SGA-70	ch1	dBi
1769 14.dat-ant_under_test	1769 14.dat	SGA-70	ch1	dBi

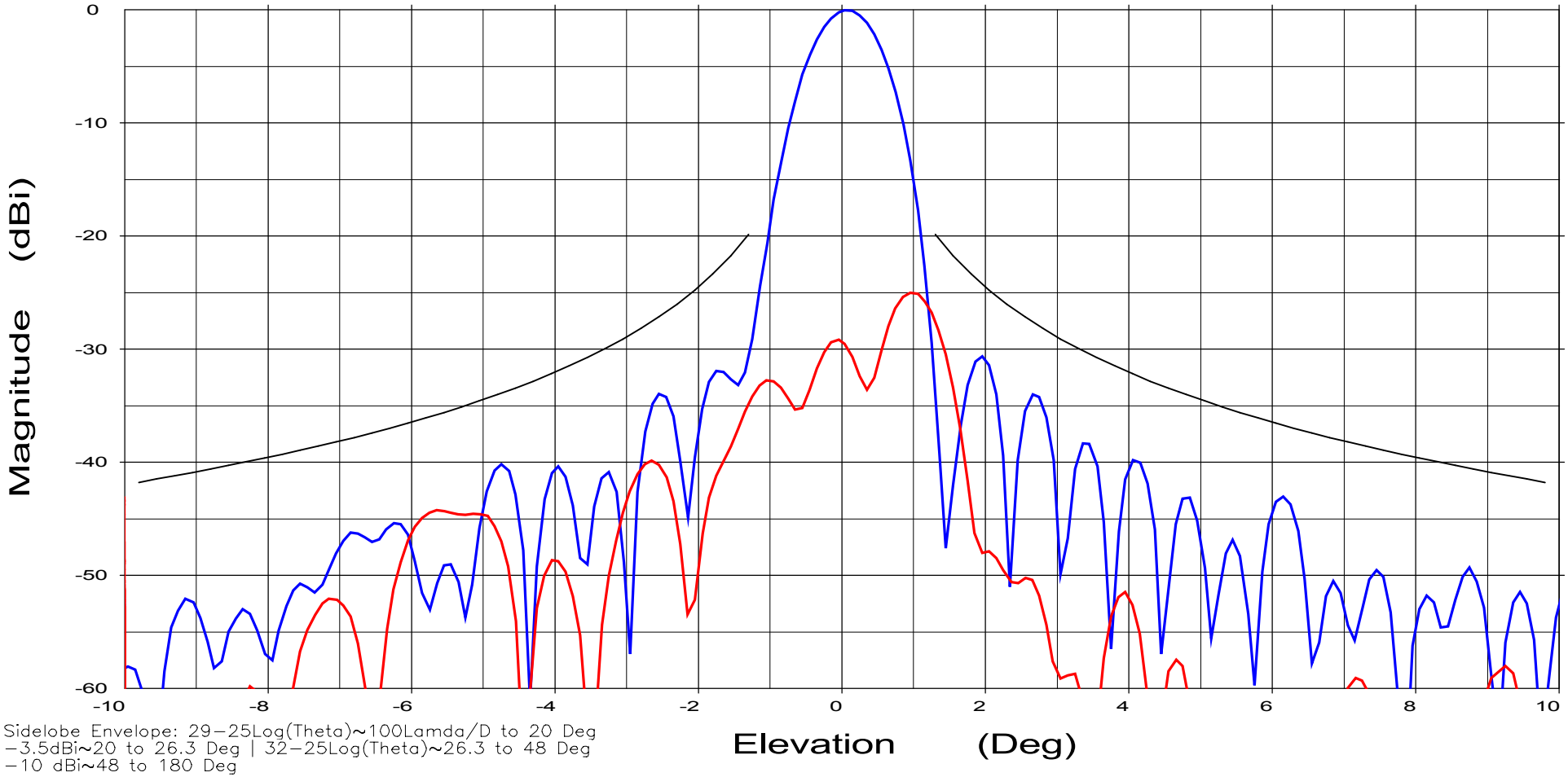
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 13.dat-ant_under_test	1769 13.dat	SGA-70	ch1	dBi
1769 14.dat-ant_under_test	1769 14.dat	SGA-70	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

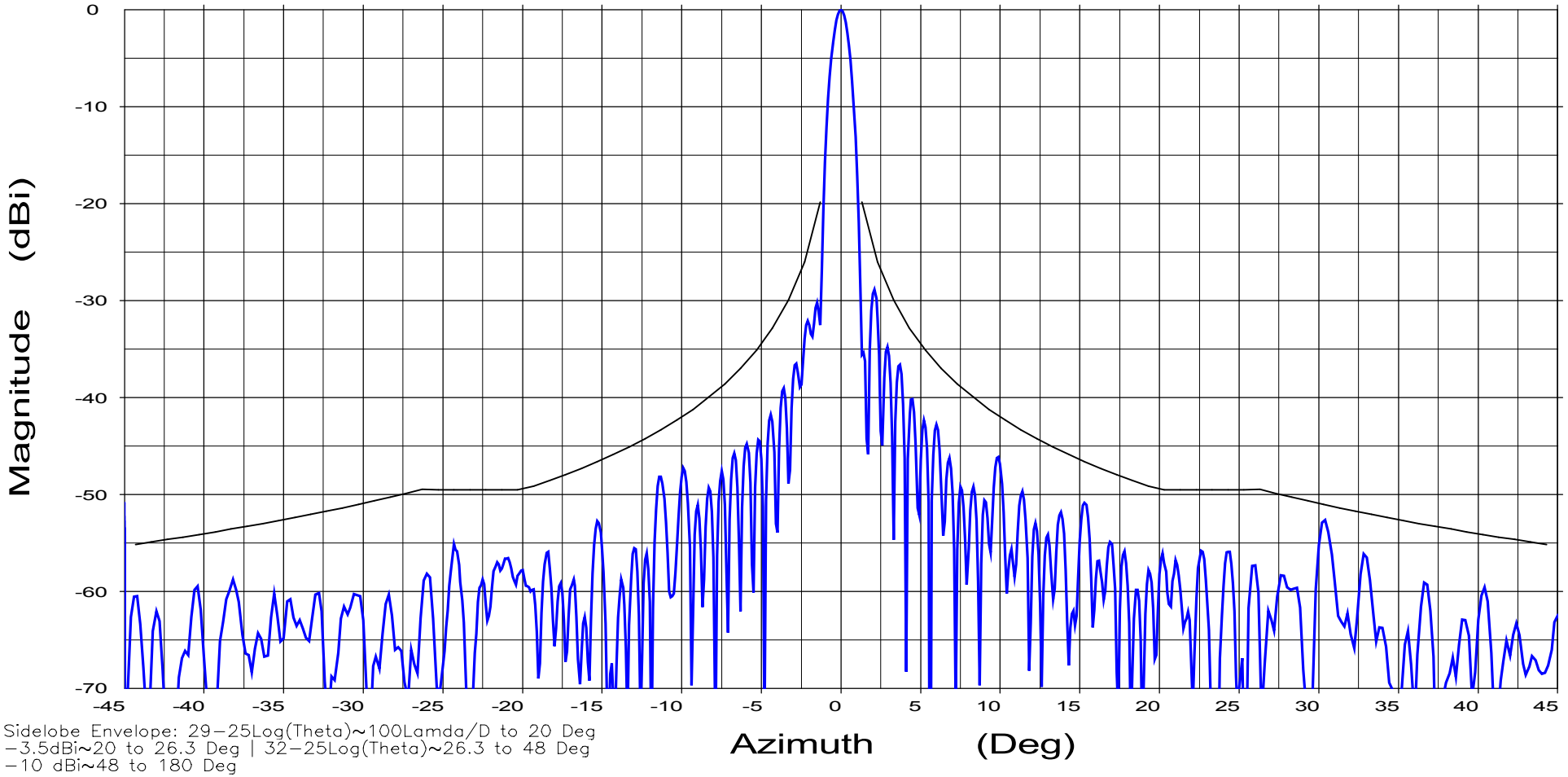
2.5 RHCP Polarization Transmit +/-45 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

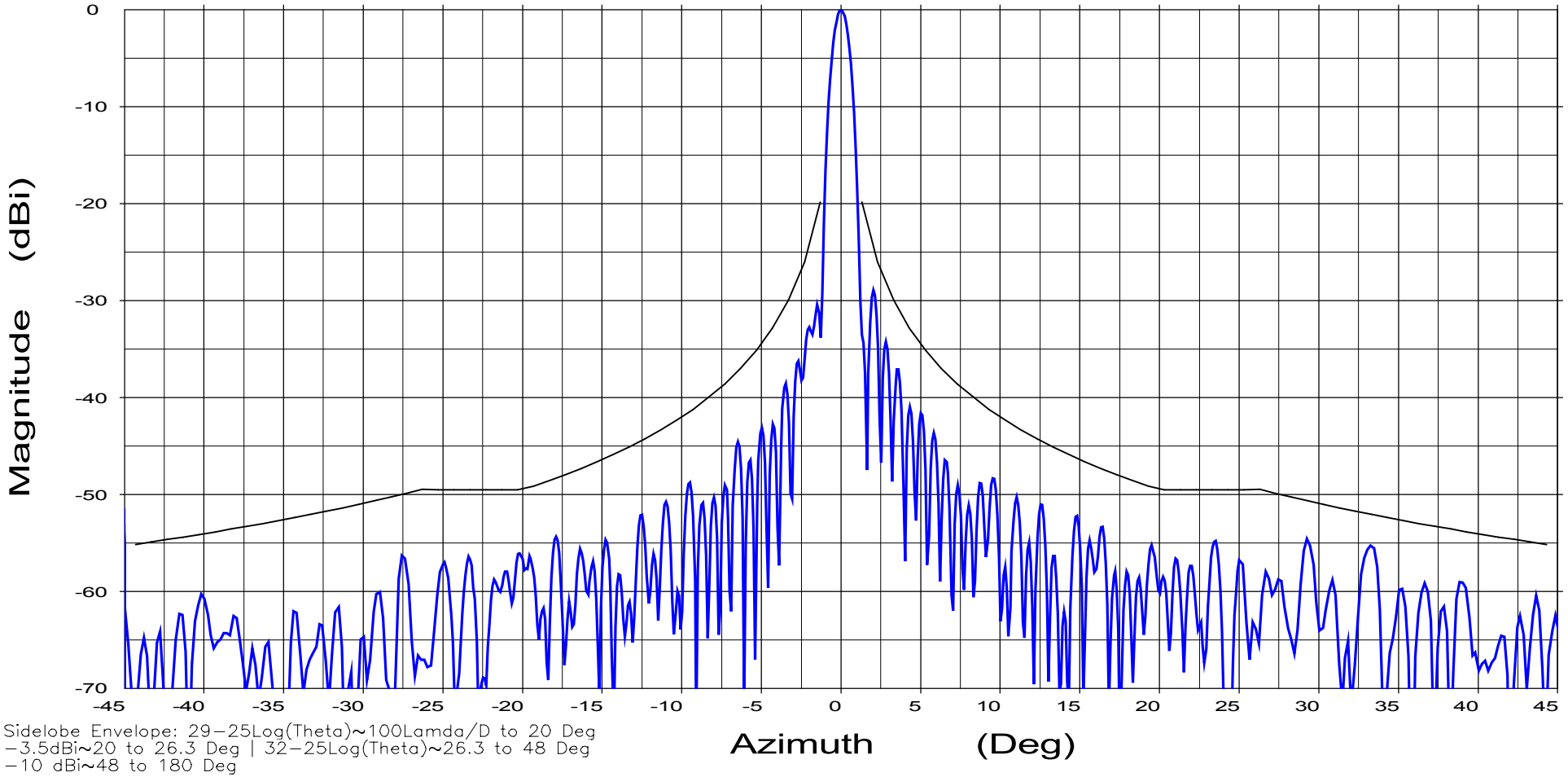
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

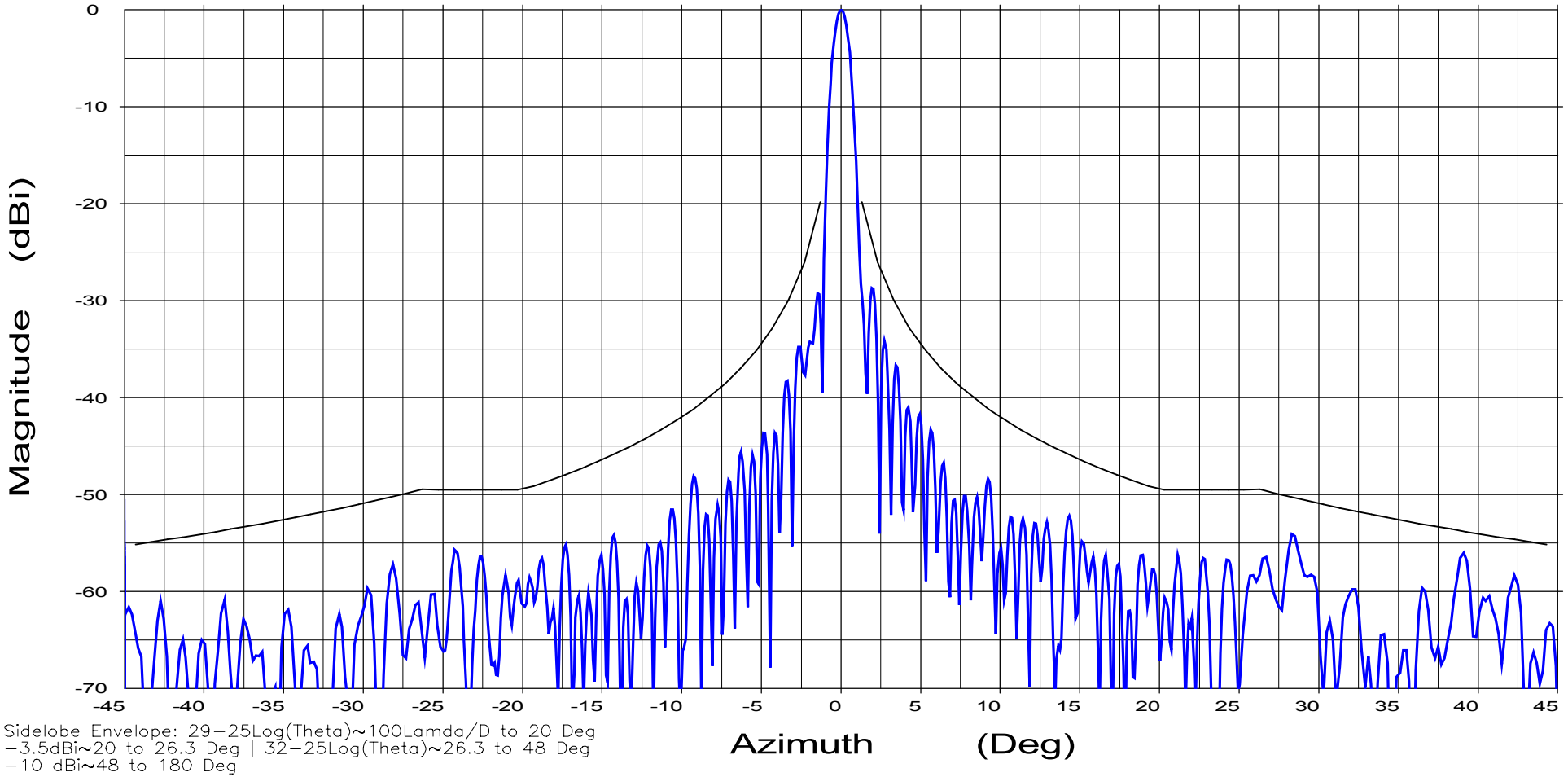
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

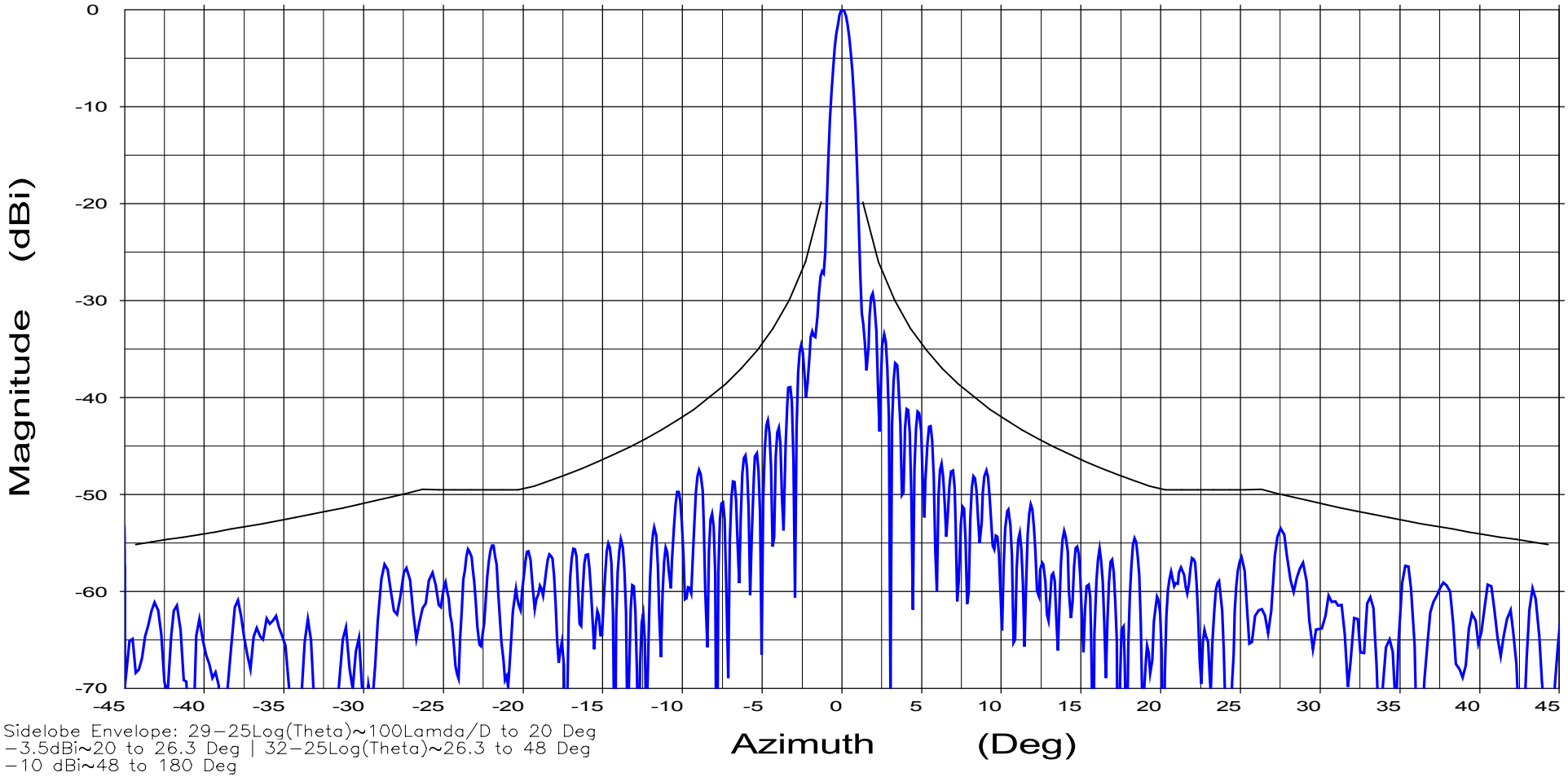
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

