



Exhibit No.

Date

Call Letters

Location

Customer

Antenna Type

TFU-8DSB-M

Channel 18

AZIMUTH PATTERN

Gain

Calculated / Measured

1.90 (2.79 dB)

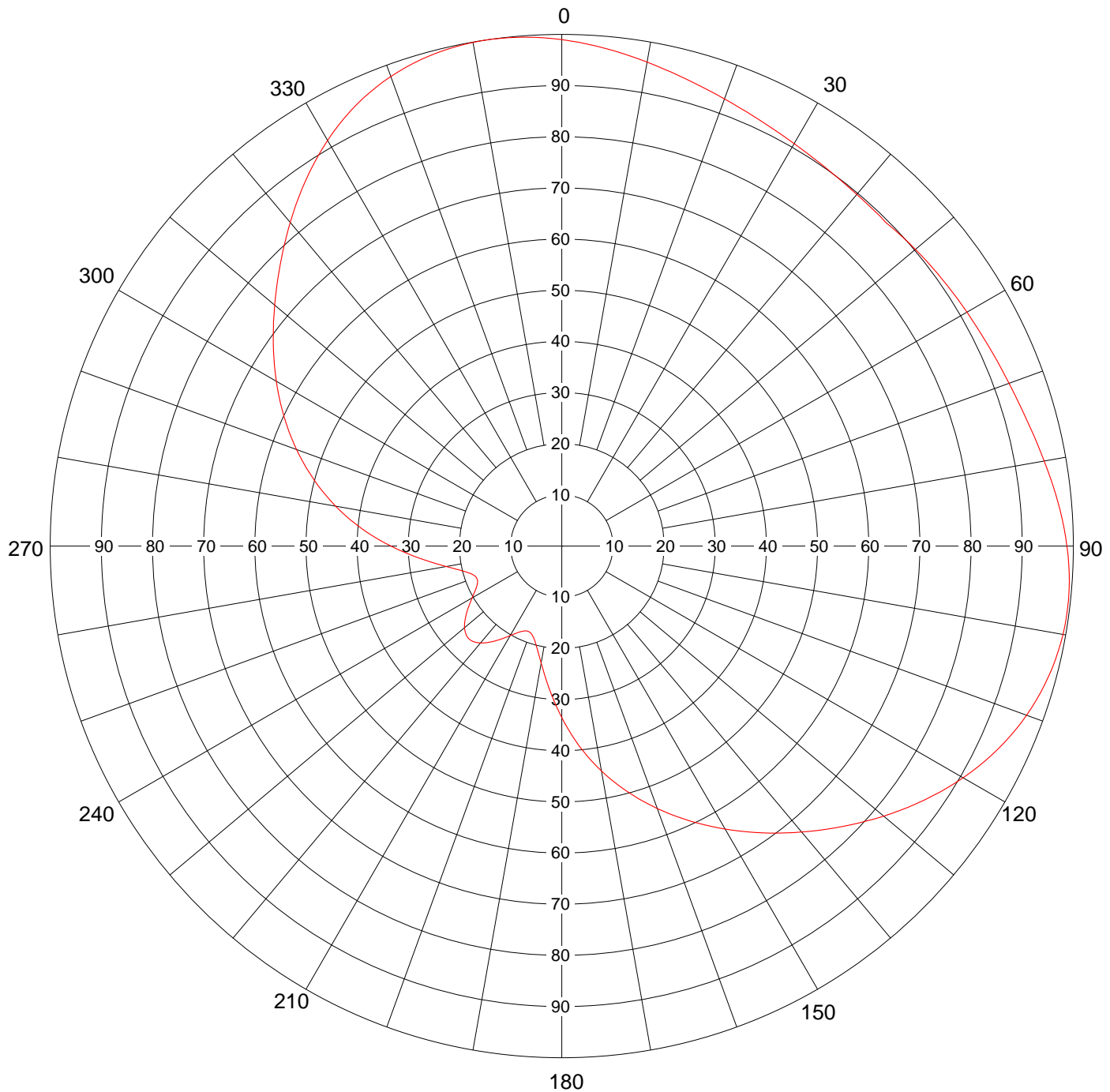
Calculated

Frequency

Drawing #

497 MHz

DSB-M



Remarks:



Date

Call Letters

Location

Customer

Antenna Type **TFU-8DSB-M**Channel **18****TABULATION OF AZIMUTH PATTERN**Azimuth Pattern Drawing # **DSB-M**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.990	45	0.895	90	0.988	135	0.775	180	0.335	225	0.257	270	0.334	315	0.778
1	0.987	46	0.897	91	0.990	136	0.766	181	0.324	226	0.256	271	0.346	316	0.788
2	0.985	47	0.898	92	0.992	137	0.757	182	0.313	227	0.255	272	0.357	317	0.797
3	0.982	48	0.900	93	0.993	138	0.748	183	0.302	228	0.253	273	0.369	318	0.807
4	0.979	49	0.901	94	0.994	139	0.739	184	0.291	229	0.251	274	0.381	319	0.816
5	0.976	50	0.902	95	0.995	140	0.730	185	0.280	230	0.248	275	0.393	320	0.826
6	0.973	51	0.904	96	0.996	141	0.720	186	0.270	231	0.245	276	0.404	321	0.835
7	0.970	52	0.905	97	0.996	142	0.711	187	0.260	232	0.241	277	0.415	322	0.845
8	0.967	53	0.906	98	0.996	143	0.702	188	0.250	233	0.236	278	0.427	323	0.854
9	0.964	54	0.907	99	0.996	144	0.693	189	0.241	234	0.232	279	0.438	324	0.863
10	0.960	55	0.908	100	0.995	145	0.684	190	0.232	235	0.227	280	0.449	325	0.873
11	0.957	56	0.910	101	0.993	146	0.675	191	0.224	236	0.222	281	0.460	326	0.882
12	0.954	57	0.911	102	0.992	147	0.666	192	0.216	237	0.217	282	0.470	327	0.890
13	0.951	58	0.912	103	0.990	148	0.657	193	0.209	238	0.212	283	0.481	328	0.899
14	0.947	59	0.913	104	0.988	149	0.648	194	0.203	239	0.207	284	0.491	329	0.907
15	0.944	60	0.914	105	0.985	150	0.639	195	0.197	240	0.202	285	0.502	330	0.916
16	0.941	61	0.916	106	0.982	151	0.630	196	0.192	241	0.198	286	0.512	331	0.923
17	0.938	62	0.917	107	0.979	152	0.620	197	0.188	242	0.194	287	0.522	332	0.931
18	0.935	63	0.918	108	0.975	153	0.611	198	0.184	243	0.190	288	0.532	333	0.938
19	0.933	64	0.920	109	0.971	154	0.602	199	0.182	244	0.186	289	0.542	334	0.945
20	0.930	65	0.921	110	0.967	155	0.593	200	0.180	245	0.183	290	0.552	335	0.951
