

**ACTS Spacecraft G/T & EIRP
(pre-launch measured)**

G/T East Beams

Rx Front	Peak Gain dB	Conv Factor dB/°K	Peak G/T dB°K	EOC Gain dB	EOC Gain Slope dB/°	Pointing Error °	Pointing Loss dB	EOC G/T dB°K
Fixed Beam								
Cleveland	52.90	29.94	22.96	50.70	0.60	0.02	0.01	20.74
Isolated Spot								
Houston	52.20	29.70	22.50	48.80	5.30	0.02	0.11	18.99
Kansas City	53.10	29.70	23.40	50.10	2.90	0.02	0.06	20.34
Los Angeles	50.70	29.70	21.00	47.70	6.80	0.02	0.14	17.86
Miami	51.95	29.70	22.25	48.50	3.80	0.02	0.08	18.72
Nashville	53.20	29.70	23.50	50.30	2.20	0.02	0.04	20.55
Seattle	50.80	29.70	21.10	47.10	10.20	0.02	0.20	17.19
East Scan Beam								
Beam 1	50.07	29.70	20.37	47.07	20.00	0.02	0.40	16.97
Beam 2	49.92	29.70	20.22	46.92	20.00	0.02	0.40	16.82
Beam 3	50.08	29.70	20.38	47.08	20.00	0.02	0.40	16.98
Beam 4	50.04	29.70	20.34	47.04	48.60	0.02	0.97	16.36
Beam 5	50.19	29.70	20.49	47.19	24.40	0.02	0.49	17.00
Beam 6	50.33	29.70	20.63	47.33	24.40	0.02	0.49	17.14
Beam 7	50.09	29.70	20.39	47.09	20.00	0.02	0.40	16.99
Beam 8	50.40	29.70	20.70	47.40	24.40	0.02	0.49	17.21
Beam 9	50.17	29.70	20.47	47.17	31.90	0.02	0.64	16.83
Beam 10	50.26	29.70	20.56	47.26	20.00	0.02	0.40	17.16
Beam 11	50.04	29.70	20.34	47.04	20.00	0.02	0.40	16.94
Beam 12	50.27	29.70	20.57	47.27	58.30	0.02	1.17	16.40

EIRP – Effective Isolated Radiated Power

EOC- Edge of coverage

G/T – Gain to equivalent noise temperature

G/T West Beams

Rx Back	Peak Gain	Conv Factor	Peak G/T	EOC Gain	EOC Gain Slope	Pointing Error	Pointing Loss	EOC G/T
	dB	dB/°K	dB	dB	dB/°	°	dB	dB
Fixed Beam								
Atlanta	54.10	29.84	24.26	51.60	2.30	0.02	0.05	21.71
Tampa	52.50	29.12	23.38	49.40	4.70	0.02	0.09	20.18
Isolated Spot								
Dallas	52.40	30.28	22.12	49.50	3.50	0.02	0.07	19.15
Denver	52.10	30.28	21.82	48.70	6.10	0.02	0.12	18.29
Memphis	52.80	30.28	22.52	49.90	1.70	0.02	0.03	19.58
New Orleans	52.40	30.28	22.12	49.30	3.50	0.02	0.07	18.95
Phoenix	51.20	30.28	20.92	47.70	6.00	0.02	0.12	17.30
San Francisco	50.80	30.28	20.52	47.30	8.10	0.02	0.16	16.85
White Sands	51.70	30.28	21.42	48.60	3.50	0.02	0.07	18.25
West Scan Beam								
Beam 1	49.98	30.28	19.70	46.98	20.00	0.02	0.40	16.30
Beam 2	49.75	30.28	19.47	46.75	20.00	0.02	0.40	16.07
Beam 3	49.95	30.28	19.67	46.95	20.00	0.02	0.40	16.27
Beam 4	49.63	30.28	19.35	46.63	20.00	0.02	0.40	15.95
Beam 5	49.12	30.28	18.84	46.12	20.00	0.02	0.40	15.44
Beam 6	49.85	30.28	19.57	46.85	23.70	0.02	0.47	16.09
Beam 7	49.65	30.28	19.37	46.65	20.00	0.02	0.40	15.97
Beam 8	50.05	30.28	19.77	47.05	20.60	0.02	0.41	16.35
Beam 9	49.55	30.28	19.27	46.55	20.60	0.02	0.41	15.85
Beam 10	49.95	30.28	19.67	46.95	20.00	0.02	0.40	16.27
Beam 11	49.55	30.28	19.27	46.55	20.00	0.02	0.40	15.87
Beam 12	50.05	30.28	19.77	47.05	20.00	0.02	0.40	16.37
Beam 13	49.75	30.28	19.47	46.75	20.00	0.02	0.40	16.07
Beam 14	48.95	30.28	18.67	45.95	33.60	0.02	0.67	14.99
Beam 15	49.45	30.28	19.17	46.45	32.40	0.02	0.65	15.52
Beam 16	49.55	30.28	19.27	46.55	20.00	0.02	0.40	15.87
Beam 17	49.95	30.28	19.67	46.95	32.40	0.02	0.65	16.02
Beam 18	49.85	30.28	19.57	46.85	20.00	0.02	0.40	16.17
Beam 19	50.15	30.28	19.87	47.15	32.40	0.02	0.65	16.22
Beam 20	49.75	30.28	19.47	46.75	20.00	0.02	0.40	16.07
Beam 21	49.95	30.28	19.67	46.95	30.30	0.02	0.61	16.06
Beam 22	49.75	30.28	19.47	46.75	30.30	0.02	0.61	15.86