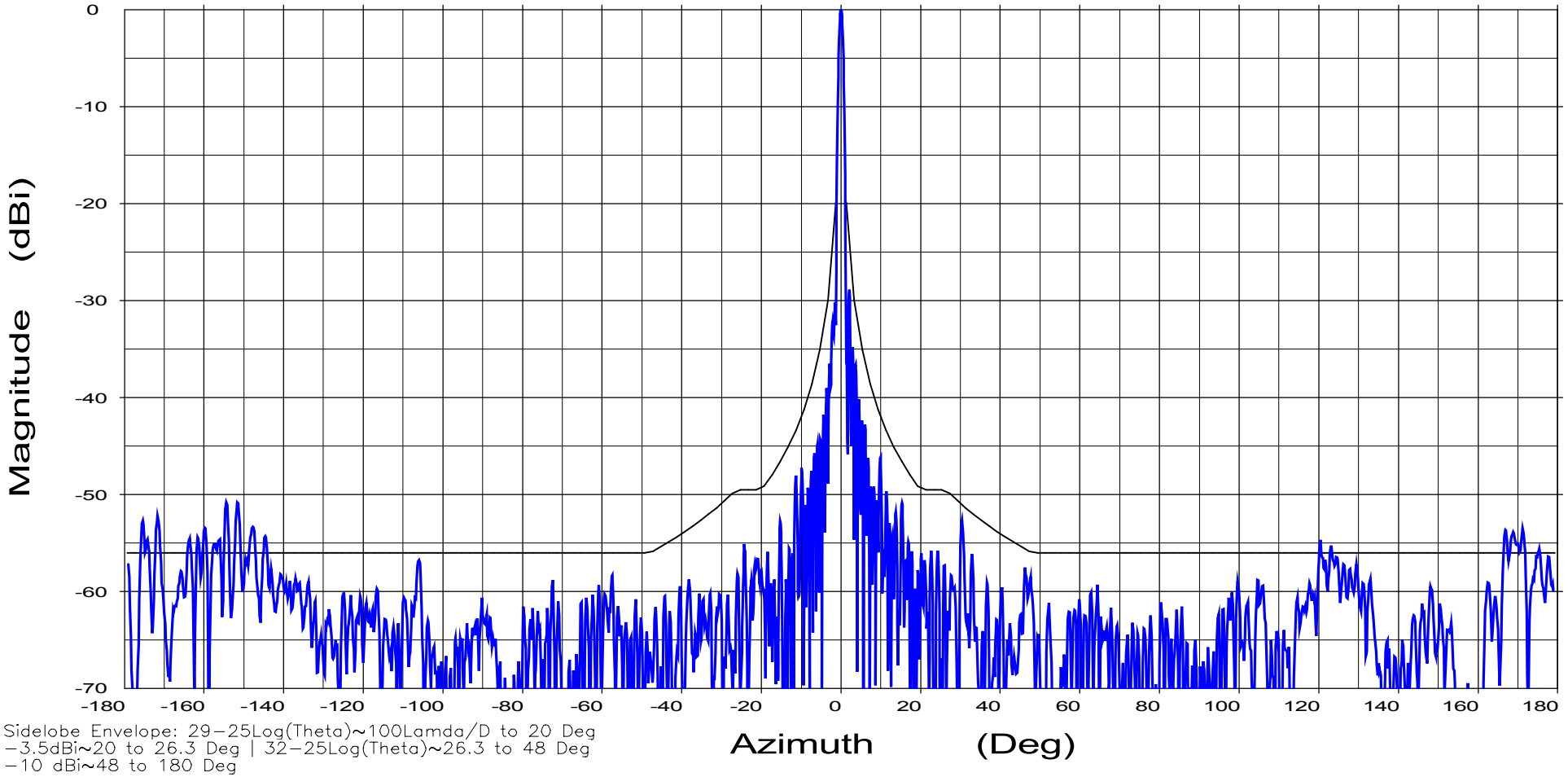
2.6 RHCP Polarization Transmit +/-180 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 5.845 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

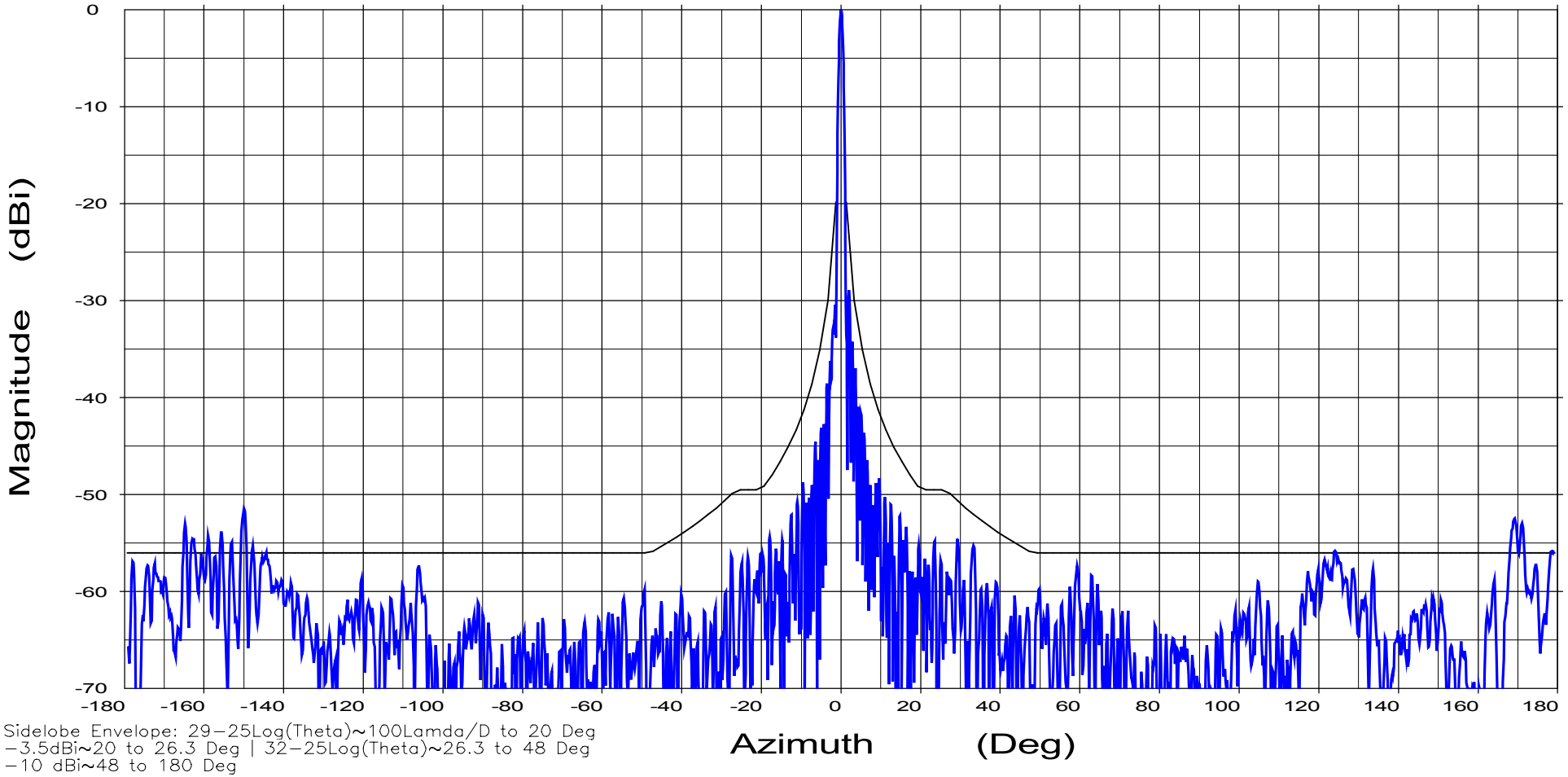
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.045 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

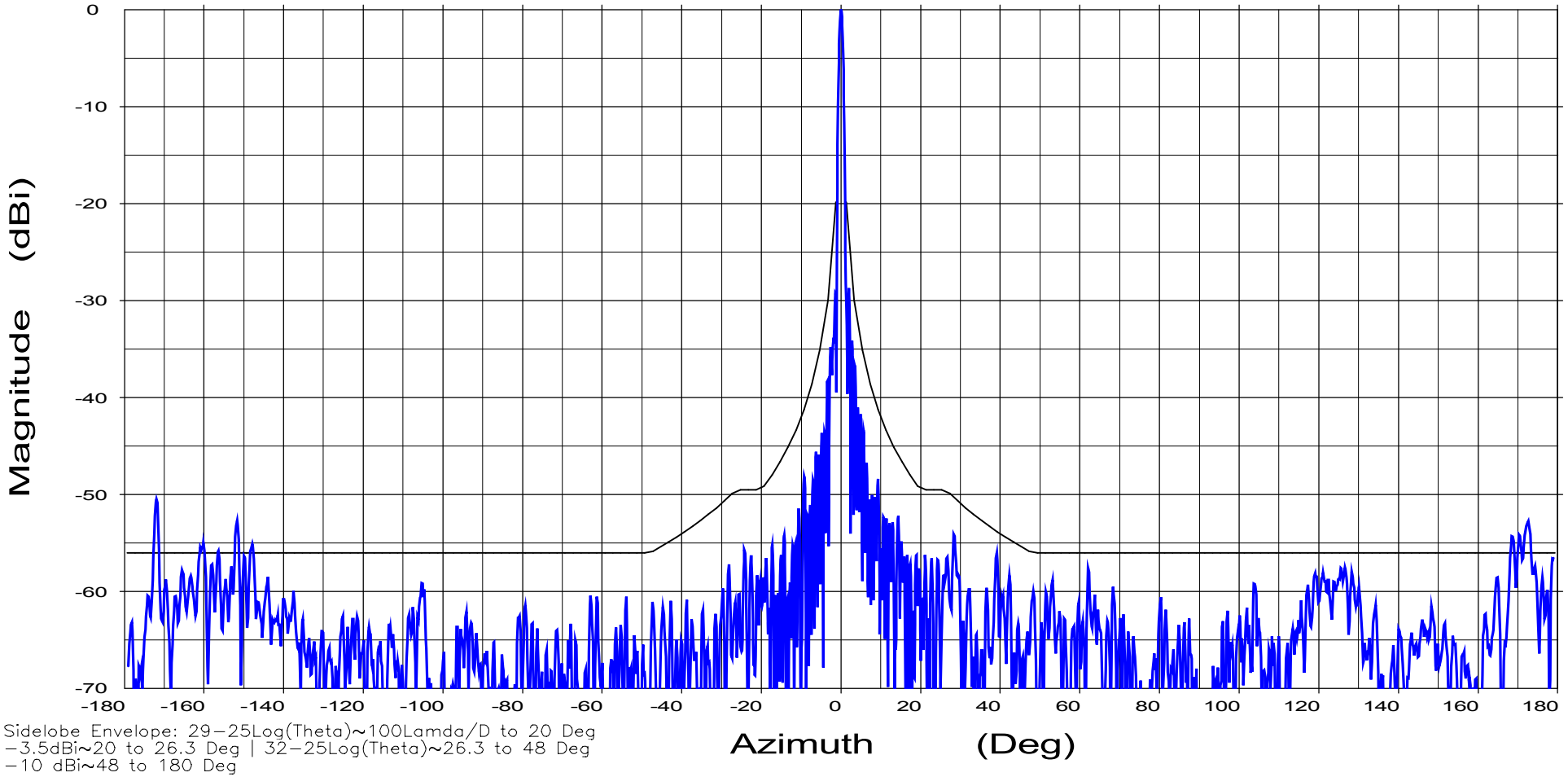
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.245 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

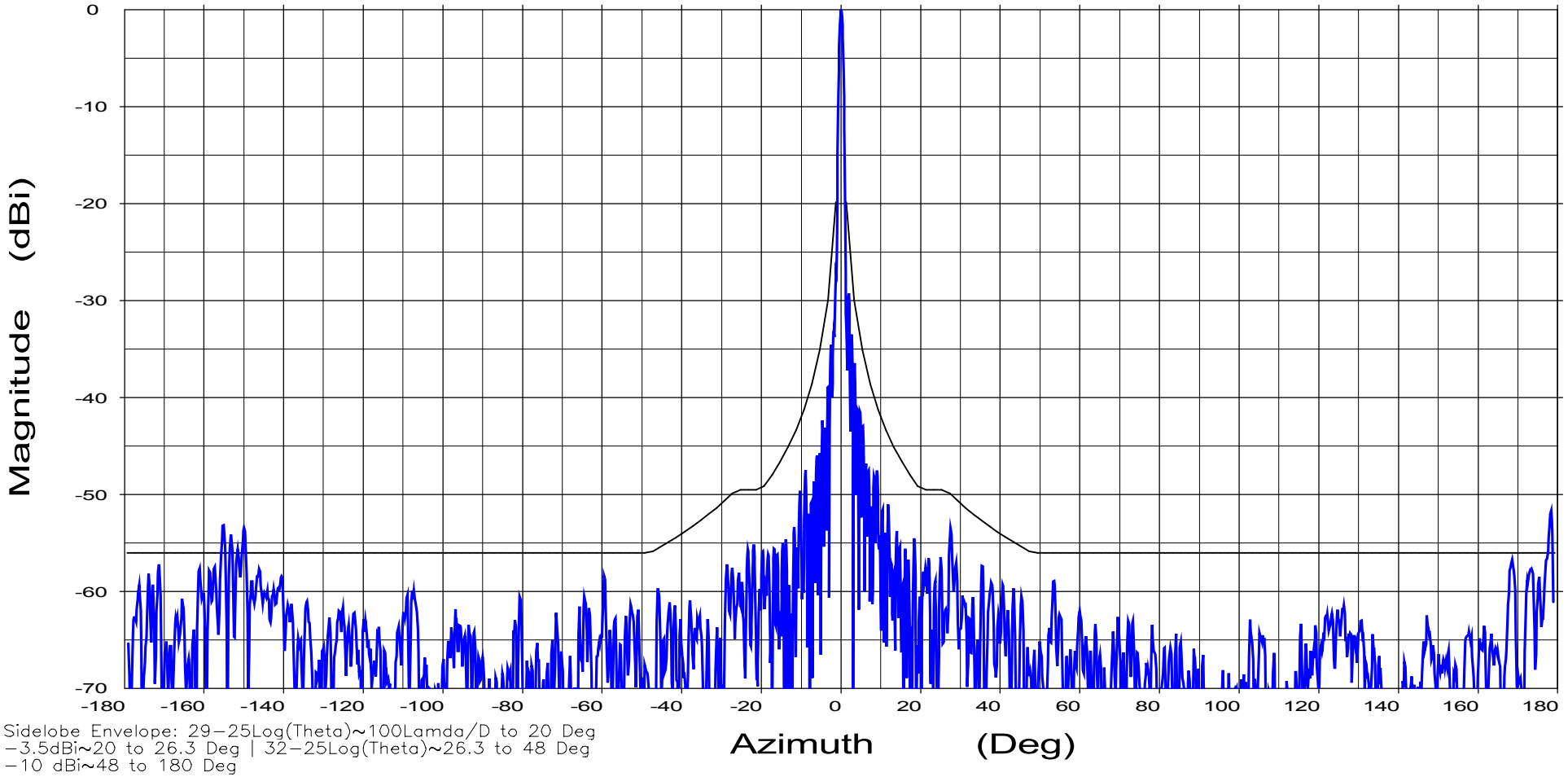
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 6.425 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 15.dat-ant_under_test	1769 15.dat	SGA-70	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

3.0 Receive Antenna Pattern Measurements

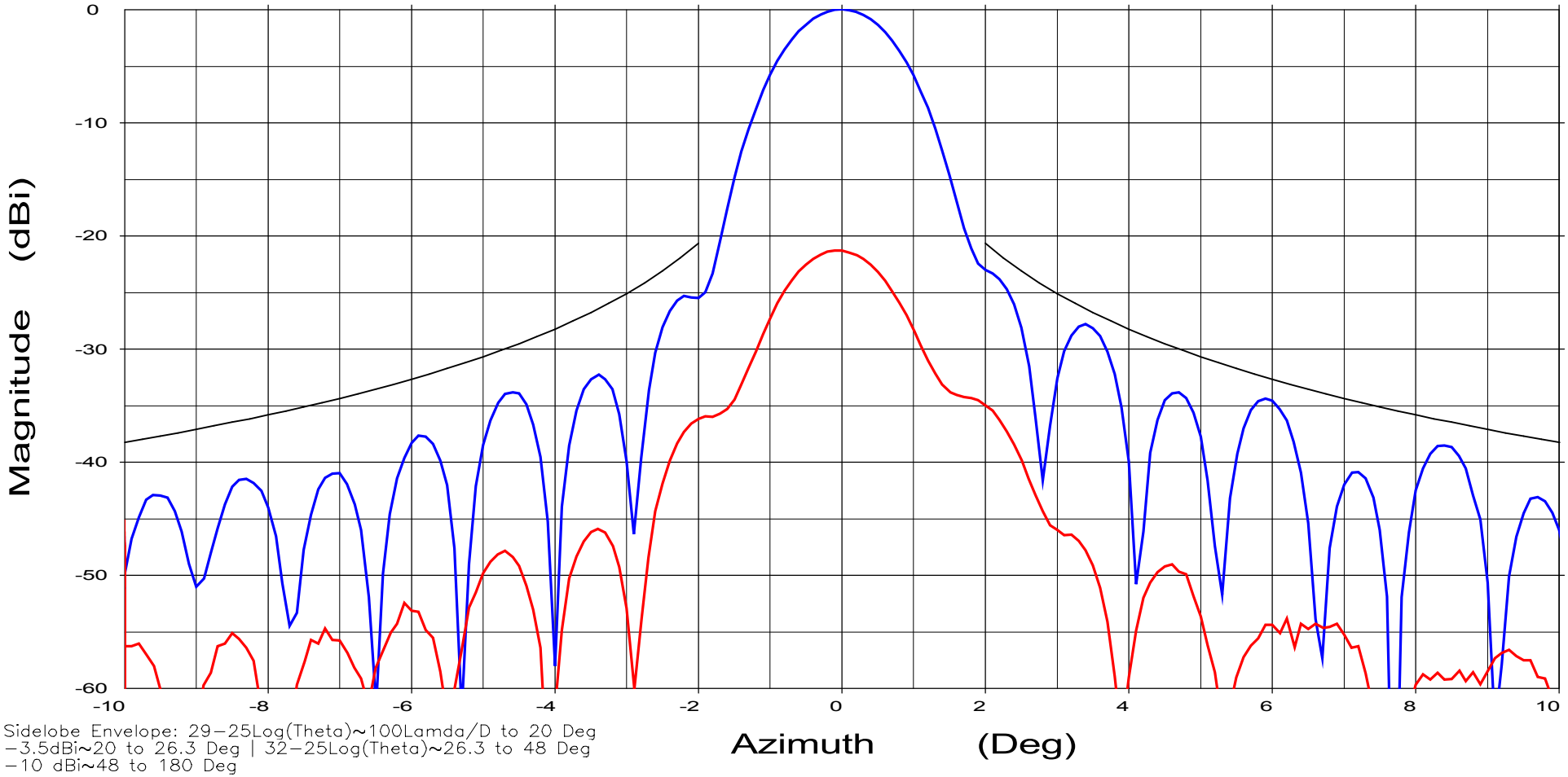
3.1 RHCP Polarization Transmit +/-10 Degree Co & Cross Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi
1769 A03.dat-ant_under_test	1769 A03.dat	SGA-40	ch1	dBi

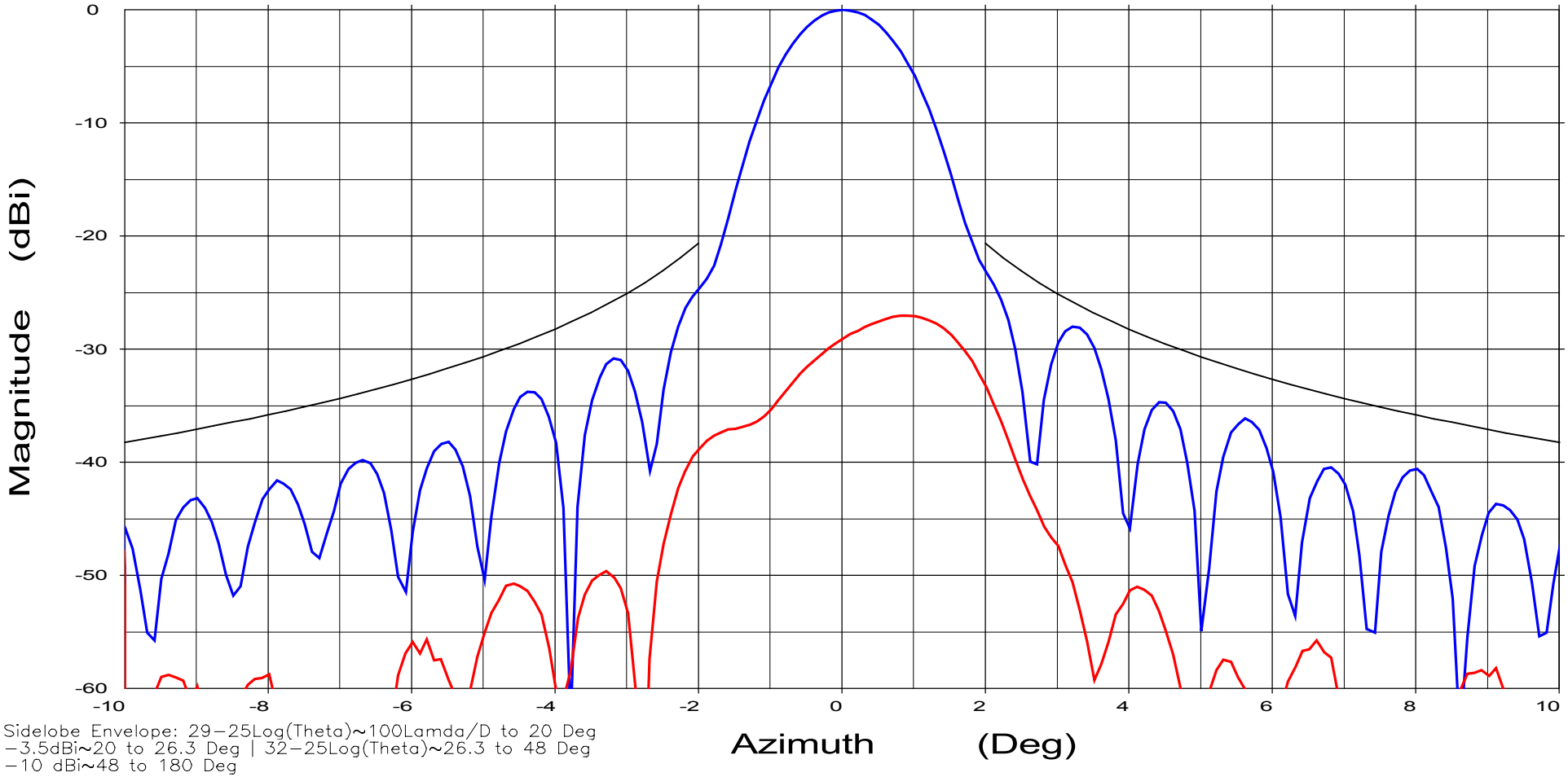
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi
1769 A03.dat-ant_under_test	1769 A03.dat	SGA-40	ch1	dBi