21	0.927	66	0.923	111	0.962	156	0.583	201	0.179	246	0.181	291	0.561	336	0.957
22	0.925	67	0.925	112	0.957	157	0.574	202	0.179	247	0.179	292	0.571	337	0.963
23	0.922	68	0.926	113	0.952	158	0.565	203	0.180	248	0.178	293	0.580	338	0.968
24	0.920	69	0.928	114	0.946	159	0.555	204	0.182	249	0.178	294	0.590	339	0.972
25	0.918	70	0.930	115	0.940	160	0.546	205	0.184	250	0.178	295	0.599	340	0.977
26	0.916	71	0.932	116	0.934	161	0.536	206	0.187	251	0.180	296	0.608	341	0.981
27	0.914	72	0.935	117	0.927	162	0.527	207	0.190	252	0.182	297	0.617	342	0.984
28	0.912	73	0.937	118	0.920	163	0.517	208	0.194	253	0.185	298	0.626	343	0.987
29	0.910	74	0.940	119	0.913	164	0.507	209	0.198	254	0.189	299	0.635	344	0.990
30	0.908	75	0.942	120	0.906	165	0.497	210	0.202	255	0.194	300	0.644	345	0.993
31	0.907	76	0.945	121	0.898	166	0.487	211	0.207	256	0.200	301	0.653	346	0.995
32	0.905	77	0.948	122	0.890	167	0.477	212	0.211	257	0.206	302	0.662	347	0.996
33	0.904	78	0.951	123	0.882	168	0.467	213	0.216	258	0.214	303	0.671	348	0.998
34	0.903	79	0.954	124	0.874	169	0.457	214	0.221	259	0.221	304	0.680	349	0.999
35	0.901	80	0.958	125	0.865	170	0.446	215	0.226	260	0.229	305	0.688	350	1.000
36	0.900	81	0.961	126	0.857	171	0.436	216	0.231	261	0.238	306	0.697	351	1.000
37	0.899	82	0.964	127	0.848	172	0.425	217	0.235	262	0.248	307	0.706	352	1.000
38	0.899	83	0.967	128	0.839	173	0.414	218	0.240	263	0.257	308	0.715	353	1.000
39	0.898	84	0.971	129	0.830	174	0.403	219	0.244	264	0.267	309	0.724	354	0.999
40	0.897	85	0.974	130	0.821	175	0.392	220	0.247	265	0.278	310	0.733	355	0.998
41	0.897	86	0.977	131	0.812	176	0.381	221	0.250	266	0.289	311	0.742	356	0.997
42	0.896	87	0.980	132	0.803	177	0.370	222	0.253	267	0.300	312	0.751	357	0.996
43	0.896	88	0.983	133	0.794	178	0.358	223	0.255	268	0.311	313	0.760	358	0.994
44	0.896	89	0.985	134	0.784	179	0.347	224	0.256	269	0.322	314	0.769	359	0.992