EIRP East Beams

Tx Front	Peak Gain	Conv Factor	Peak EIRP	EOC Gain	EOC Gain Slope	Pointing Error	Pointing Loss	EOC EIRP
	dB	dBW	dBW	dB	dB/°	°	dB	dBW
Fixed Beam								
Cleveland	55.15	14.41	69.56	52.35	0.60	0.04	0.02	66.74
Isolated Spot								
Houston	54.54	14.51	69.05	51.44	5.30	0.04	0.19	65.76
Kansas City	54.25	14.51	68.76	51.25	2.90	0.04	0.10	65.66
Los Angeles	51.05	14.51	65.56	48.35	6.80	0.04	0.24	62.62
Miami	53.25	14.51	67.76	50.25	3.80	0.06	0.23	64.53
Nashville	54.05	14.51	68.56	51.05	2.20	0.04	0.08	65.48
Seattle	51.25	14.51	65.76	48.05	10.20	0.04	0.36	62.20
East Scan Beam								
Beam 1	50.75	14.51	65.26	47.75	20.00	0.04	0.70	61.56
Beam 2	51.08	14.51	65.59	48.08	20.00	0.04	0.70	61.89
Beam 3	51.03	14.51	65.54	48.03	20.00	0.04	0.70	61.84
Beam 4	51.20	14.51	65.71	48.20	48.60	0.04	1.70	61.01
Beam 5	50.99	14.51	65.50	47.99	24.40	0.04	0.85	61.65
Beam 6	51.05	14.51	65.56	48.05	24.40	0.04	0.85	61.71
Beam 7	51.08	14.51	65.59	48.08	20.00	0.04	0.70	61.89
Beam 8	51.05	14.51	65.56	48.05	24.40	0.04	0.85	61.71
Beam 9	51.35	14.51	65.86	48.35	31.90	0.04	1.12	61.74
Beam 10	50.99	14.51	65.50	47.99	20.00	0.04	0.70	61.80
Beam 11	51.05	14.51	65.56	48.05	20.00	0.04	0.70	61.86
Beam 12	51.05	14.51	65.56	48.05	58.30	0.04	2.04	60.52

EIRP West Beams

Tx Back	Peak Gain	Conv Factor	Peak EIRP	EOC Gain	EOC Gain Slope	Pointing Error	Pointing Loss	EOC EIRP
	dB	dBW	dBW	dB	dB/°	°	dB	dBW
Fixed Beam								
Atlanta	53.80	14.80	68.60	51.00	2.30	0.04	0.08	65.72
Tampa	53.14	14.71	67.85	50.54	4.70	0.04	0.16	65.09
Isolated Spot								
Dallas	53.42	14.47	67.89	50.32	3.50	0.04	0.12	64.67
Denver	53.17	14.47	67.64	49.97	6.10	0.04	0.21	64.23
Memphis	53.67	14.47	68.14	50.57	1.70	0.04	0.06	64.98
New Orleans	53.22	14.47	67.69	50.22	3.50	0.04	0.12	64.57
Phoenix	51.67	14.47	66.14	48.67	6.00	0.04	0.21	62.93
San Francisco	49.12	14.47	63.59	45.92	8.10	0.04	0.28	60.11
White Sands	52.92	14.47	67.39	49.82	3.50	0.04	0.12	64.17
West Scan Beam								
Beam 1	50.77	14.47	65.24	47.77	20.00	0.04	0.70	61.54
Beam 2	50.72	14.47	65.19	47.72	20.00	0.04	0.70	61.49
Beam 3	50.70	14.47	65.17	47.70	20.00	0.04	0.70	61.47
Beam 4	50.47	14.47	64.94	47.47	20.00	0.04	0.70	61.24
Beam 5	50.67	14.47	65.14	47.67	20.00	0.04	0.70	61.44
Beam 6	50.67	14.47	65.14	47.67	23.70	0.04	0.83	61.31
Beam 7	50.76	14.47	65.23	47.76	20.00	0.04	0.70	61.53
Beam 8	50.52	14.47	64.99	47.52	20.60	0.04	0.72	61.27
Beam 9	50.80	14.47	65.27	47.80	20.60	0.04	0.72	61.55
Beam 10	49.81	14.47	64.28	46.81	20.00	0.04	0.70	60.58
Beam 11	50.75	14.47	65.22	47.75	20.00	0.04	0.70	61.52
Beam 12	50.59	14.47	65.06	47.59	20.00	0.04	0.70	61.36
Beam 13	50.42	14.47	64.89	47.42	20.00	0.04	0.70	61.19
Beam 14	50.57	14.47	65.04	47.57	33.60	0.04	1.18	60.86
Beam 15	50.64	14.47	65.11	47.64	32.40	0.04	1.13	60.93
Beam 16	50.68	14.47	65.15	47.68	20.00	0.04	0.70	61.45
Beam 17	50.52	14.47	64.99	47.52	32.40	0.04	1.13	60.86
Beam 18	50.74	14.47	65.21	47.74	20.00	0.04	0.70	61.51
Beam 19	50.76	14.47	65.23	47.76	32.40	0.04	1.13	61.10
Beam 20	50.72	14.47	65.19	47.72	20.00	0.04	0.70	61.49
Beam 21	49.79	14.47	64.26	46.79	30.30	0.04	1.06	60.20
Beam 22	50.58	14.47	65.05	47.58	30.30	0.04	1.06	60.99