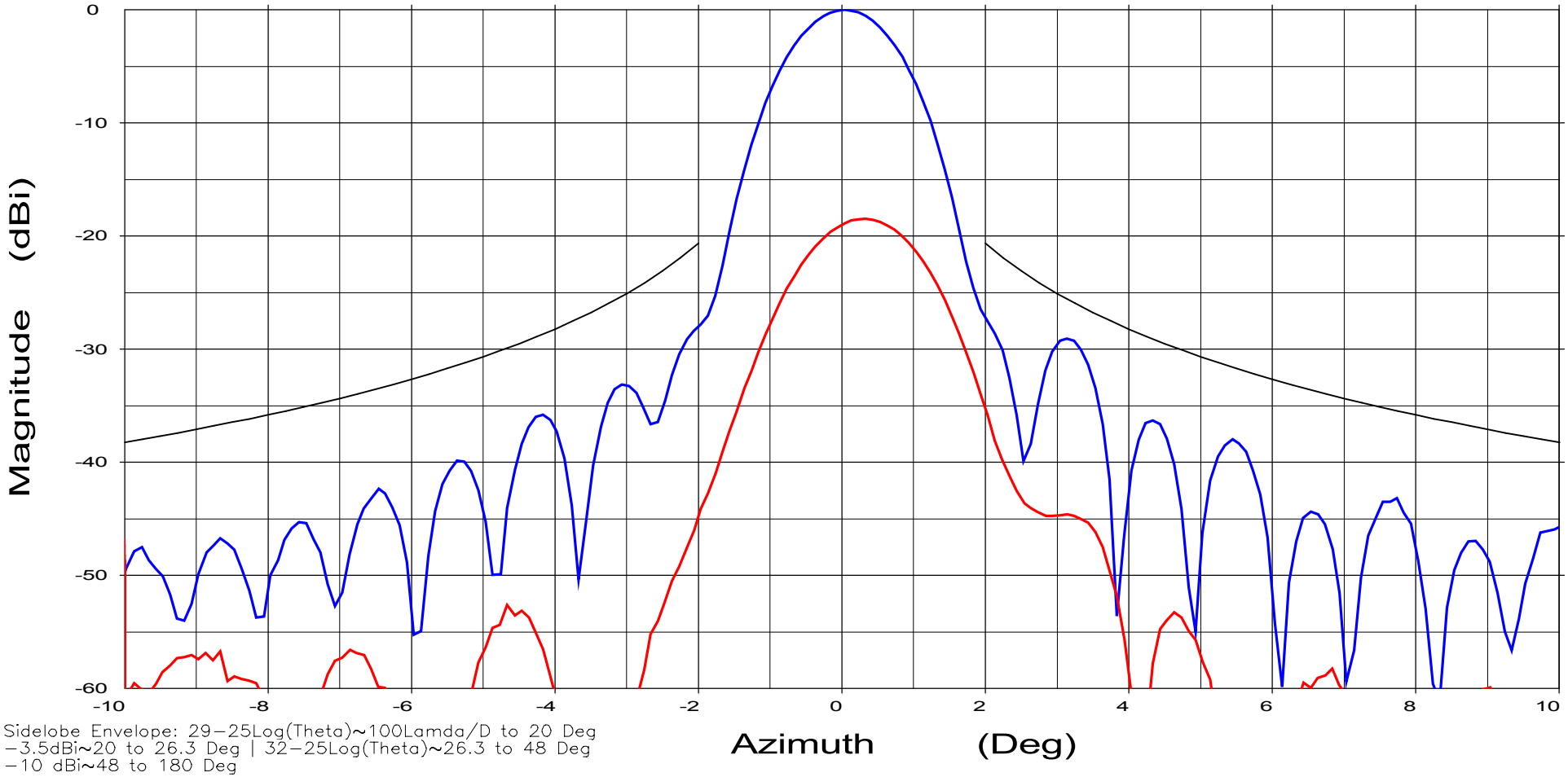
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi
1769 A03.dat-ant_under_test	1769 A03.dat	SGA-40	ch1	dBi

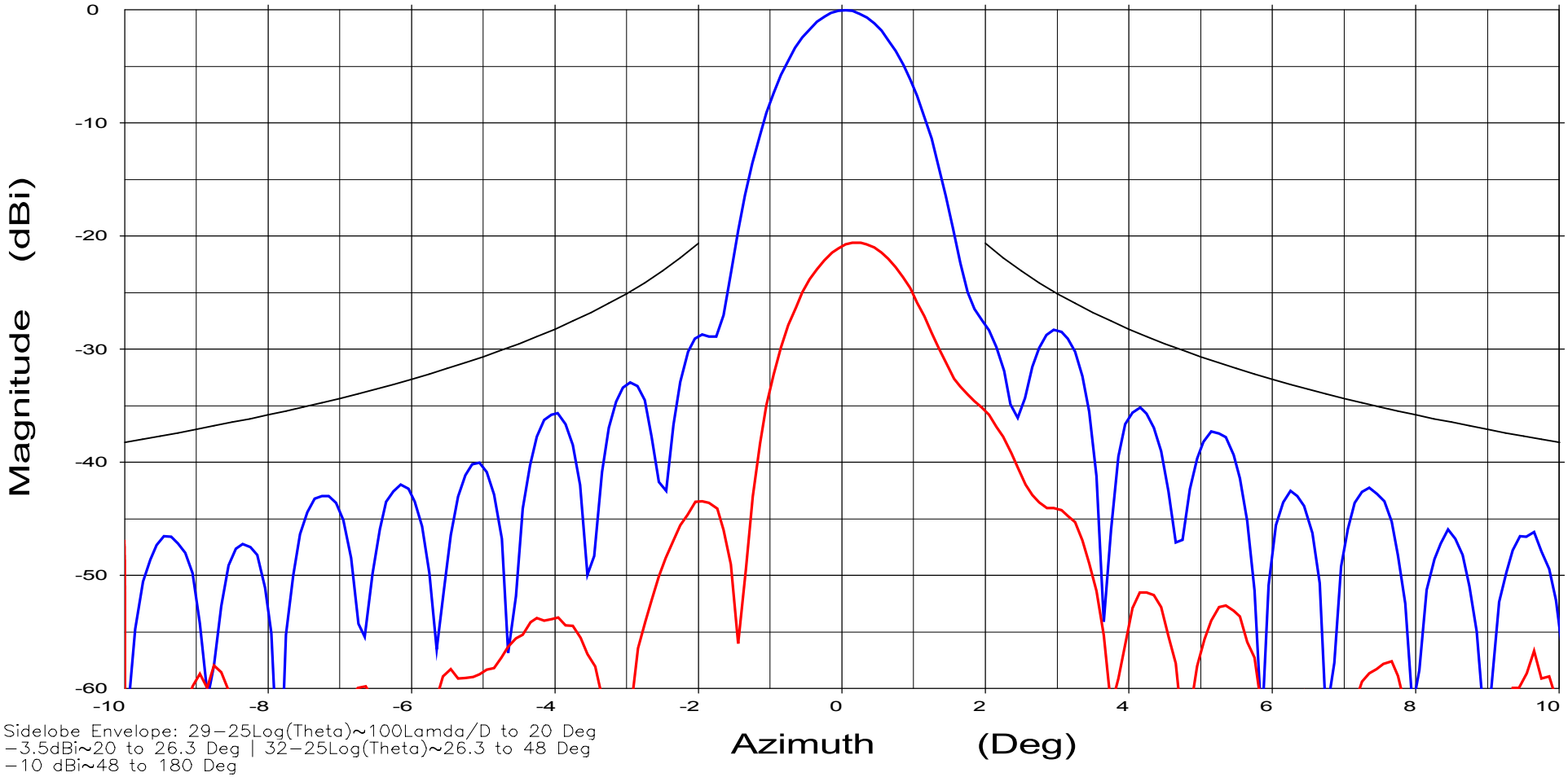
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi
1769 A03.dat-ant_under_test	1769 A03.dat	SGA-40	ch1	dBi

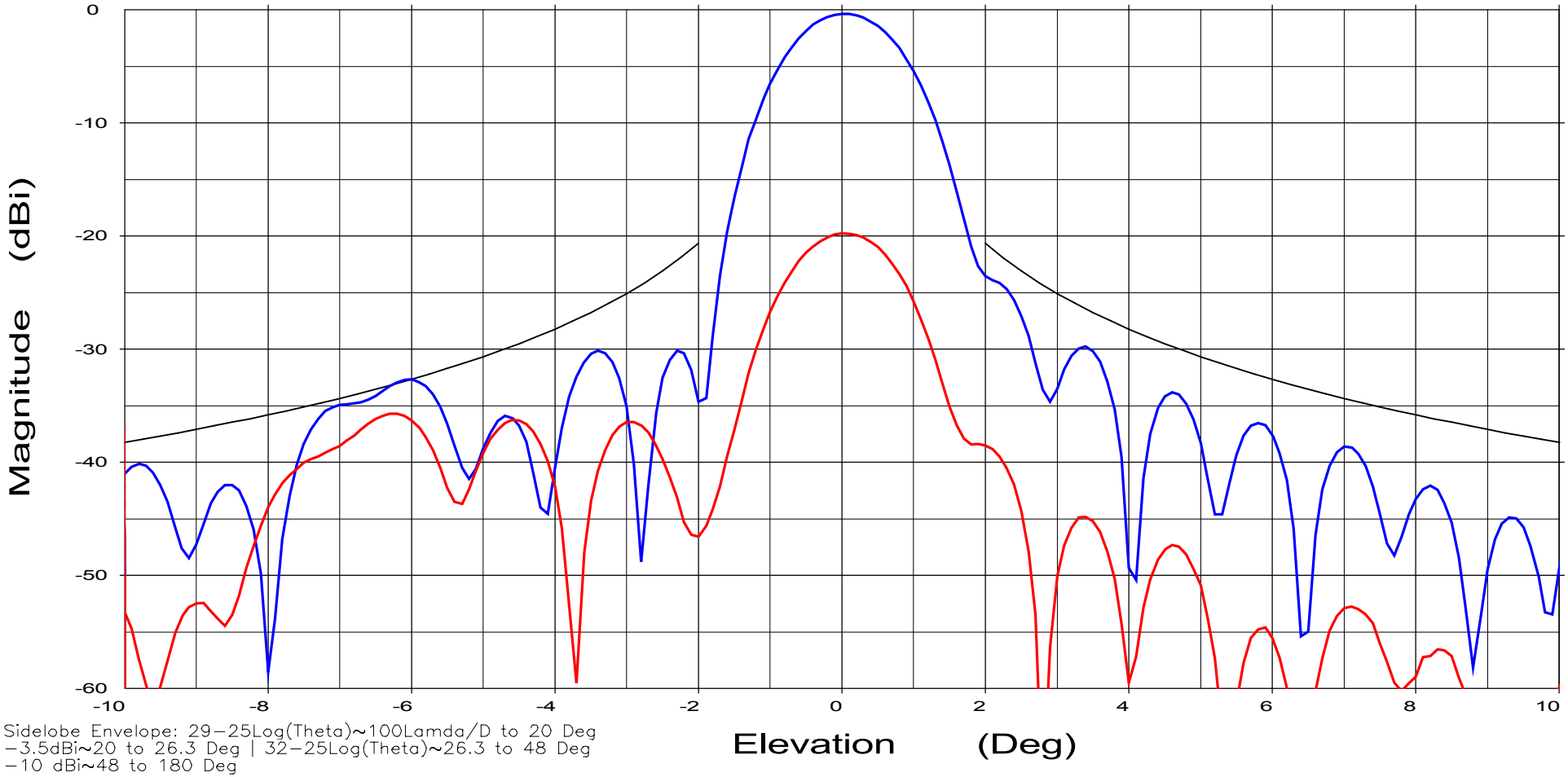
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 99.dat-ant_under_test	1769 99.dat	SGA-40	ch1	dBi
1769 A01.dat-ant_under_test	1769 A01.dat	SGA-40	ch1	dBi

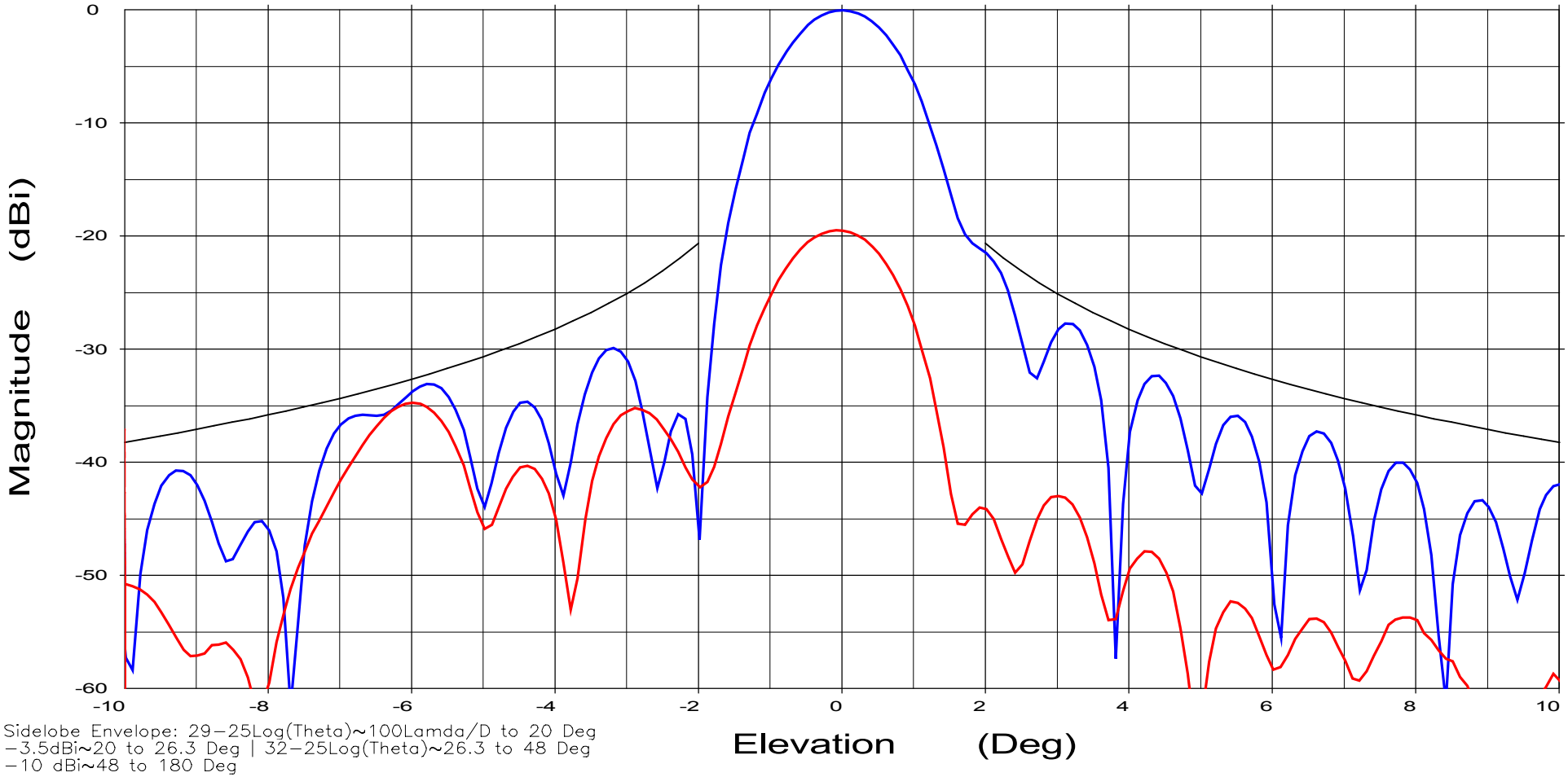
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 99.dat-ant_under_test	1769 99.dat	SGA-40	ch1	dBi
1769 A01.dat-ant_under_test	1769 A01.dat	SGA-40	ch1	dBi

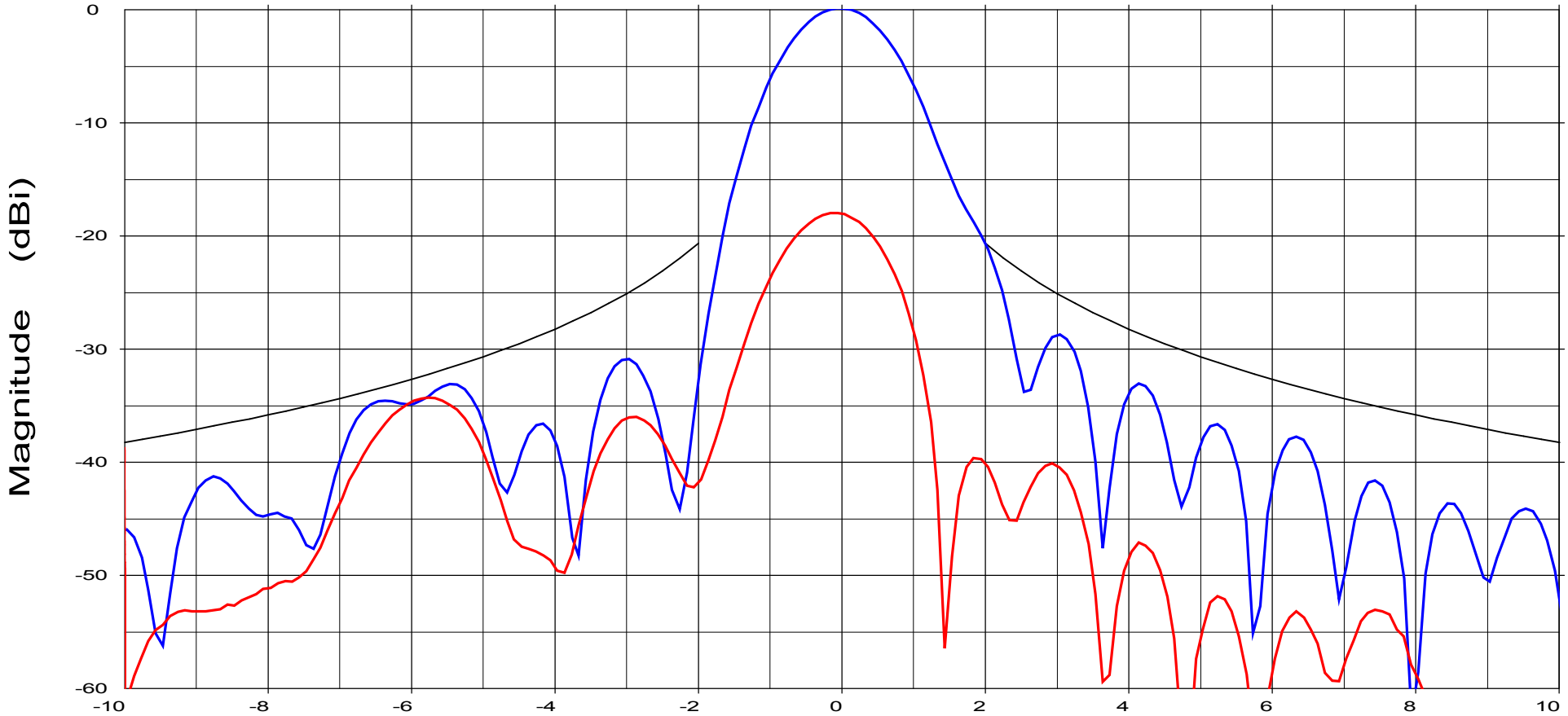
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 99.dat-ant_under_test	1769 99.dat	SGA-40	ch1	dBi
1769 A01.dat-ant_under_test	1769 A01.dat	SGA-40	ch1	dBi

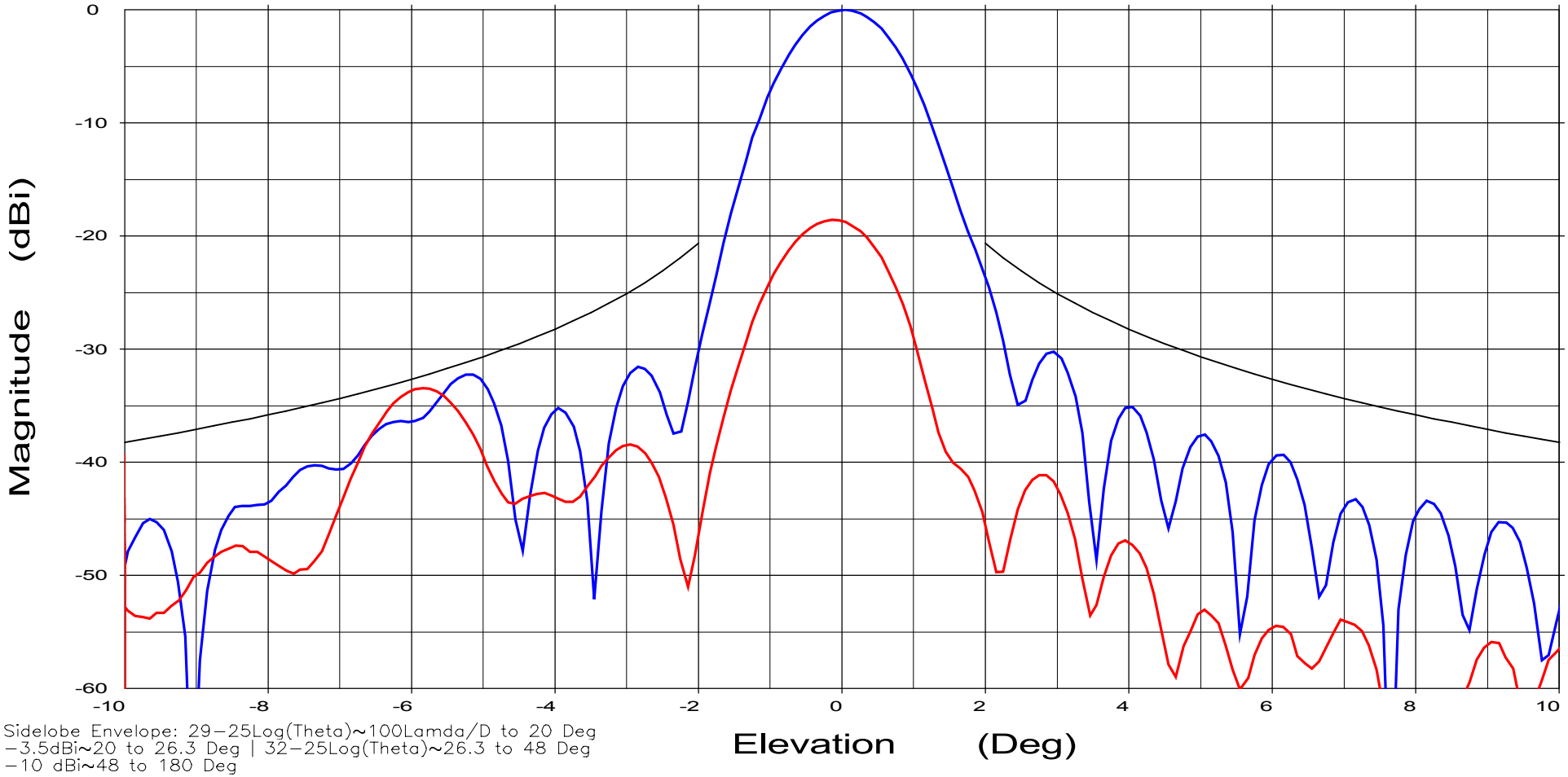
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 99.dat-ant_under_test	1769 99.dat	SGA-40	ch1	dBi
1769 A01.dat-ant_under_test	1769 A01.dat	SGA-40	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

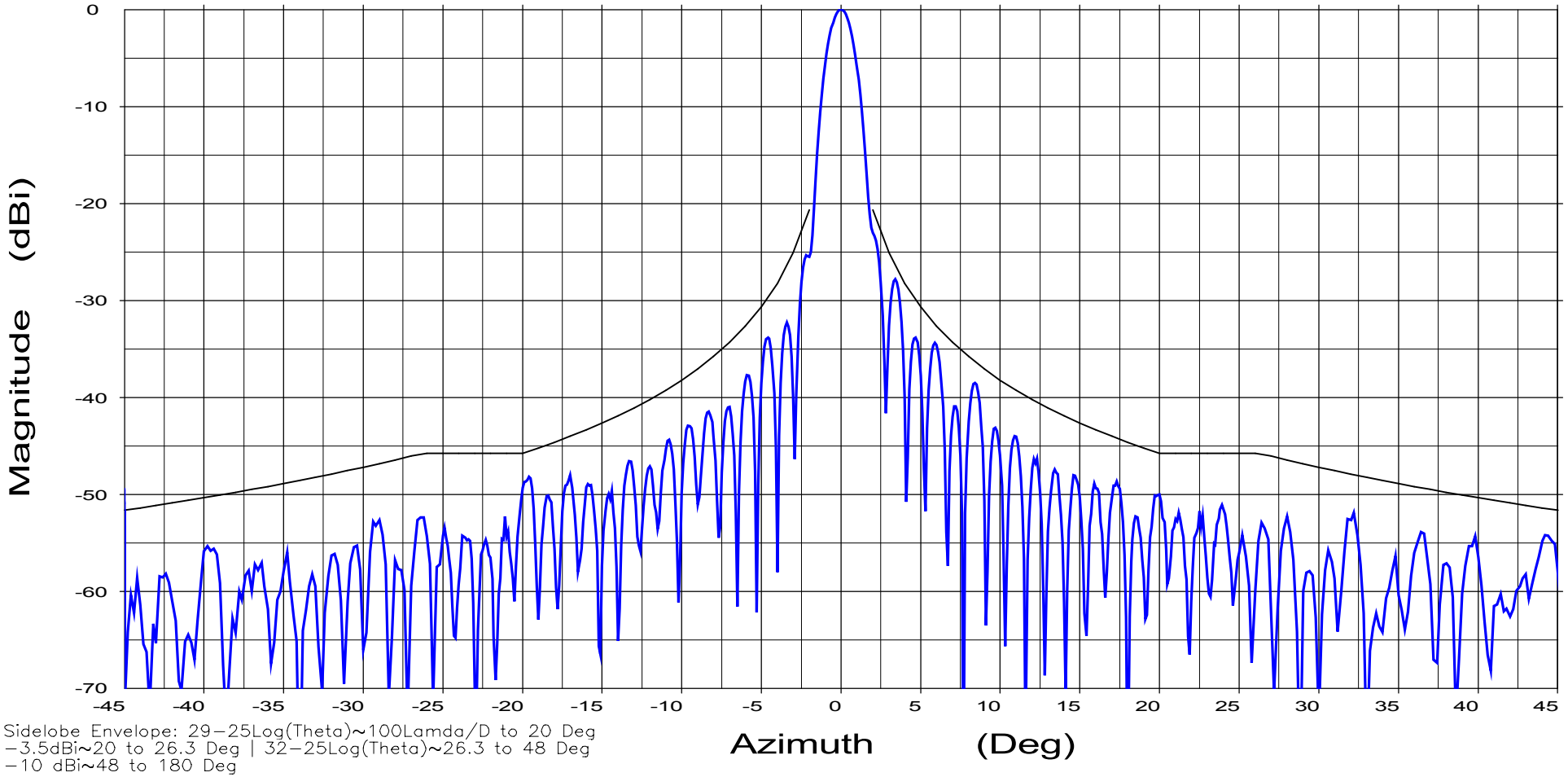
3.2 RHCP Polarization Transmit +/-45 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

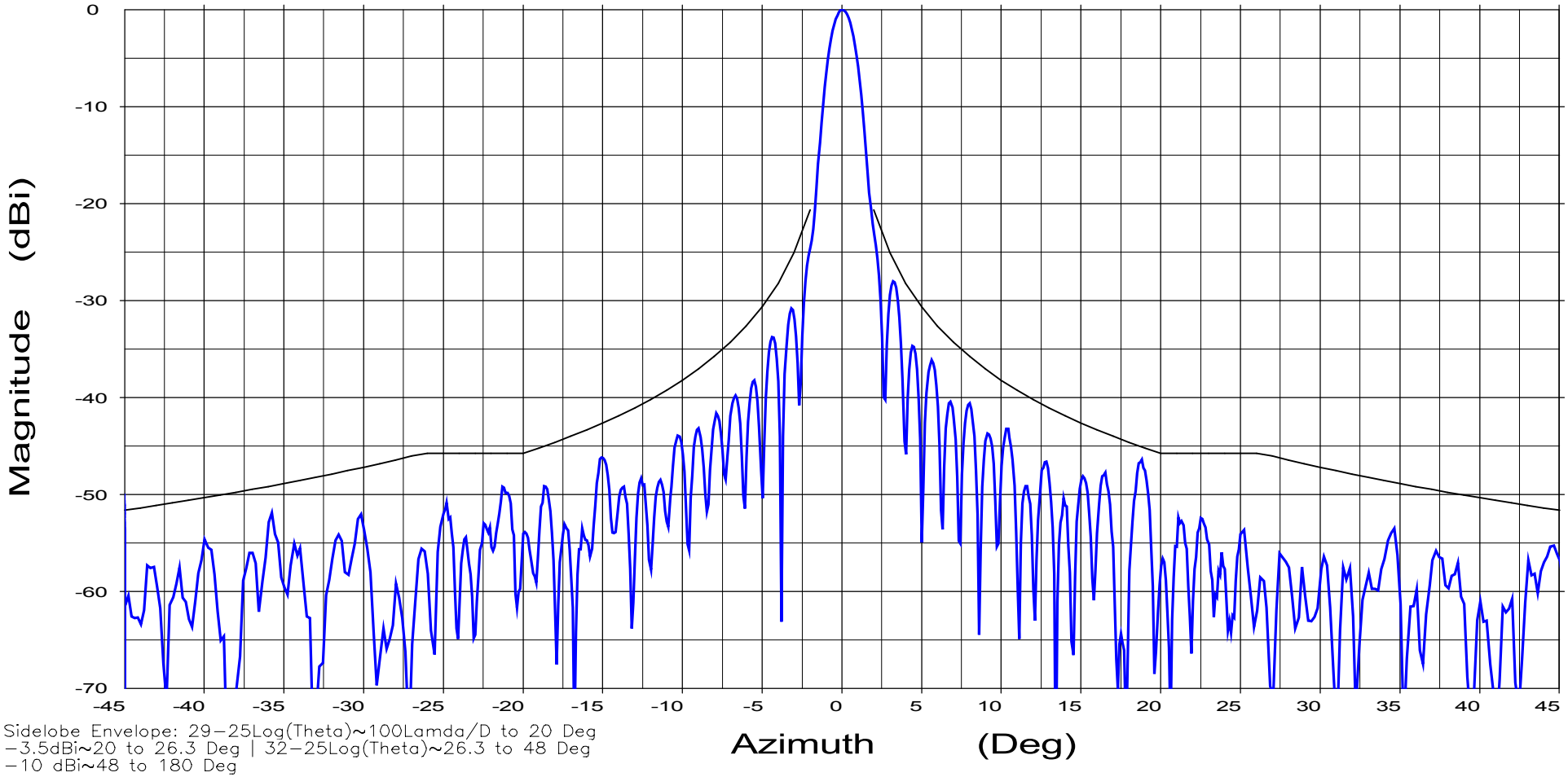
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

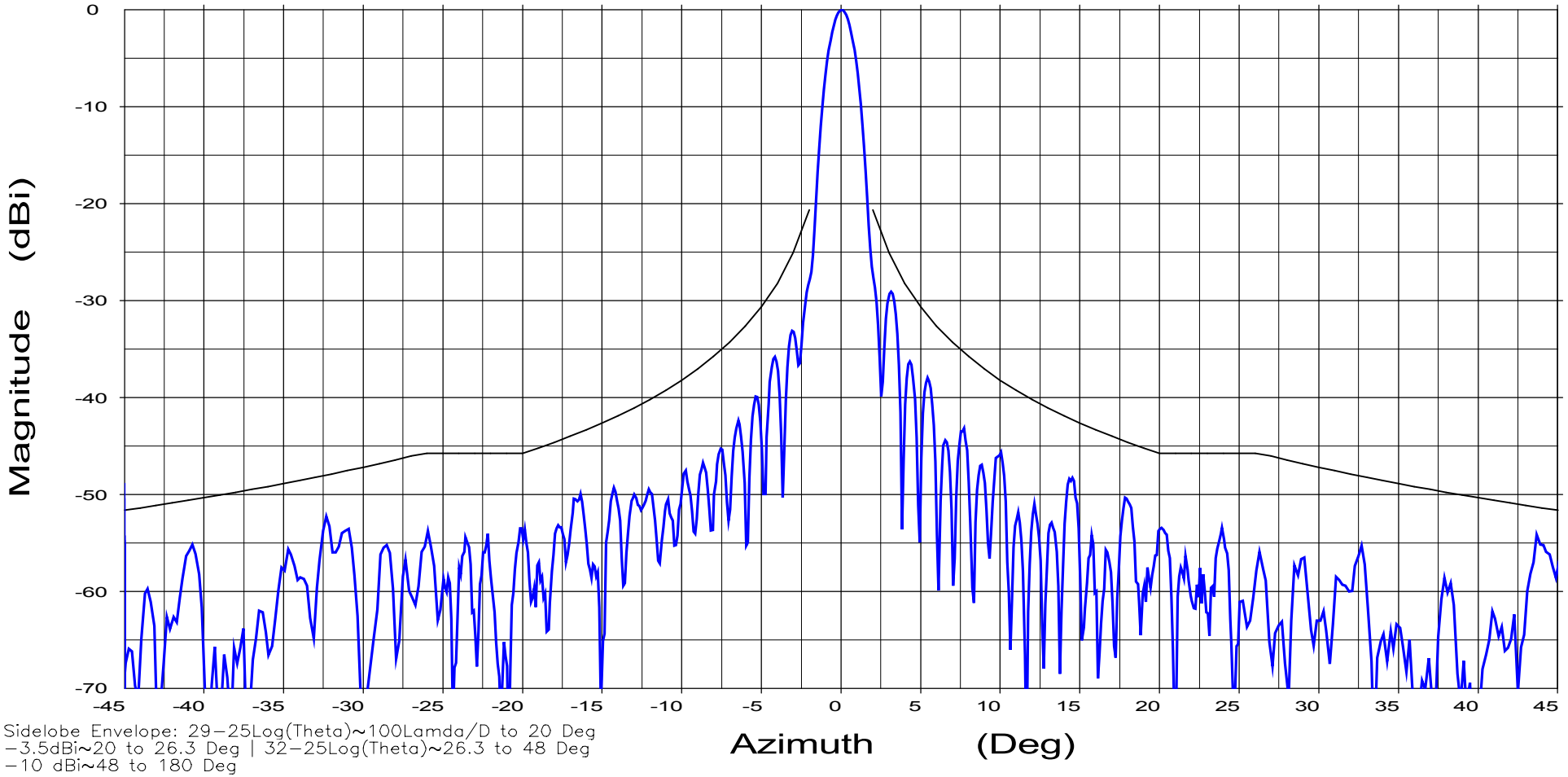
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

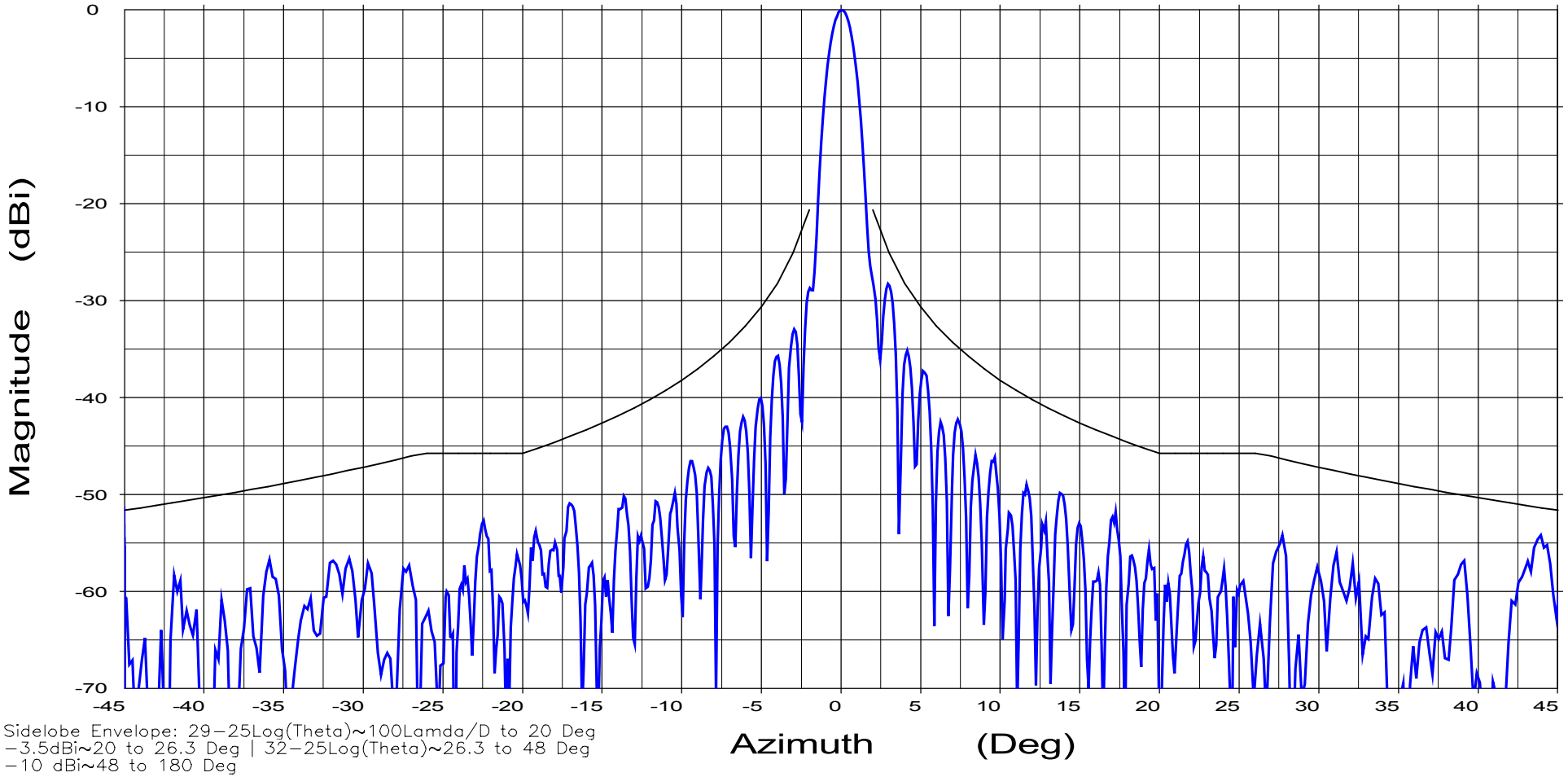
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

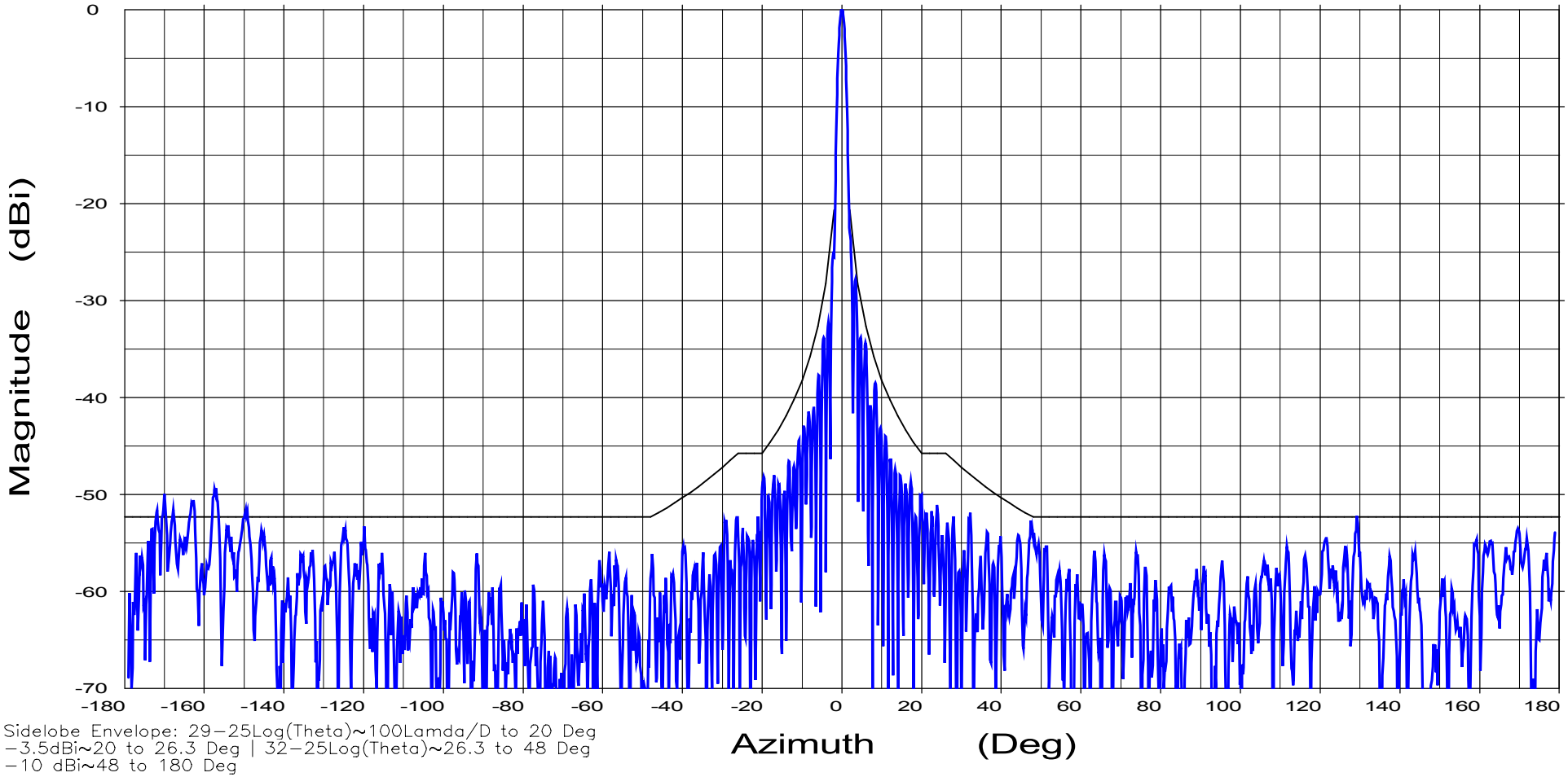
3.3 RHCP Polarization Transmit +/-180 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

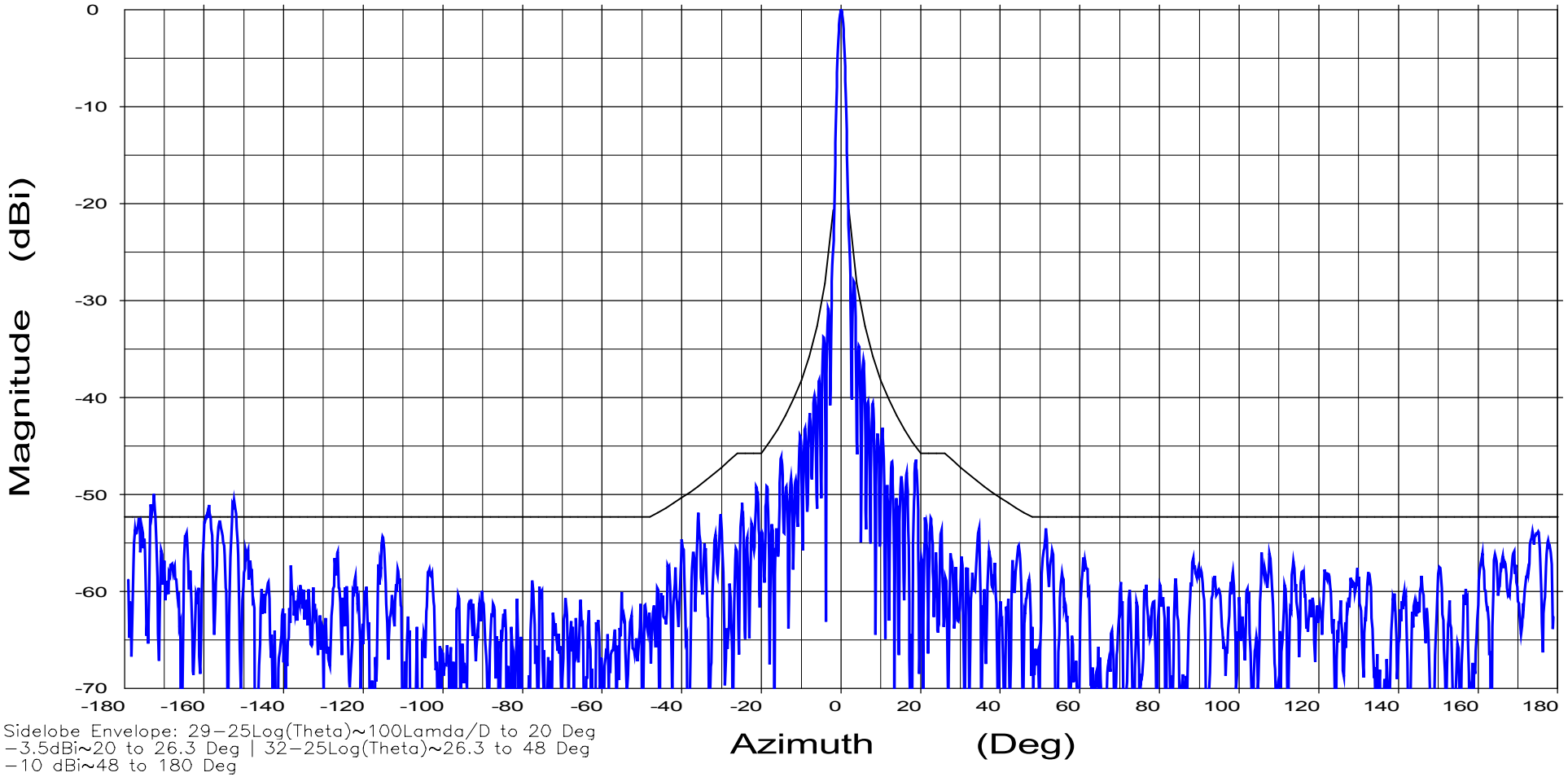
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

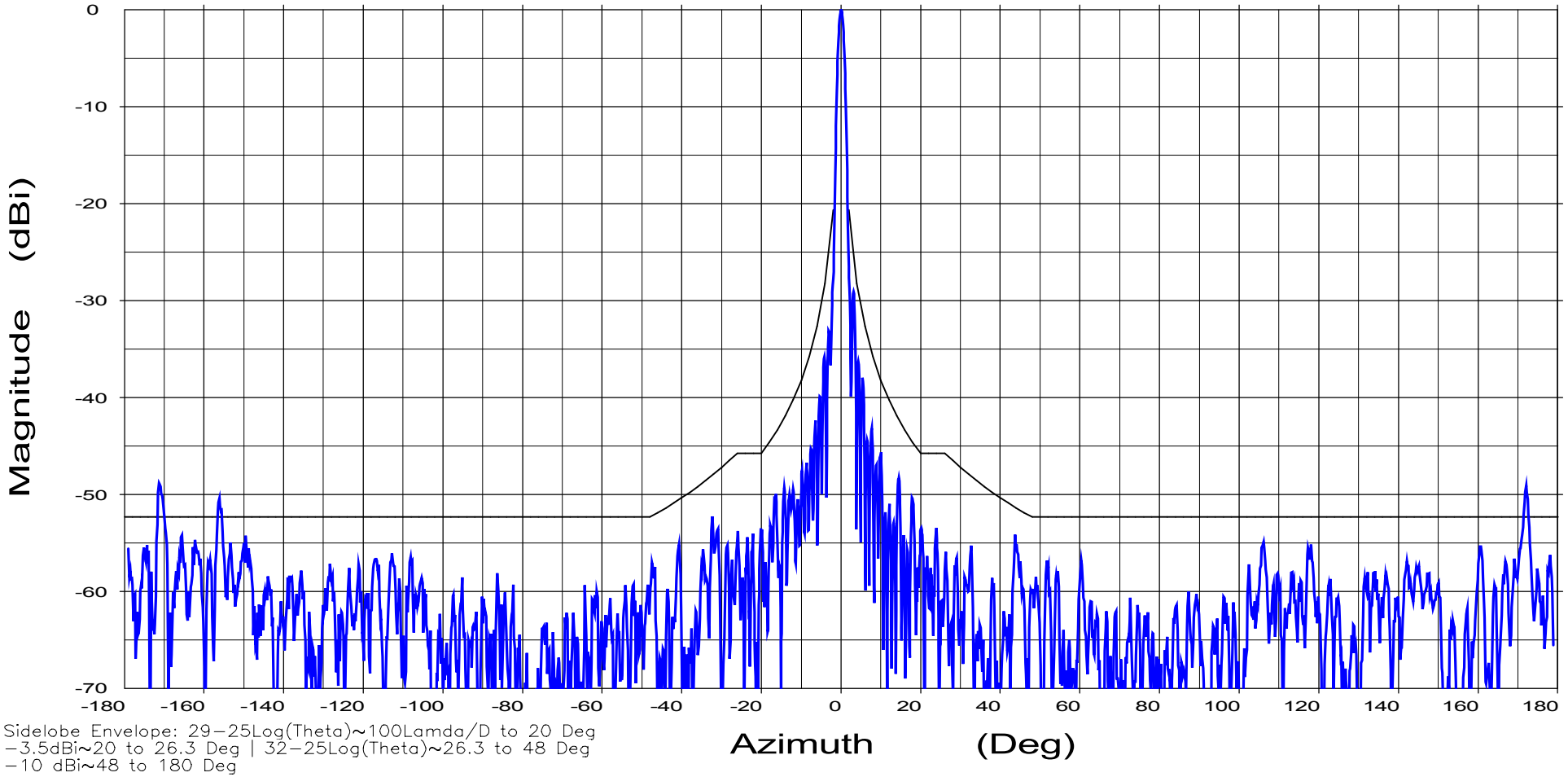
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

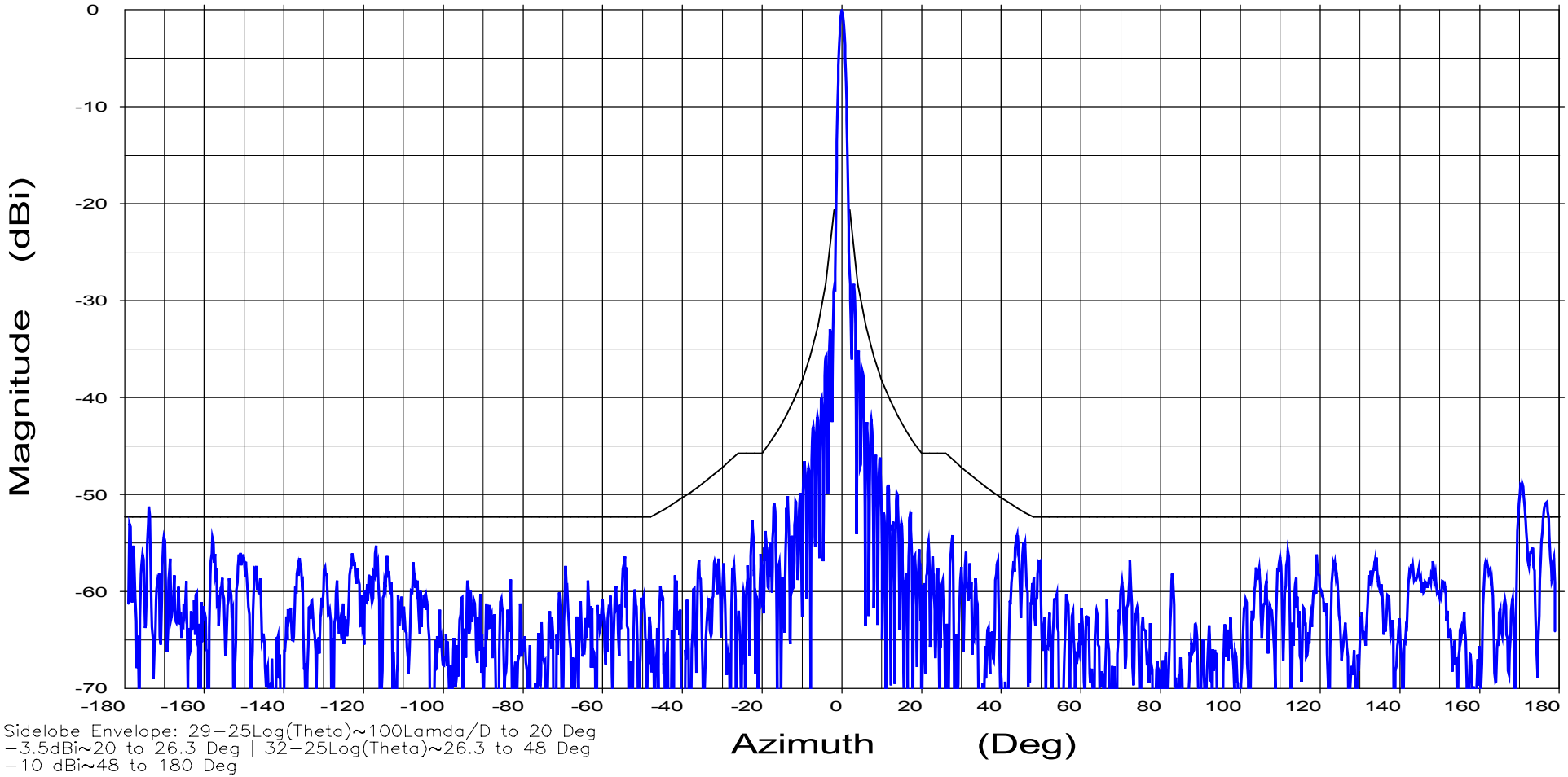
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: RHCP Rx pol: RHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 A02.dat-ant_under_test	1769 A02.dat	SGA-40	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

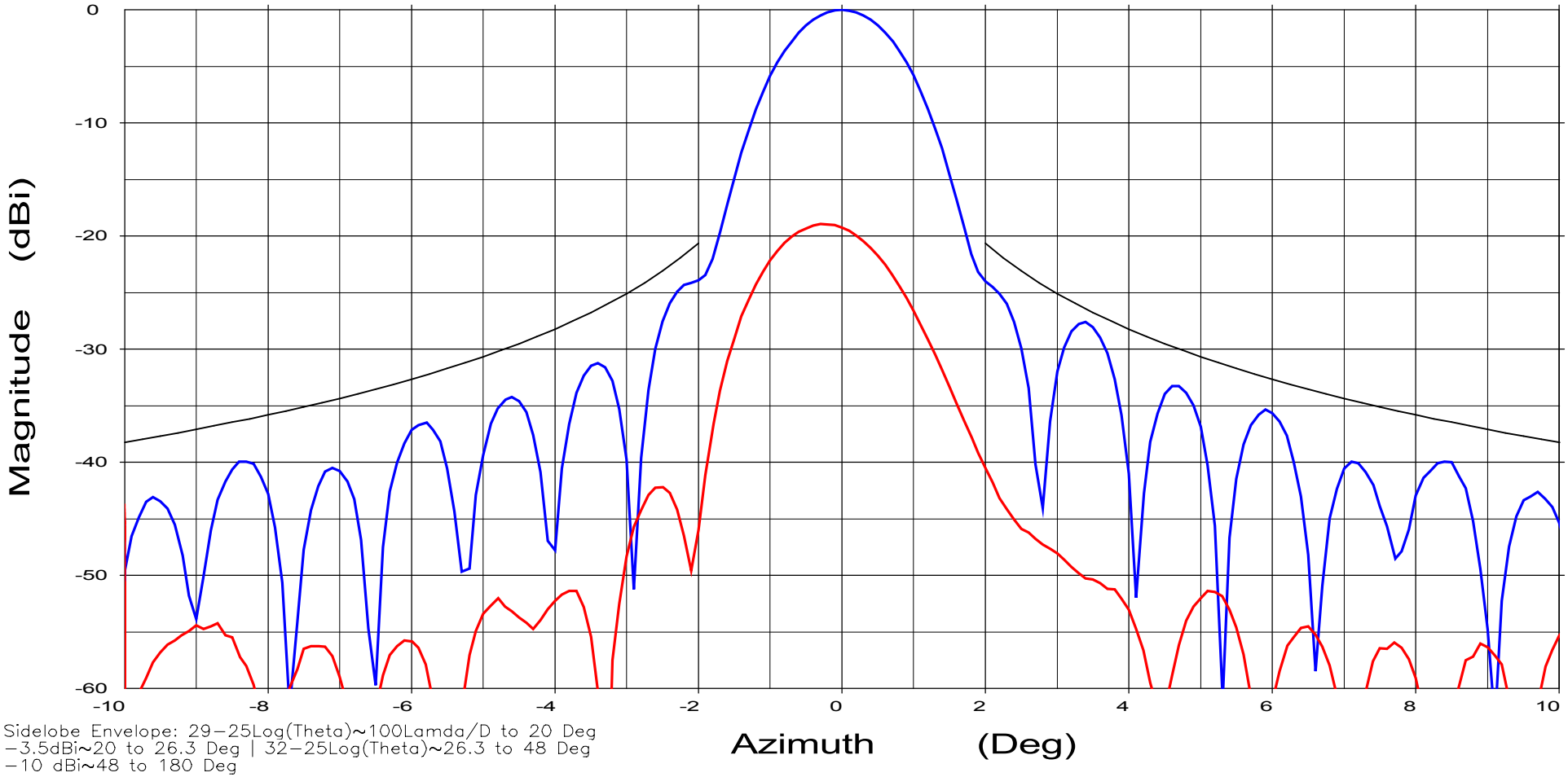
3.4 LHCP Polarization Transmit +/-10 Degree Co & Cross Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi
1769 94.dat-ant_under_test	1769 94.dat	SGA-40	ch1	dBi

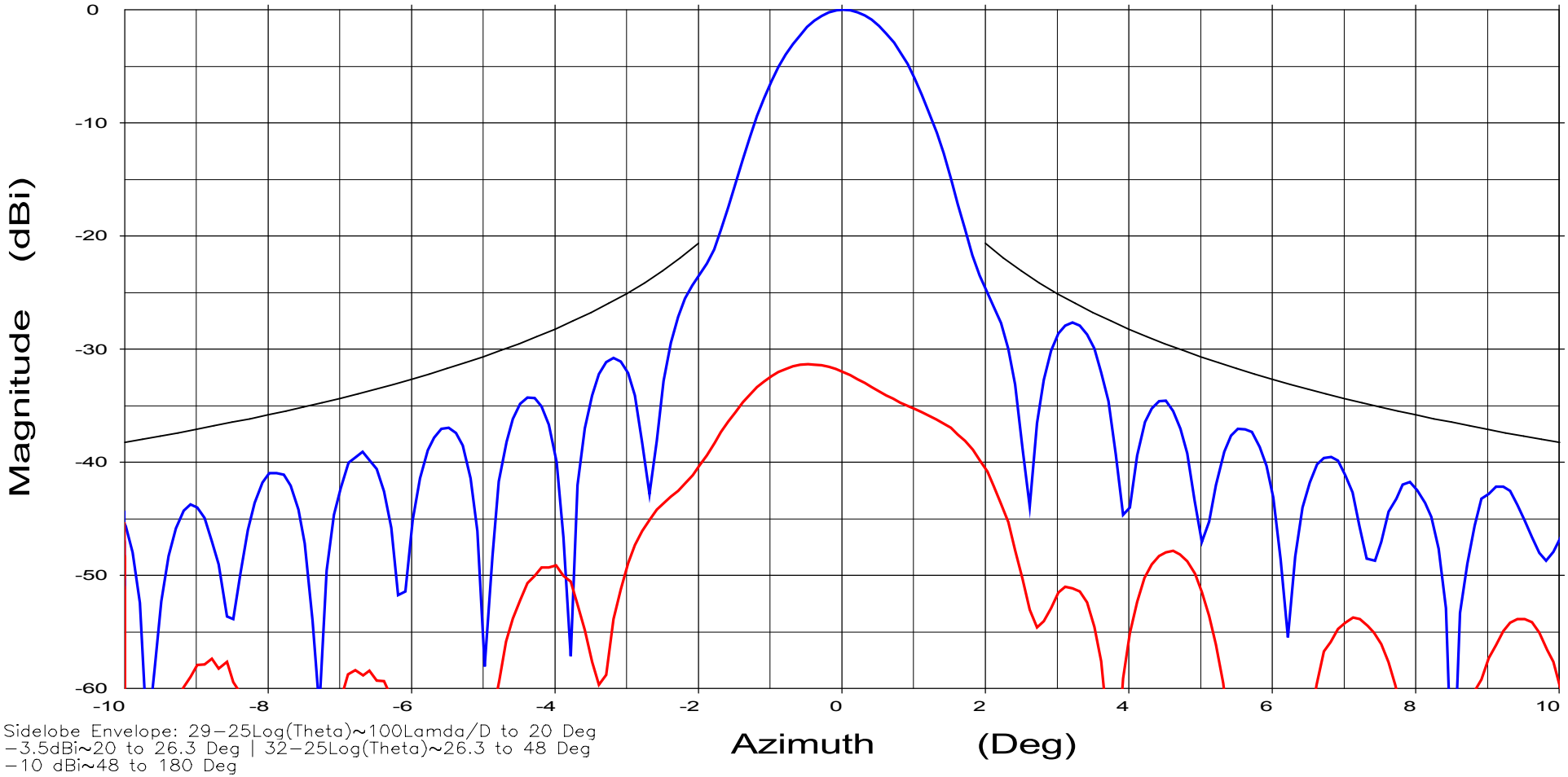
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi
1769 94.dat-ant_under_test	1769 94.dat	SGA-40	ch1	dBi

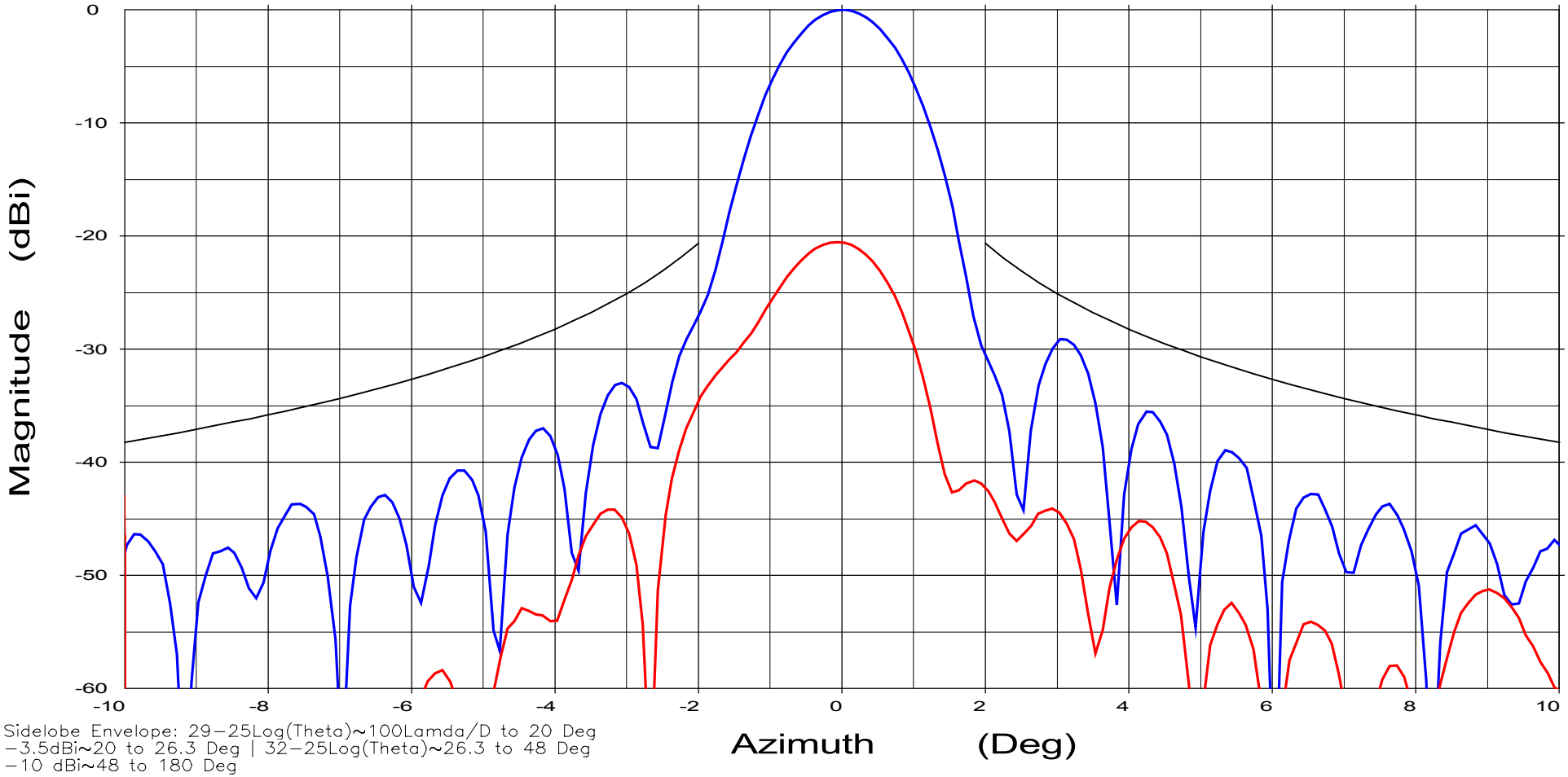
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi
1769 94.dat-ant_under_test	1769 94.dat	SGA-40	ch1	dBi

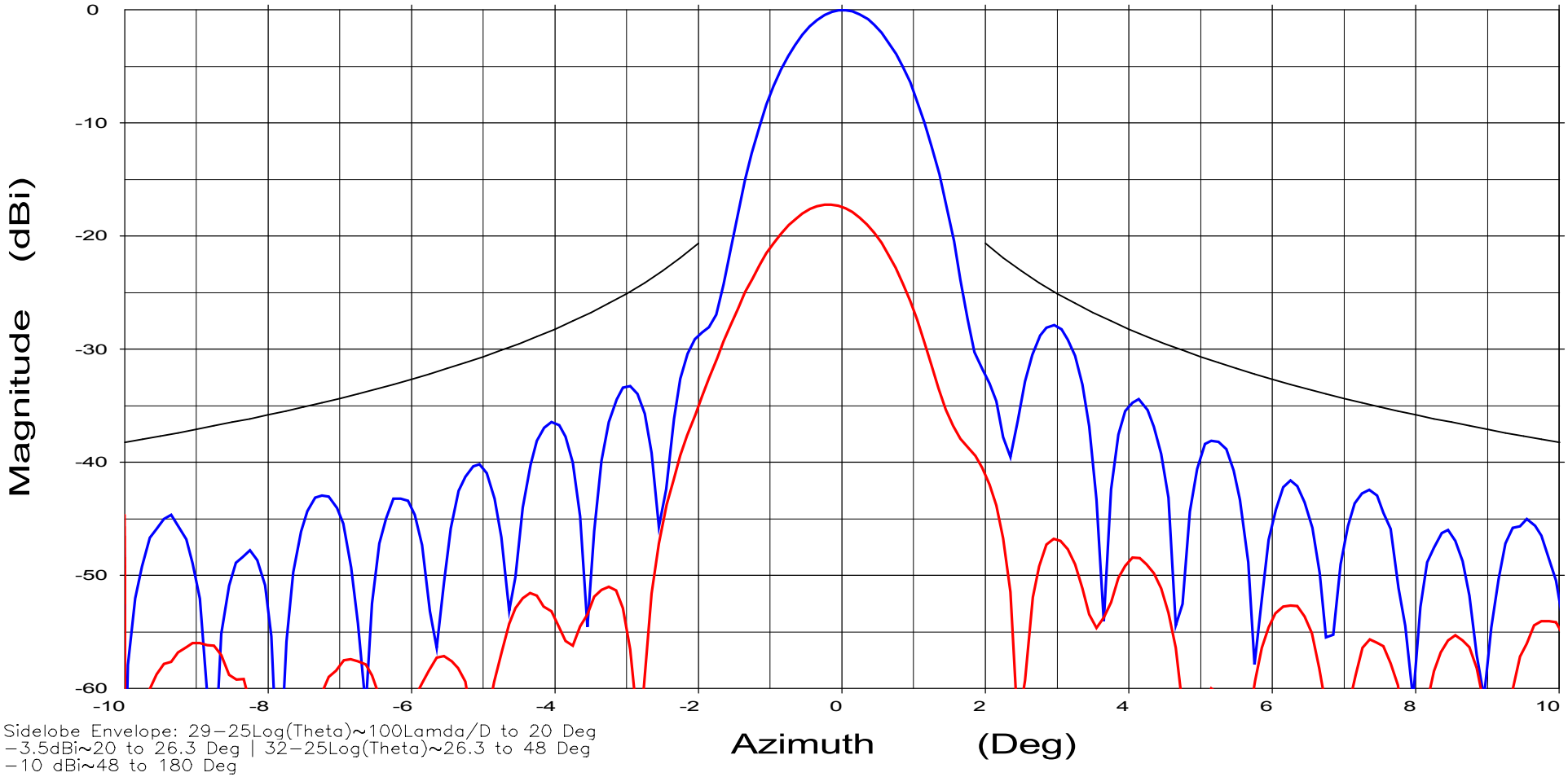
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi
1769 94.dat-ant_under_test	1769 94.dat	SGA-40	ch1	dBi

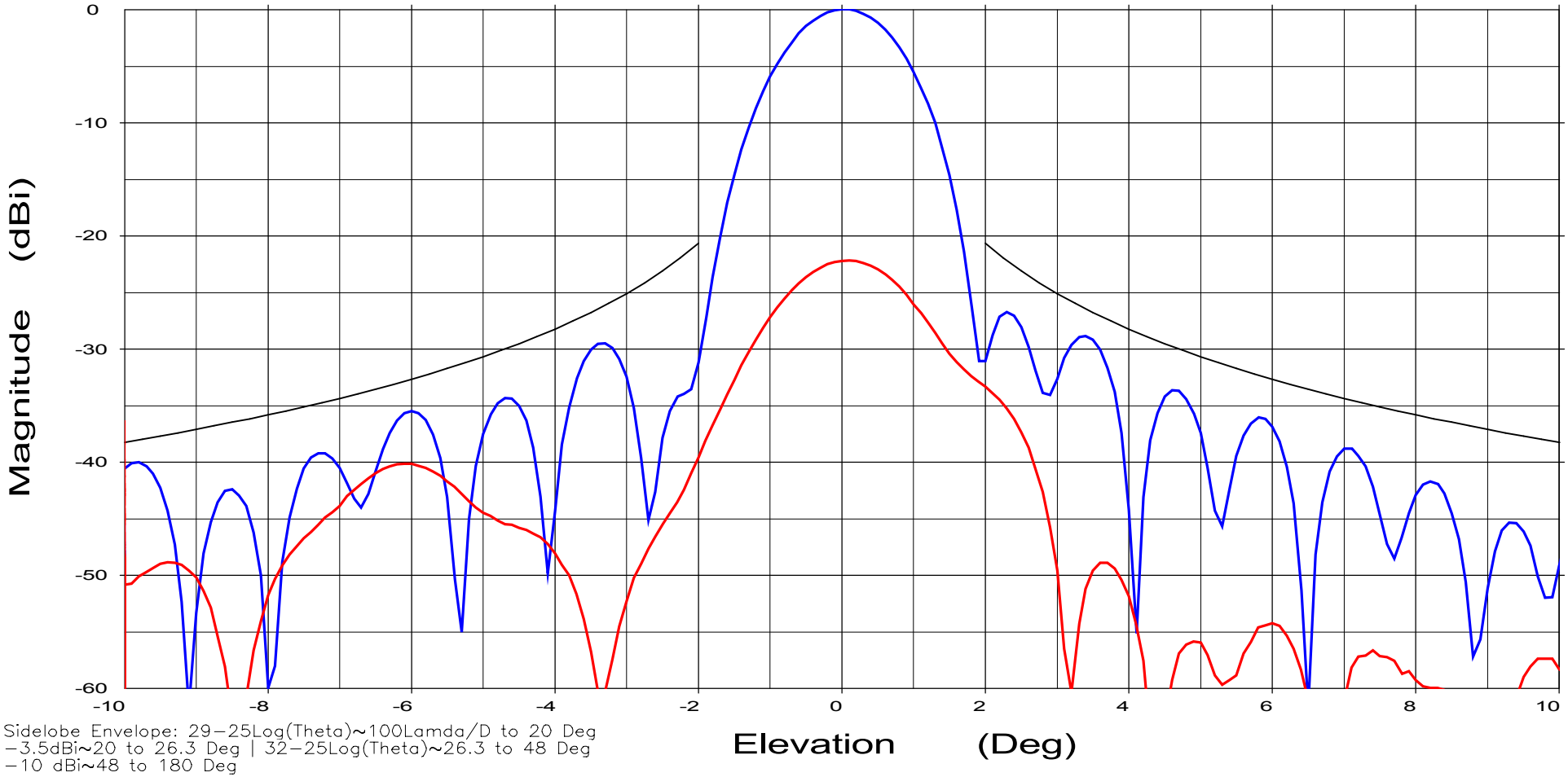
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 95.dat-ant_under_test	1769 95.dat	SGA-40	ch1	dBi
1769 97.dat-ant_under_test	1769 97.dat	SGA-40	ch1	dBi

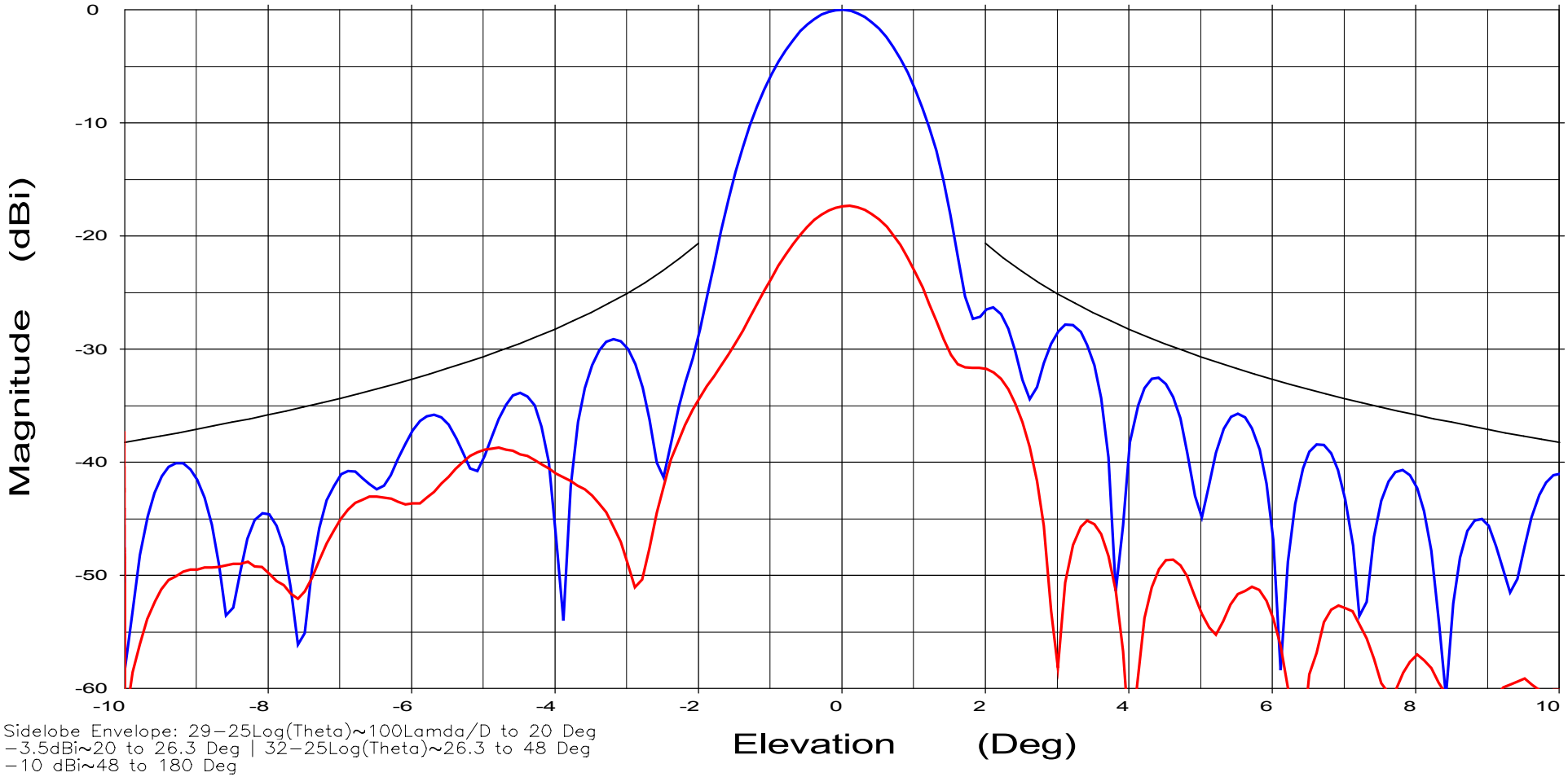
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 95.dat-ant_under_test	1769 95.dat	SGA-40	ch1	dBi
1769 97.dat-ant_under_test	1769 97.dat	SGA-40	ch1	dBi

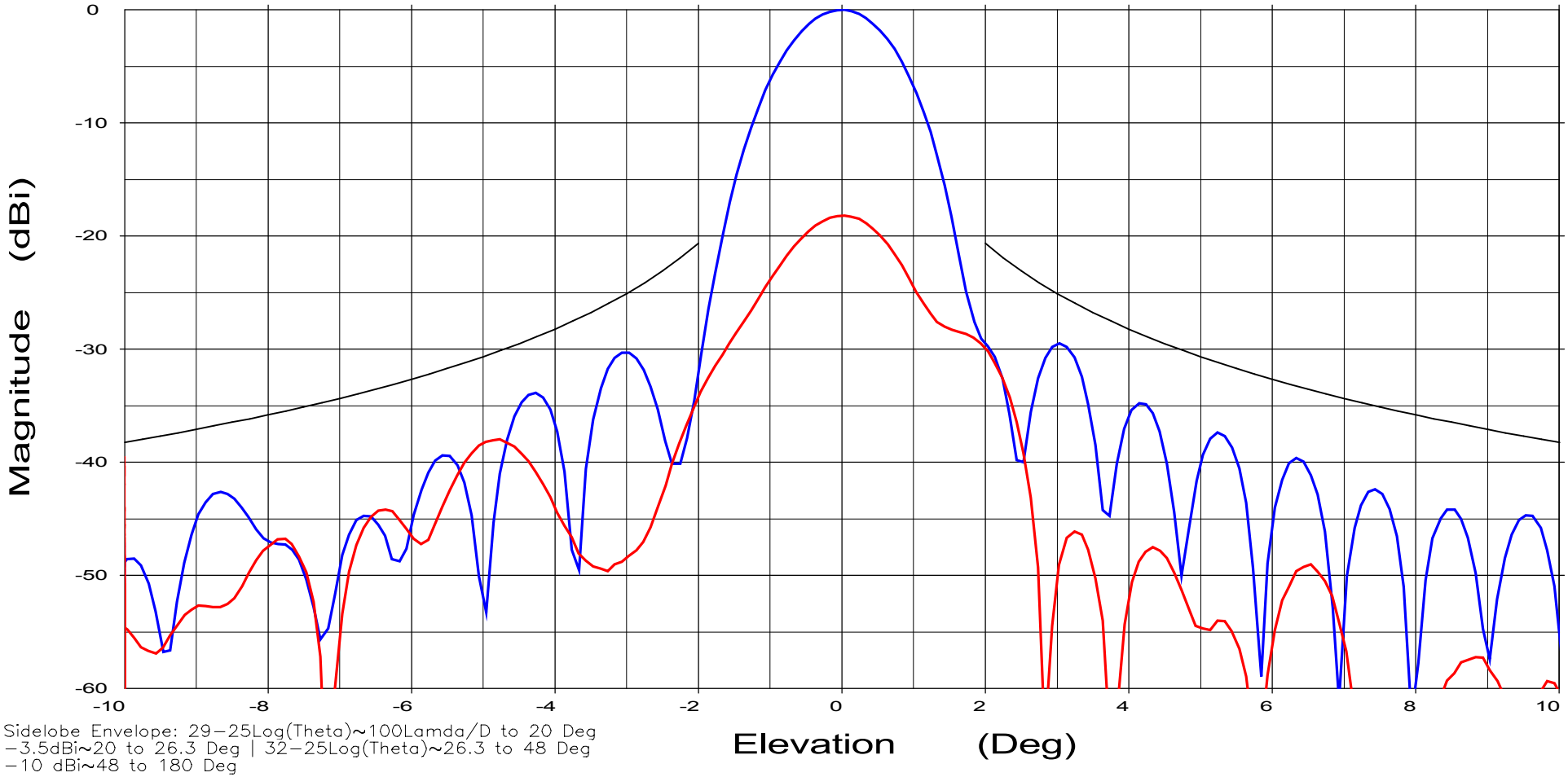
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 95.dat-ant_under_test	1769 95.dat	SGA-40	ch1	dBi
1769 97.dat-ant_under_test	1769 97.dat	SGA-40	ch1	dBi

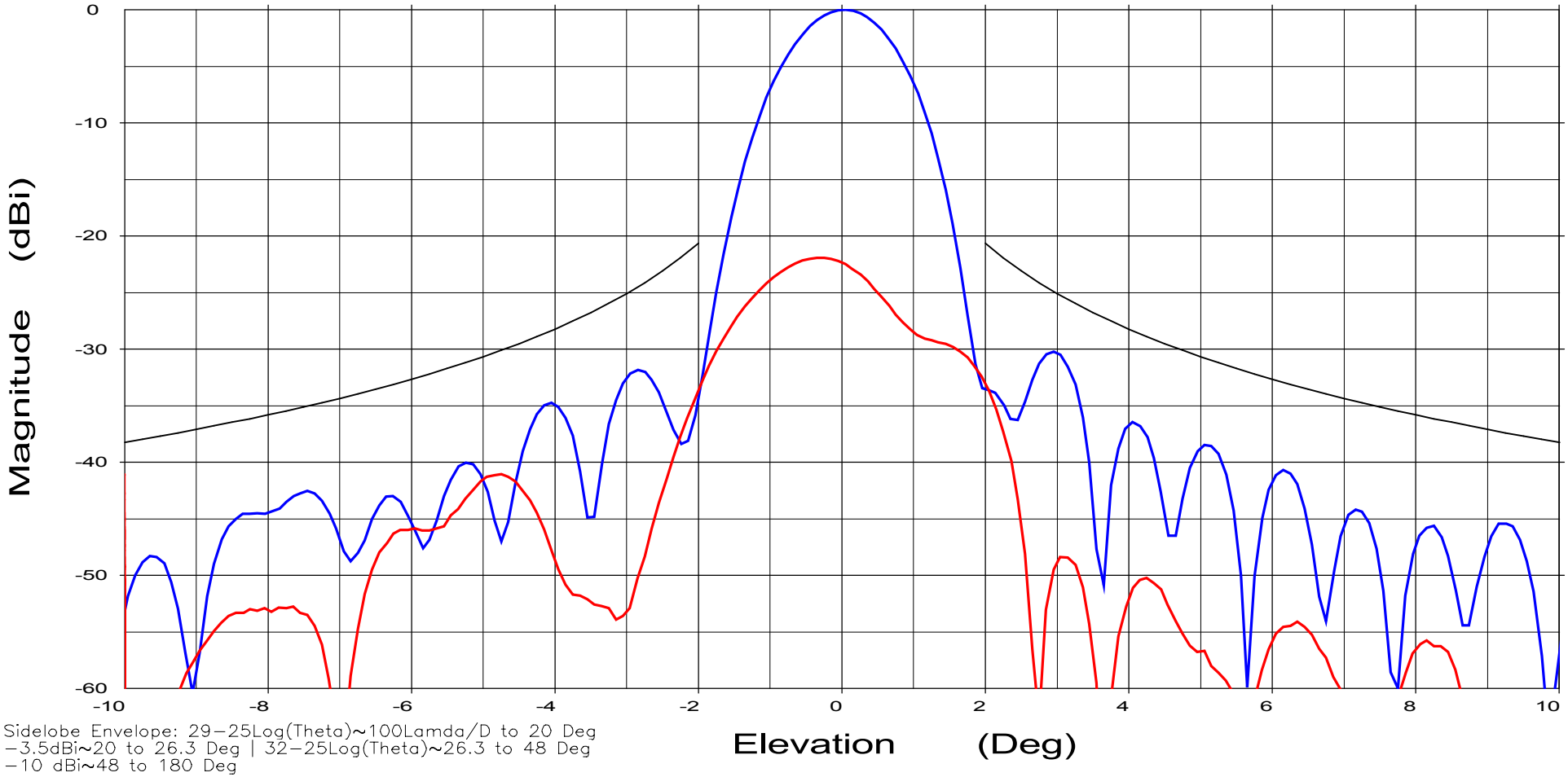
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 95.dat-ant_under_test	1769 95.dat	SGA-40	ch1	dBi
1769 97.dat-ant_under_test	1769 97.dat	SGA-40	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

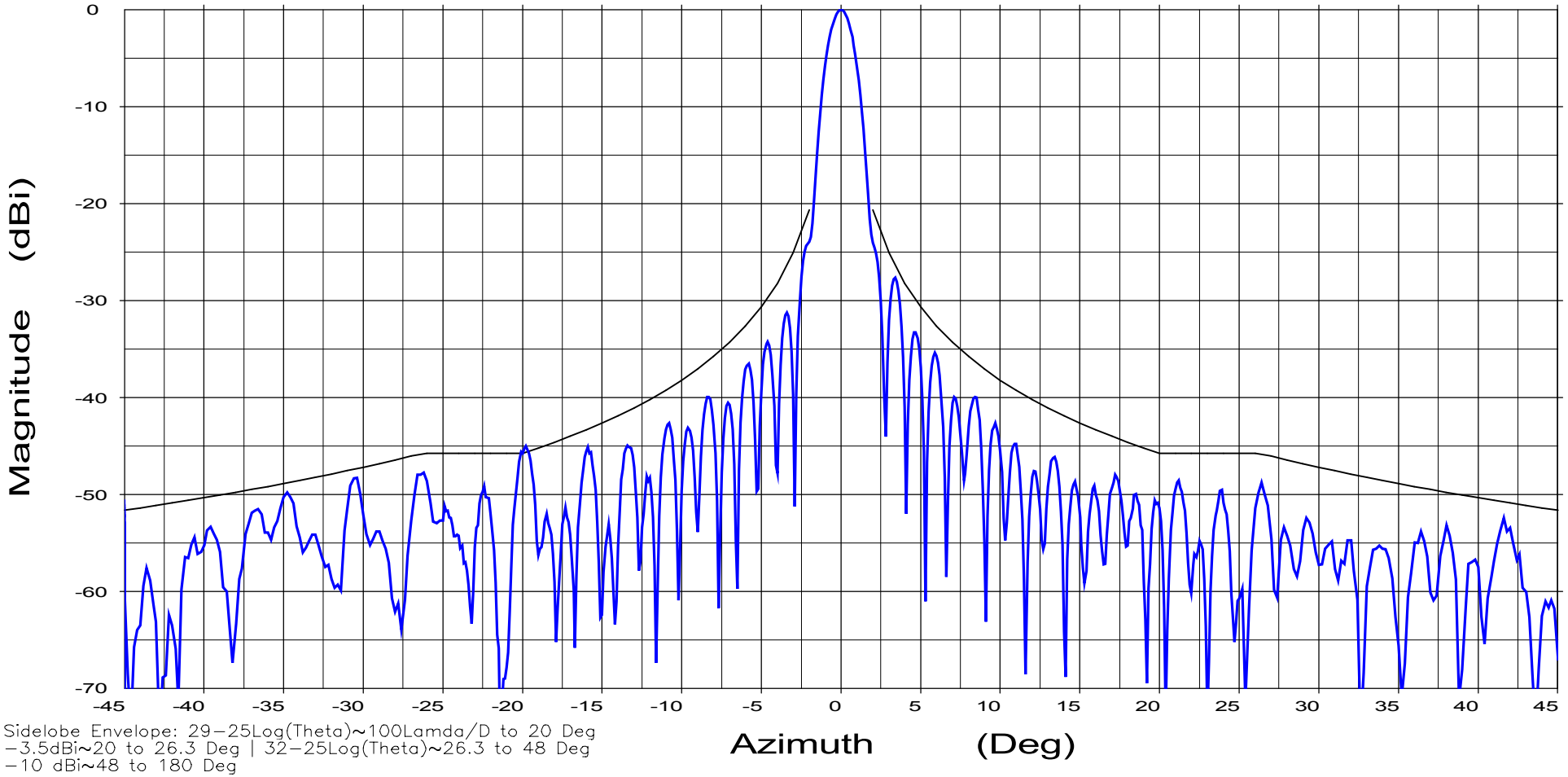
3.5 RHCP Polarization Transmit +/-45 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

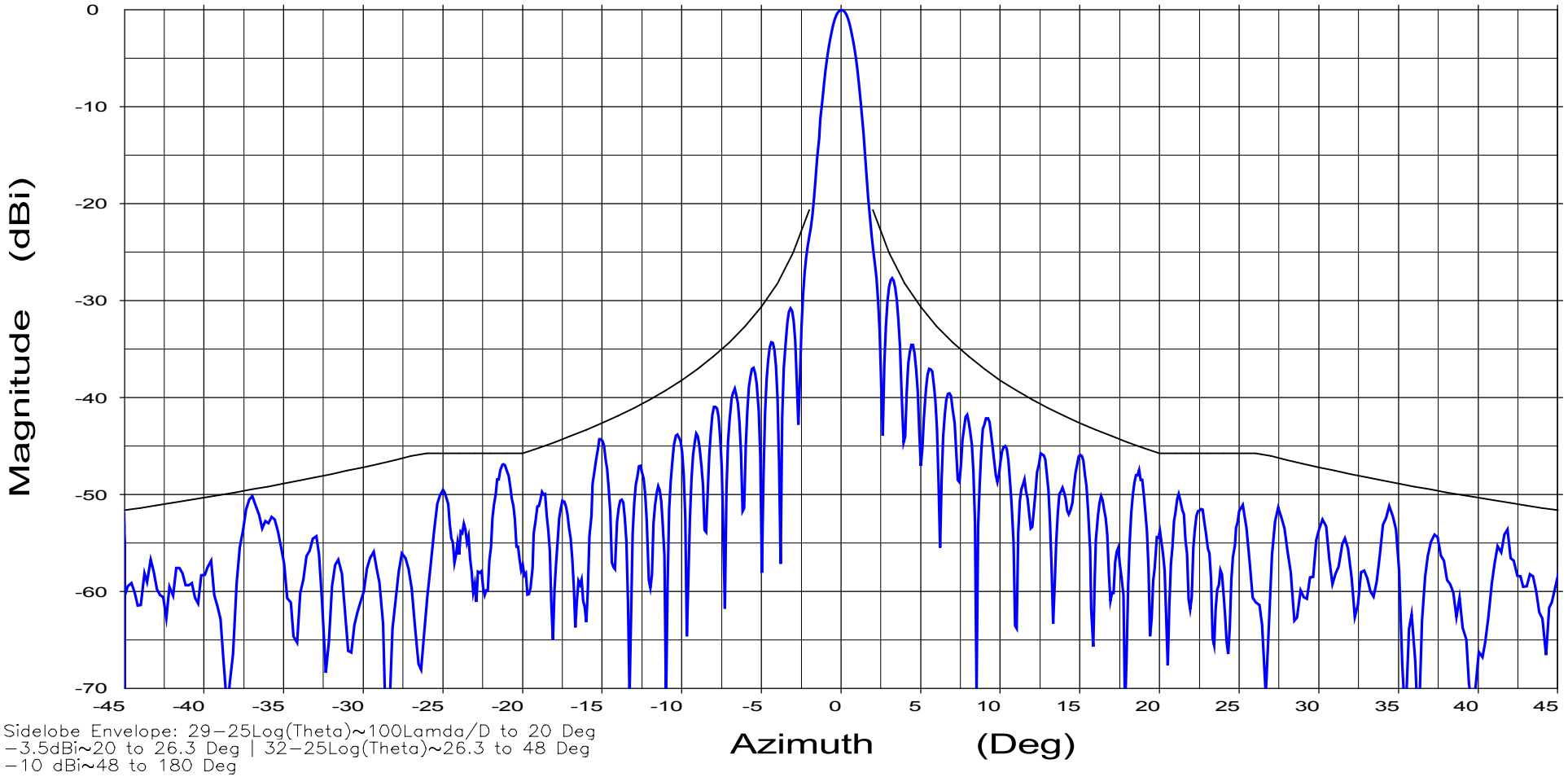
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

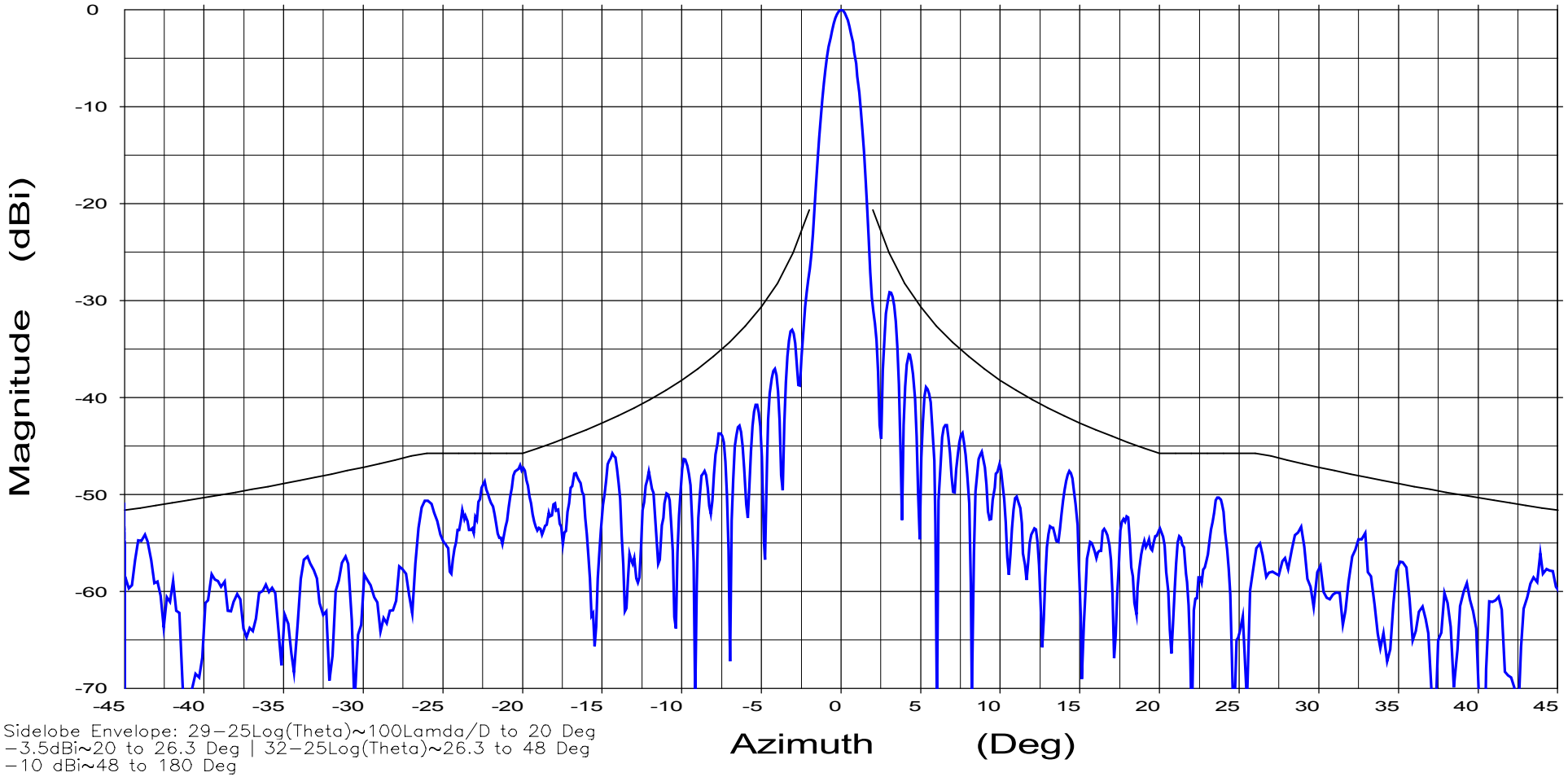
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

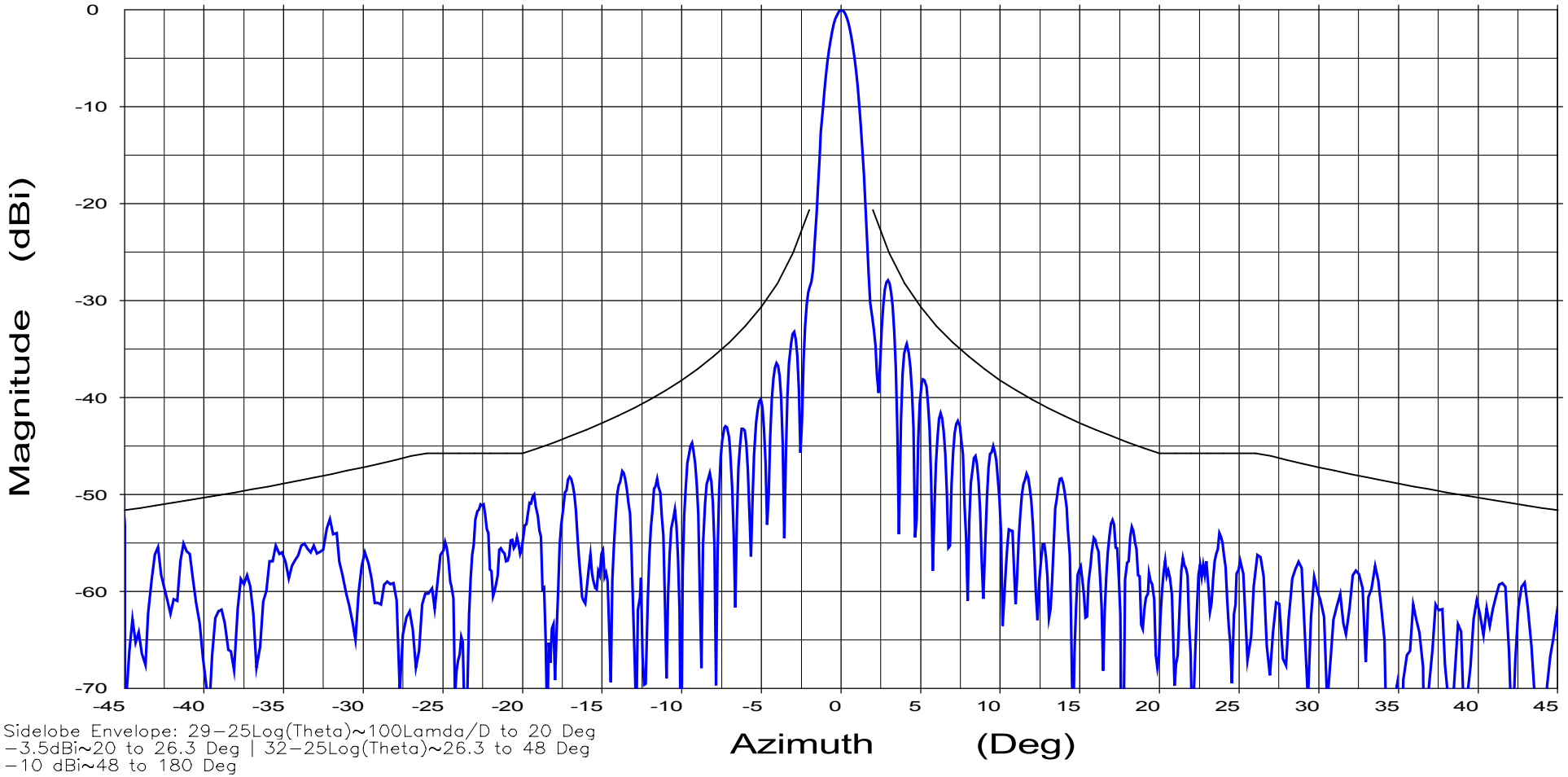
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

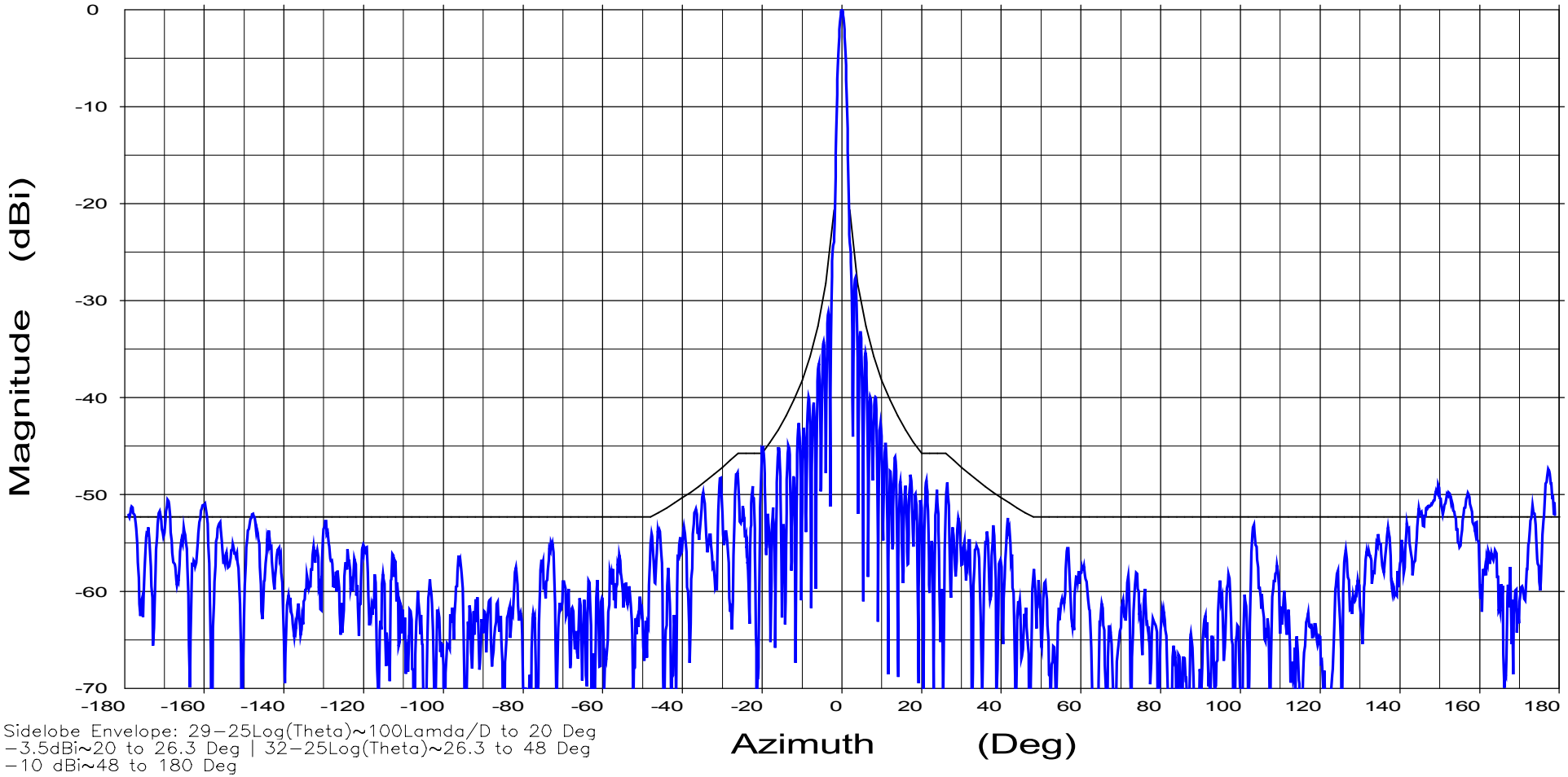
3.6 RHCP Polarization Transmit +/-180 Degree Co Pol Patterns

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.625 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

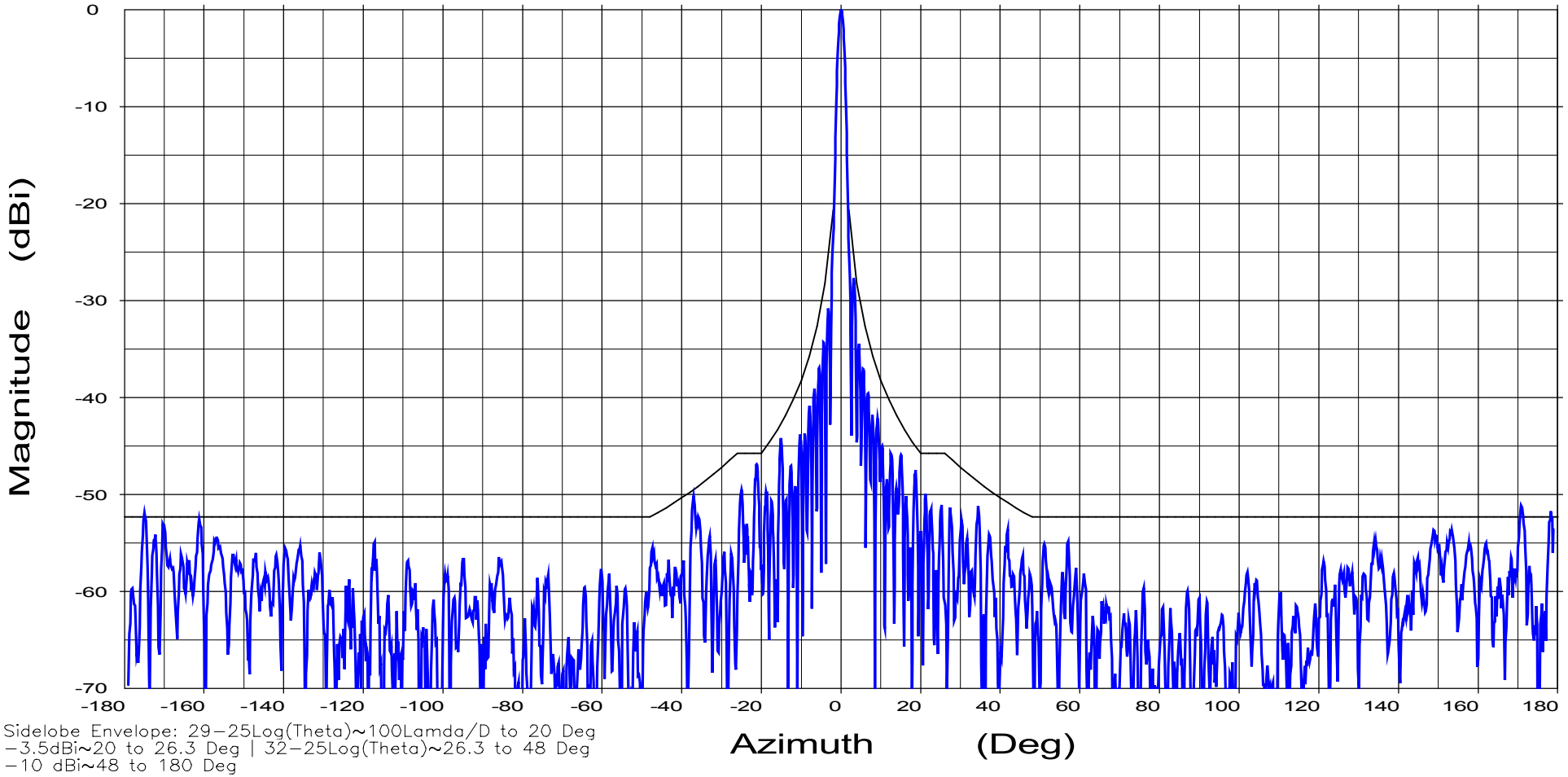
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 3.825 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

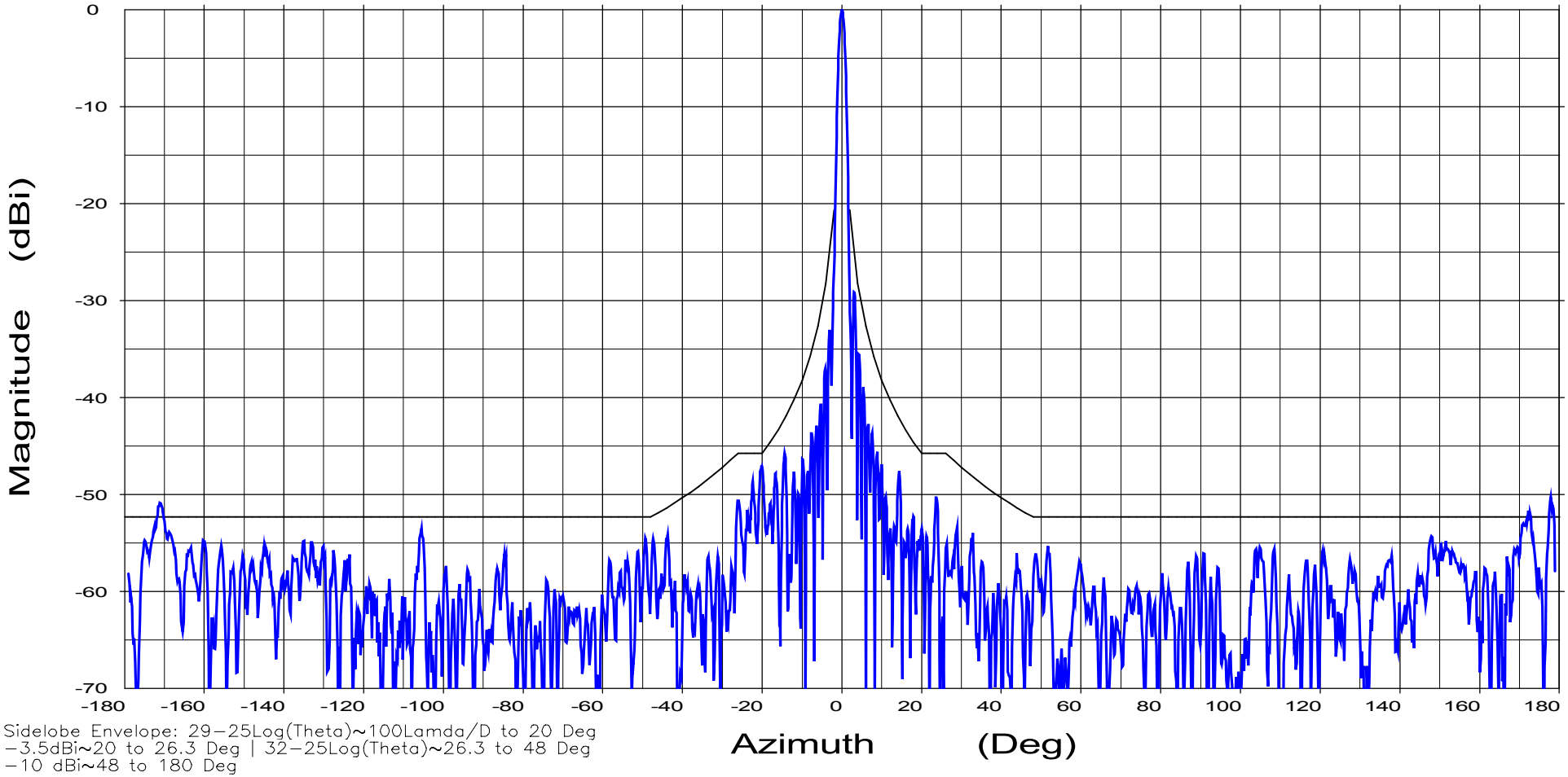
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.025 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

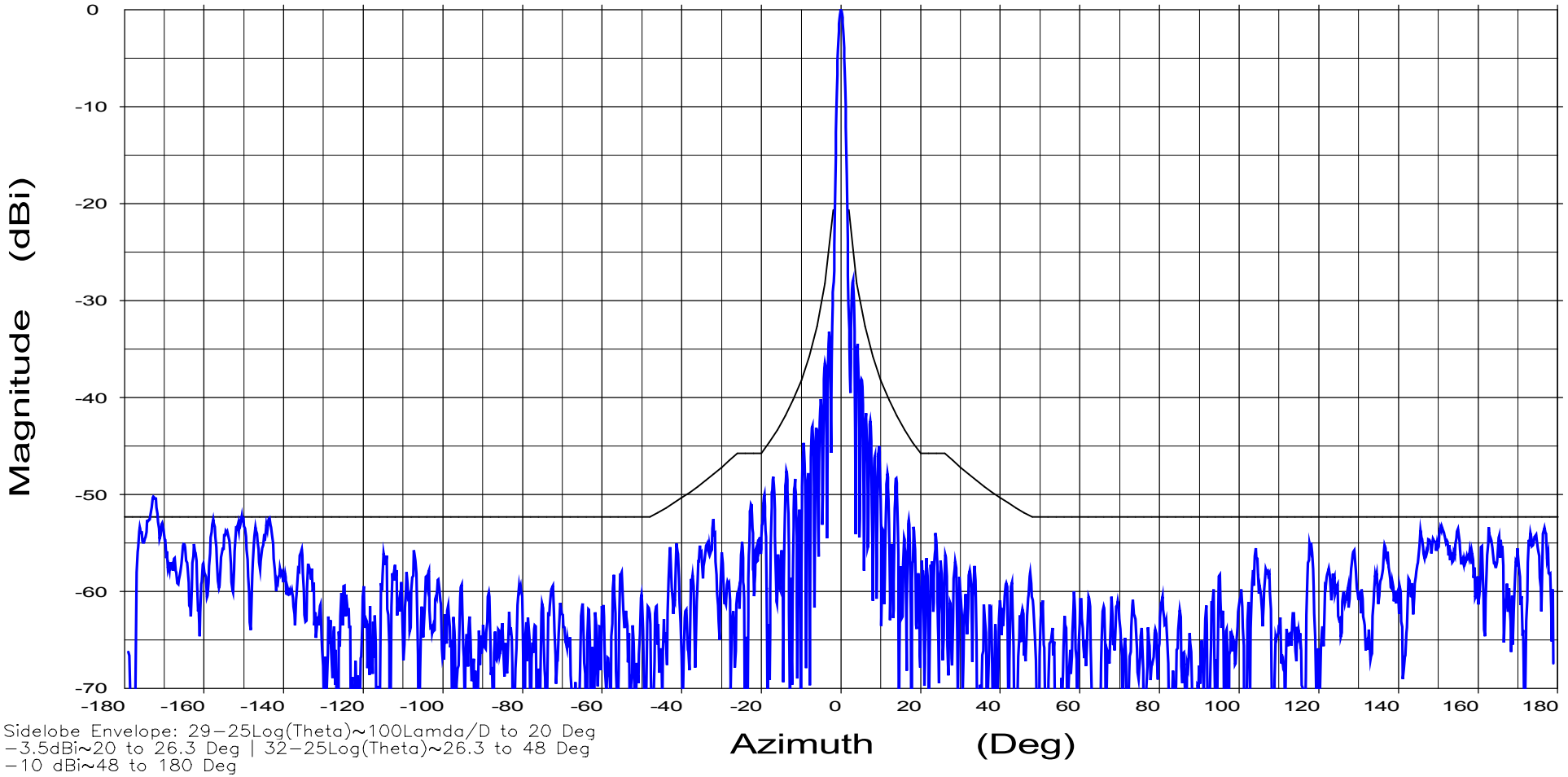
GENERAL DYNAMICS
SATCOM Technologies

File: See Legend

General Dynamics
3.8 Meter Series 1385 Antenna System
C-Band Circular F1 Feed

Frequency : 4.200 GHz

Operator: Dwight B. Lutz
Ser. no.:
Channel: ch1 Tx pol: LHCP Rx pol: LHCP



Sidelobe Envelope: 29−25Log(Theta)~100Lamda/D to 20 Deg
−3.5dBi~20 to 26.3 Deg | 32−25Log(Theta)~26.3 to 48 Deg
−10 dBi~48 to 180 Deg

Overlays	Cal. file	table	channel	units
1769 92.dat-ant_under_test	1769 92.dat	SGA-40	ch1	dBi

GENERAL DYNAMICS
SATCOM Technologies

4.0 Test Equipment Details

4.1 General Information

General Dynamics SATCOM Technologies / Prodelin Antenna Test Facility is located 5km (3 miles) East of Maiden, NC and approximately 16km (10 Miles) South-southeast of Prodelin main office in Newton, NC. We are located 61km (38 Miles) from Charlotte International Airport and 149km (90 miles) from Piedmont Triad International Airport in Greensboro, NC.

The antenna range can test a multitude of frequencies between 800 MHz and 30.00GHz, and antennas up to 4.5 meters in diameter.

Testing is accomplished over a test path between a fixed transmit tower location and a fixed receive tower location, separated by a distance of 1193.06 Meters (3914.44 feet). Transmit and receive tower heights are 17.41 meters (57.11 feet) above ground level. Using directional antennas, an unmodulated carrier wave (CW) test signal(s) are transmitted from the source tower location toward the receive tower location.

The signal is then received and interpreted by the sophisticated Orbit F/R959 Antenna Measurement System. Data is digitally recorded and many options of data analysis and presentation are possible using the Orbit F/R DataPro and GD specific software.

4.2 Test range specifics:

Range Length	1193.06 Meters (3914.44 Feet)
C/L Tx Source Antenna AGL	17.41 Meters (57.11 Feet)
C/L AUT Mounting Positioner AGL	17.49 Meters (57.88 Feet)

Test zone:

Frequency range	0.8 - 30.00 GHz
Dynamic range	80 dB (in most frequency bands)
Gain	+/- 0.5 dB*
Amplitude ripple	< +/- 0.3 dB* @ +/-20º-boresight
Amplitude ripple	< +/-0.5 dB* @ greater than 20º boresight
Phase ripple	< +/-5º*
Cross-polar purity:	-40 dB*

* For the majority of practical applications.

Positioner:

Axis 1 Azimuth	
Accuracy	< 0.12º
Axis 2 Elevation	
Accuracy	< 0.1º
Max load:	800 Lbs.

4.3 Test Equipment:

Manufacturer:	Model	Options	S/N
HP Microwave Receiver (Top Section)	8530A	010-011-8Ze	3031A08077
HP Microwave Receiver (Btm Section)	8530A	011-8ZE	3409A00301
HP Synthesized Sweeper Source #1 (Tx Source) 10Mhz – 50GHz	83651B		3844A00444
HP Amplifier 2-50GHz	83050A	8ZE	3331A00520
HP Power Supply (For 83050A Amplifier)	87421A		3611A00932
HP Synthesized Sweeper Source #2 (Reference Source) 10Mhz – 20GHz	83621B		3614A00156
HP LO/IF Distribution Unit	85309A		3224A00188
HP Extender (Up-Range)	37204A	03	3212U24550
HP Extender (Down-Range)	37204A	03	3212U23735
HP Mixer Module (Reference) 2 - 26.5GHz -71Mv	85320B		860A00143
HP Mixer Module (Test) 2 - 26.5GHz	85320A		3031A08077
HP Spectrum Analyzer 9kHz - 40 GHz	8564E		3745A01006

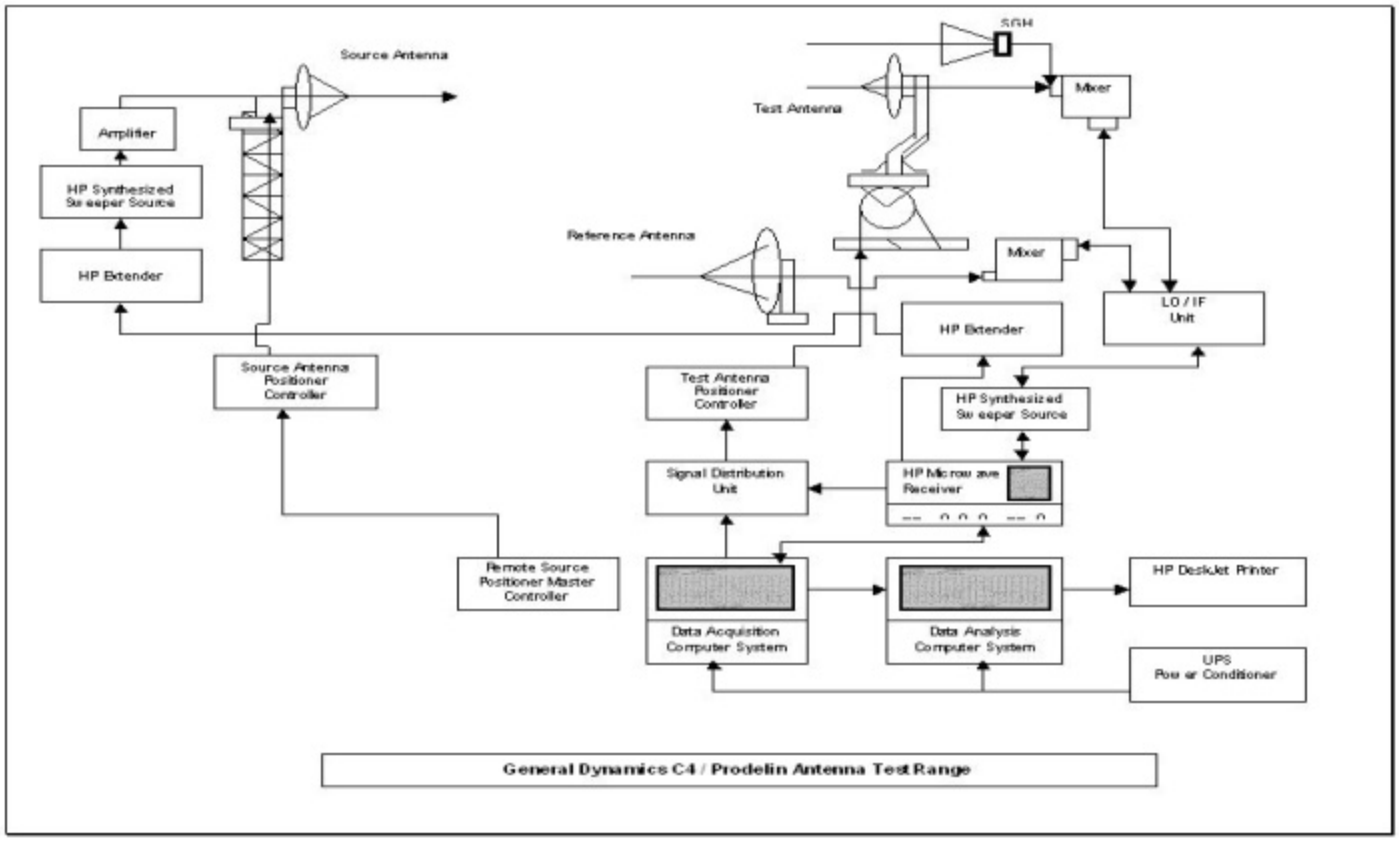
4.4 Positioner Equipment:

Orbit Positioner Programmer (To control Tx positioner)	AL-4706-3B		208
Orbit Positioner Controller & PCU (Up Range – Power Control Unit)	AL-4806-3A		182
Orbit Positioner Controller & PCU (Down Range – Power Control Unit)	AL-4806-3A	1 & 5	266

4.5 Software

F/R Signal Distribution Unit	959		K1036
Orbit F/R 959 Data Acquisition Software Automated Antenna Measurement Workstation	Spectrum Version 2.6.1	Rev-A	
Orbit F/R DataPro Plus Software Antenna Data Presentation and Analysis	Spectrum Version 2.6.1	Rev-A	

4.6 Bock Diagram



4.7 Staff / Contact Information:

Two full time operators with a combined total of 35+ Years experience in antenna testing.

Dwight B. Lutz phone: 828-428-1486
Email: dwight.lutz@gdsatcom.com

Ken Poovey phone: 828-428-1486
Email: kenneth.poovey@gdsatcom.com

Fax: 828-428-1488
Internet: http://www.gdsatcom.com

GENERAL DYNAMICS
SATCOM Technologies