Remarks:



Date

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Antenna Type

Channel **18****TFU-8DSB-M****ELEVATION PATTERN**

RMS Gain at Main Lobe

8.0 (9.03 dB)

Beam Tilt

1.50 Degrees

RMS Gain at Horizontal

6.8 (8.33 dB)

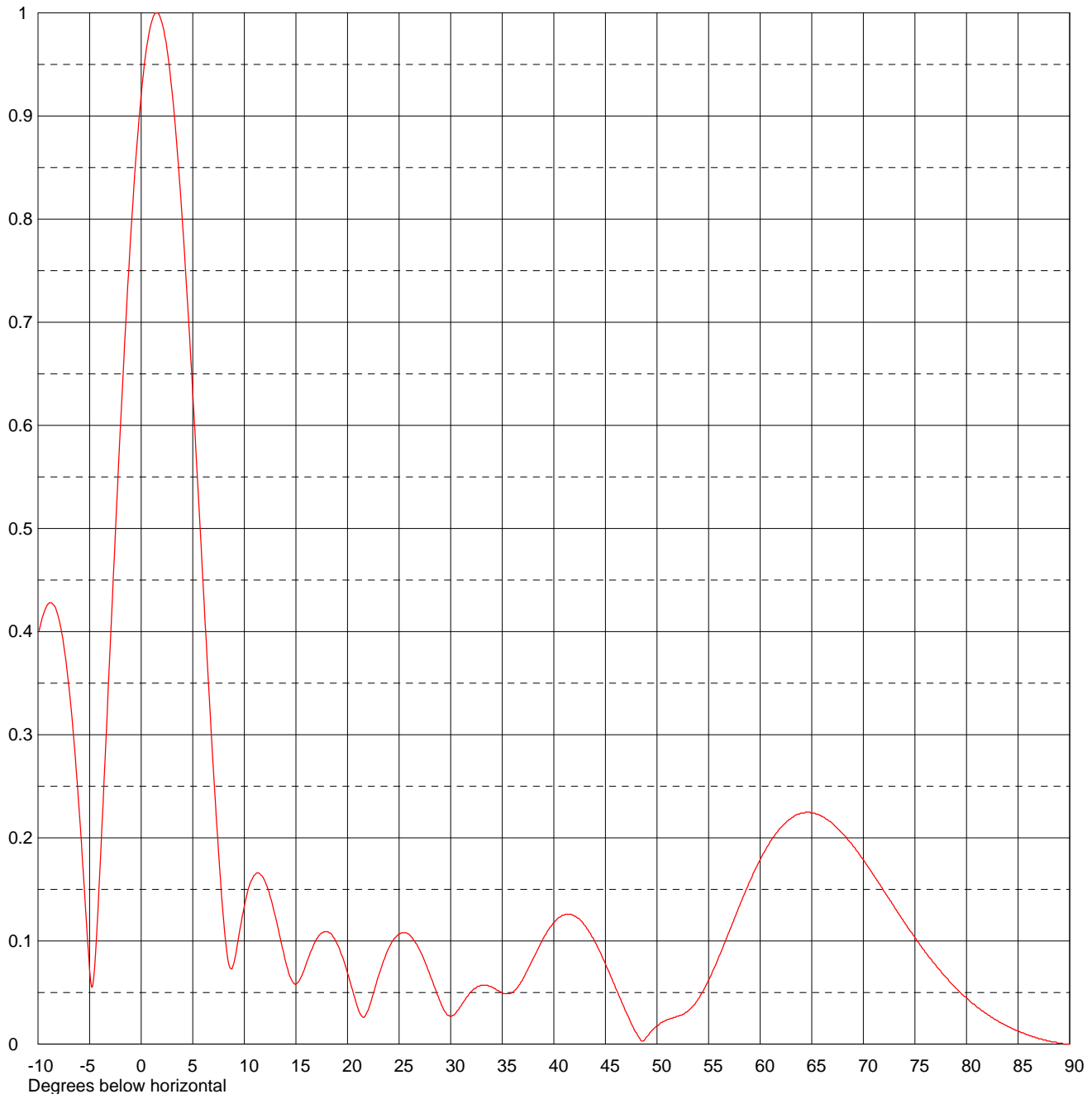
Frequency

497.00 MHz

Calculated / Measured

Calculated

Drawing #

08B080150-90

Remarks:



Date

Call Letters

Location

Customer

Antenna Type

Channel **18****TFU-8DSB-M****TABULATION OF ELEVATION PATTERN**Elevation Pattern Drawing # **08B080150-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.396	2.4	0.972	10.6	0.157	30.5	0.030	51.0	0.024	71.5	0.156
-9.5	0.416	2.6	0.958	10.8	0.161	31.0	0.037	51.5	0.025	72.0	0.148
-9.0	0.427	2.8	0.942	11.0	0.164	31.5	0.045	52.0	0.027	72.5	0.141
-8.5	0.426	3.0	0.923	11.5	0.165	32.0	0.051	52.5	0.029	73.0	0.133
-8.0	0.413	3.2	0.902	12.0	0.158	32.5	0.055	53.0	0.032	73.5	0.125
-7.5	0.386	3.4	0.879	12.5	0.143	33.0	0.057	53.5	0.037	74.0	0.118
-7.0	0.346	3.6	0.853	13.0	0.124	33.5	0.057	54.0	0.044	74.5	0.110
-6.5	0.292	3.8	0.826	13.5	0.102	34.0	0.055	54.5	0.052	75.0	0.103
-6.0	0.225	4.0	0.797	14.0	0.080	34.5	0.052	55.0	0.062	75.5	0.096
-5.5	0.149	4.2	0.766	14.5	0.064	35.0	0.050	55.5	0.073	76.0	0.089
-5.0	0.072	4.4	0.734	15.0	0.058	35.5	0.049	56.0	0.085	76.5	0.083
-4.5	0.076	4.6	0.701	15.5	0.065	36.0	0.050	56.5	0.097	77.0	0.077
-4.0	0.169	4.8	0.667	16.0	0.078	36.5	0.055	57.0	0.109	77.5	0.071
-3.5	0.276	5.0	0.631	16.5	0.091	37.0	0.063	57.5	0.122	78.0	0.065
-3.0	0.387	5.2	0.595	17.0	0.102	37.5	0.073	58.0	0.134	78.5	0.059
-2.8	0.431	5.4	0.558	17.5	0.108	38.0	0.083	58.5	0.146	79.0	0.054
-2.6	0.475	5.6	0.521	18.0	0.109	38.5	0.093	59.0	0.158	79.5	0.049
-2.4	0.518	5.8	0.484	18.5	0.106	39.0	0.103	59.5	0.169	80.0	0.045
-2.2	0.560	6.0	0.446	19.0	0.097	39.5	0.111	60.0	0.179	80.5	0.040
-2.0	0.601	6.2	0.409	19.5	0.085	40.0	0.118	60.5	0.188	81.0	0.036
-1.8	0.641	6.4	0.372	20.0	0.069	40.5	0.123	61.0	0.197	81.5	0.032
-1.6	0.680	6.6	0.336	20.5	0.052	41.0	0.125	61.5	0.204	82.0	0.029
-1.4	0.717	6.8	0.301	21.0	0.035	41.5	0.126	62.0	0.210	82.5	0.026
-1.2	0.752	7.0	0.266	21.5	0.026	42.0	0.124	62.5	0.215	83.0	0.023
-1.0	0.786	7.2	0.233	22.0	0.033	42.5	0.121	63.0	0.219	83.5	0.020
-0.8	0.817	7.4	0.201	22.5	0.049	43.0	0.115	63.5	0.222	84.0	0.017
-0.6	0.847	7.6	0.171	23.0	0.066	43.5	0.108	64.0	0.224	84.5	0.015
-0.4	0.874	7.8	0.143	23.5	0.081	44.0	0.099	64.5	0.225	85.0	0.013
-0.2	0.898	8.0	0.119	24.0	0.093	44.5	0.089	65.0	0.224	85.5	0.011
0.0	0.921	8.2	0.098	24.5	0.102	45.0	0.078	65.5	0.223	86.0	0.009
0.2	0.940	8.4	0.082	25.0	0.107	45.5	0.066	66.0	0.221	86.5	0.007
0.4	0.957	8.6	0.074	25.5	0.108	46.0	0.054	66.5	0.218	87.0	0.005
0.6	0.971	8.8	0.073	26.0	0.106	46.5	0.043	67.0	0.214	87.5	0.004
0.8	0.983	9.0	0.079	26.5	0.100	47.0	0.031	67.5	0.209	88.0	0.003
1.0	0.991	9.2	0.089	27.0	0.091	47.5	0.020	68.0	0.204	88.5	0.002
1.2	0.997	9.4	0.101	27.5	0.080	48.0	0.011	68.5	0.198	89.0	0.001
1.4	1.000	9.6	0.113	28.0	0.067	48.5	0.003	69.0	0.192	89.5	0.000
1.6	1.000	9.8	0.124	28.5	0.054	49.0	0.007	69.5	0.186	90.0	0.000
1.8	0.997	10.0	0.134	29.0	0.041	49.5	0.013	70.0	0.179		
2.0	0.991	10.2	0.143	29.5	0.031	50.0	0.018	70.5	0.171		
2.2	0.983	10.4	0.151	30.0	0.027	50.5	0.021	71.0	0.164		

Remarks: