

3-6 Power Handling: 2.0W minimum

3-7 Impedance: 50Ω (nominal)

3-8 Gain: (reference)

Measuring conditions: As gain can only be specified along one line in three dimensional space, it is also necessary to specify gain plots across certain cross sections of the three dimensional space.

These positions are defined as E1, E2 and H positions as described below:

E1: in this position the specified housing is placed flat on its back and radiation pattern is measured on a horizontal plane 360° around the unit.

E2: in this position the specified housing is placed on its side with the antenna away from the supporting surface and the radiation pattern is measured on a horizontal plane 360° around the unit.

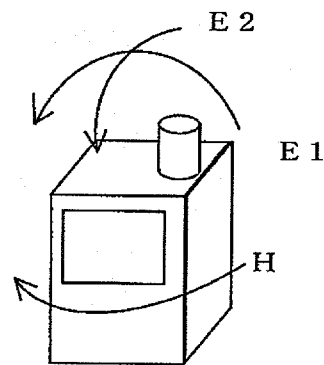
H: in this position the specified housing is placed vertically on a supporting surface and the radiation pattern is measured on a horizontal plane 360° around the unit.

	CDMA				PCS			
	824MHz		894MHz		1850MHz		1990MHz	
	Gain(MRG)	Gain(PAG)	Gain(MRG)	Gain(PAG)	Gain(MRG)	Gain(PAG)	Gain(MRG)	Gain(PAG)
E1	-3 dBd Min	-7 dBd Min	-2 dBd Min	-6 dBd Min	-2 dBd Min	-7 dBd Min	-2 dBd Min	-7 dBd Min
E2	-3 dBd Min	-7 dBd Min	-2 dBd Min	-6 dBd Min	-1 dBd Min	-7 dBd Min	-2 dBd Min	-7 dBd Min
H	-3 dBd Min	-4 dBd Min	-2 dBd Min	-3 dBd Min	-4 dBd Min	-8 dBd Min	-4 dBd Min	-8 dBd Min

MRG : Maximum Radiation Gain

PAG : Pattern Average Gain

* The Gain(3-8) shall be measured at the specific site in Tsuyama Matsushita Electric Co.,Ltd.



4. Mechanical Characteristics:

The mechanical characteristics shall be specified under the condition that the antenna shall be attached to the specified housing or the test equipment with the specified nut by the torque 20 N·cm±2N·cm.

NAME	3-8:Gain	1 Customer request	Jan, 8,2002
ANTENNA FOR PORTABLE CELLULAR TELEPHONE	ISSUE	REVISIONS	DATA
Part No.	DRAWING No.		
EWPACB005 Q	RV-H-00011		2/6

VSWR

CH1 S11 1 U FS

S: 150.10 Ω 25.977 Ω 5.1233 nH

10 Dec 2001 13:31:43

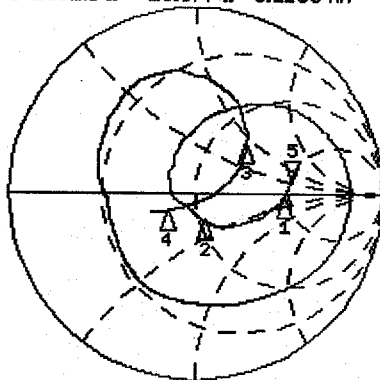
806.960 001 MHz

NO. 1

Del Free Space

Cor

PRm



CH1 Markers

1: 136.80 Ω
-10.492 Ω
824.000 MHz

2: 52.035 Ω
-15.570 Ω
894.000 MHz

3: 70.379 Ω
43.500 Ω
1.85000 GHz

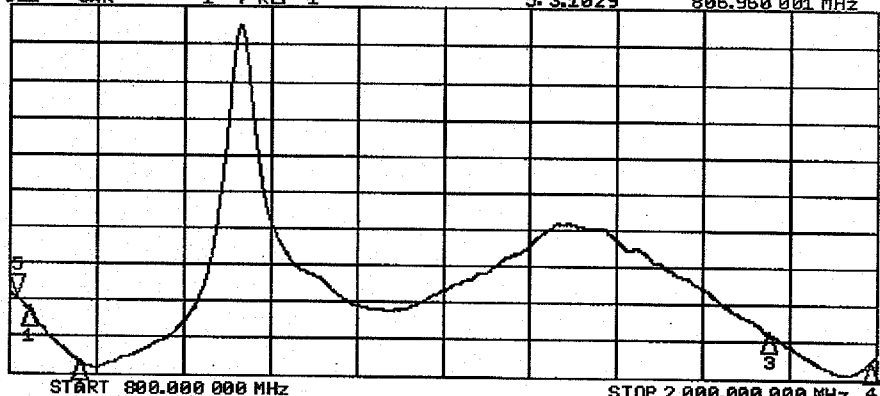
4: 35.764 Ω
-7.1719 Ω
1.99000 GHz

CH2 S11 SWR 1 / REF 1 S: 3.1029 806.960 001 MHz

Del

Cor

PRm



CH2 Markers

1: 2.7544
824.000 MHz

2: 1.3589
894.000 MHz

3: 2.2017
1.85000 GHz

4: 1.4546
1.99000 GHz

CH1 S11 1 U FS

S: 134.79 Ω -14.156 Ω 13.932 pF

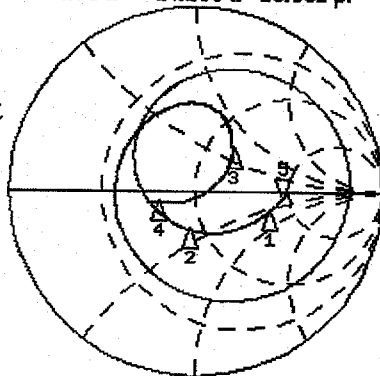
10 Dec 2001 13:32:15

806.960 001 MHz

Del Talk Position

Cor

PRm



CH1 Markers

1: 108.80 Ω
-28.789 Ω
824.000 MHz

2: 43.270 Ω
-18.998 Ω
894.000 MHz

3: 64.965 Ω
33.117 Ω
1.85000 GHz

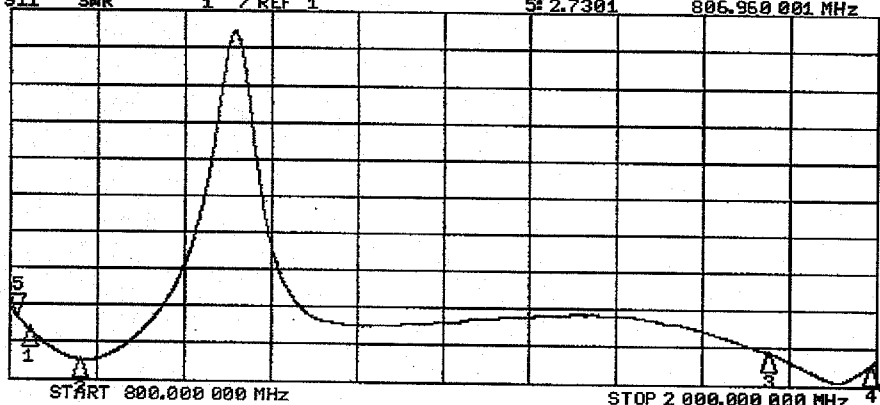
4: 33.131 Ω
-4.4746 Ω
1.99000 GHz

CH2 S11 SWR 1 / REF 1 S: 2.7301 806.960 001 MHz

Del

Cor

PRm



CH2 Markers

1: 2.3650
824.000 MHz

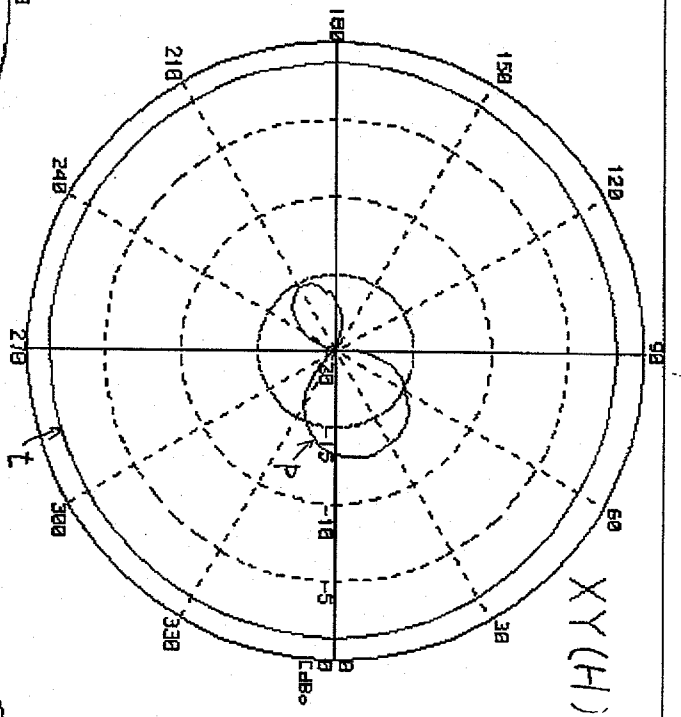
2: 1.5373
894.000 MHz

3: 1.8726
1.85000 GHz

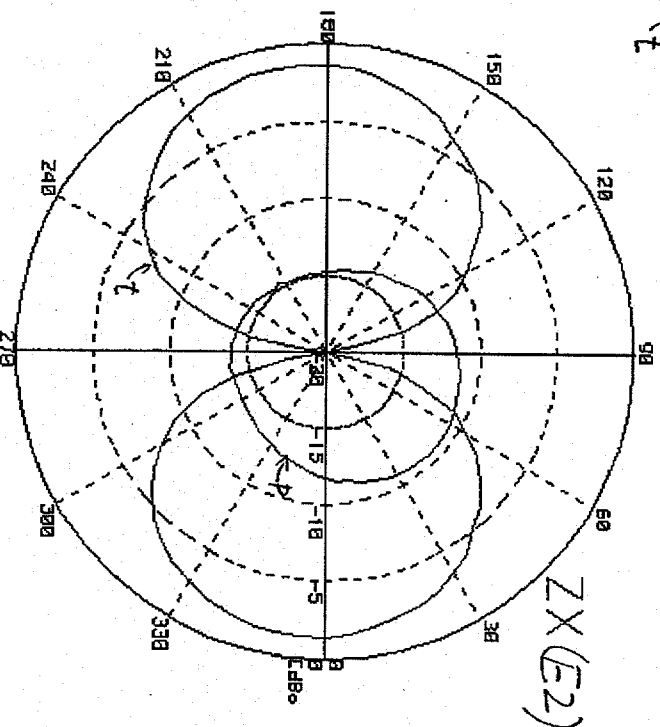
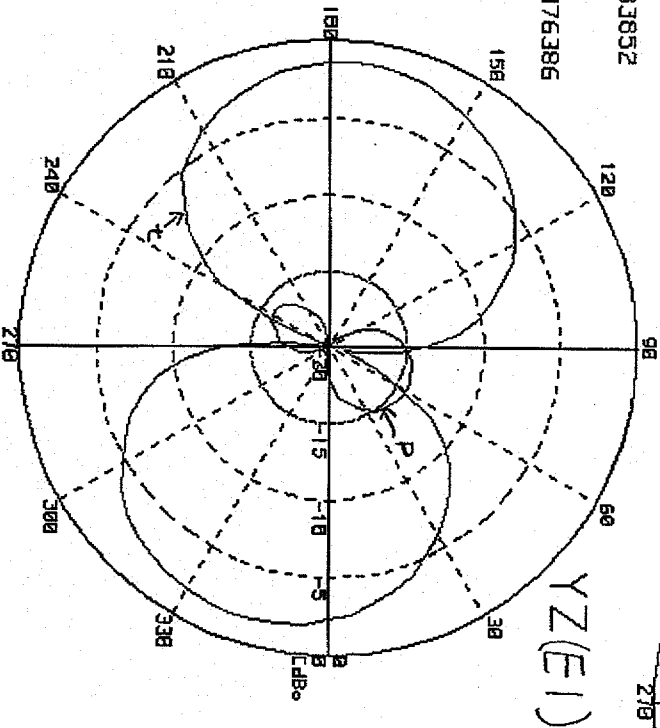
4: 1.5305
1.99000 GHz

Free Space

Date : 5 Dec 2001
 Name : LG156
 Polarization : LH
 Plane : XY, YZ, ZX
 Refl. V : CdBmJ: -29.03338
 Refl. H : CdBmJ: -27.544
 Start Angle : 0
 Stop Angle : 355
 Turntable : L0
 Height : 148
 Frequency [Hz]: 2.454E+7
 H XY-t: PAgCdBdJ=-1.57797194535
 MRGdBdJ=-1.36962
 XY-p: PAgCdBdJ=-16.6384987222
 MRGdBdJ=-12.815
 E1 YZ-t: PAgCdBdJ=-4.76883726823
 MRGdBdJ=-1.395
 YZ-p: PAgCdBdJ=-17.3074585113
 MRGdBdJ=-14.26562
 E2 ZX-t: PAgCdBdJ=-4.71173910452
 MRGdBdJ=-1.369
 ZX-p: PAgCdBdJ=-12.7881863852
 MRGdBdJ=-10.62362
 KC
 Efficiency[CdB] : -1.29329376386

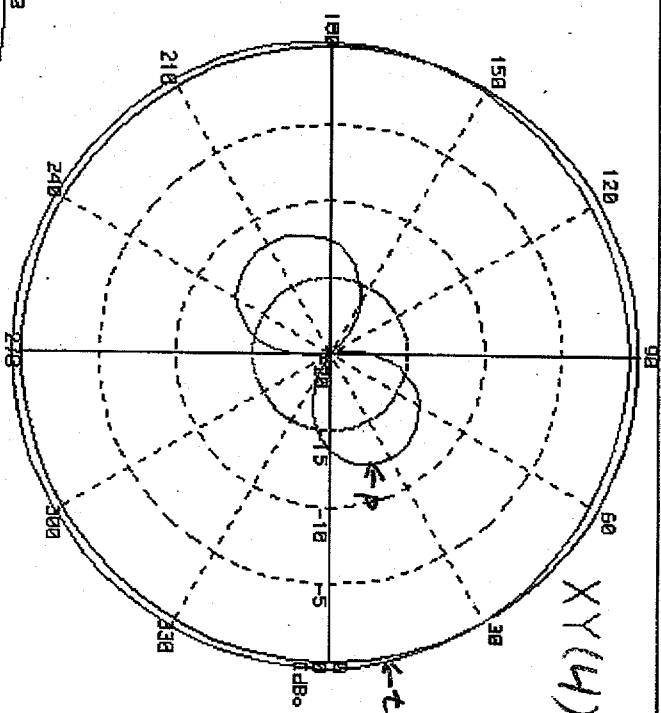


824 MHz
 NO.1



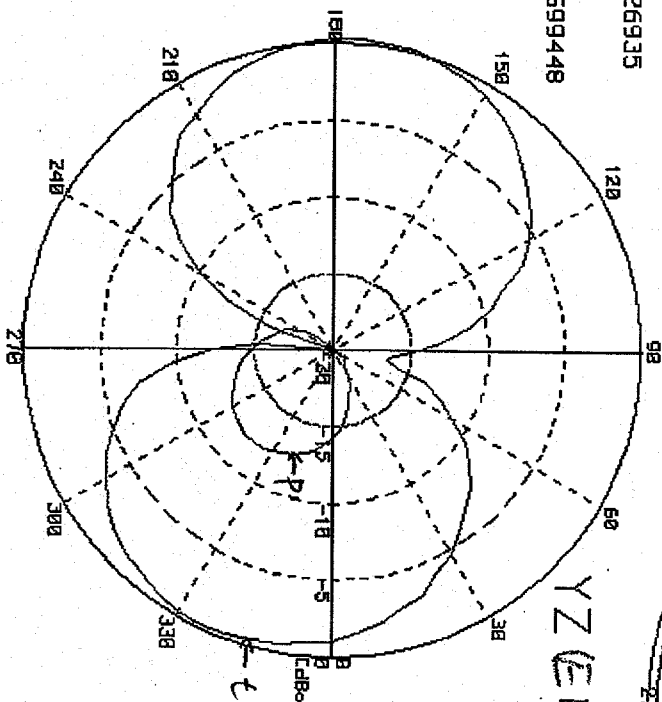
Free Space

Date : 5 Dec 2001
 Name : LG157
 Polarization : UH
 Plane : XY, YZ, ZX
 Refl. V [dBm] : -29.60367
 Refl. H [dBm] : -27.505
 Start Angle : 0
 Stop Angle : 355
 Step Angle : 5
 Turntable [rpm] : 10
 Height [cm] : 148
 Frequency [MHz] : 9.431E+7
 H) XY-t: PAgCdBd] = .139897931137
 MRGdBd] = .59987
 XY-p: PAgCdBd] = -14.7816118853
 MRGdBd] = -11.62
 E) YZ-t: PAgCdBd] = -3.35498335674
 MRGdBd] = .278
 YZ-p: PAgCdBd] = -16.8564494638
 MRGdBd] = -12.20813
 E2 ZX-t: PAgCdBd] = -3.6712197097
 MRGdBd] = -.163
 ZX-p: PAgCdBd] = -11.5754226935
 MRGdBd] = -7.91413
 Kc
 Efficiency[dB] : -.185231699448

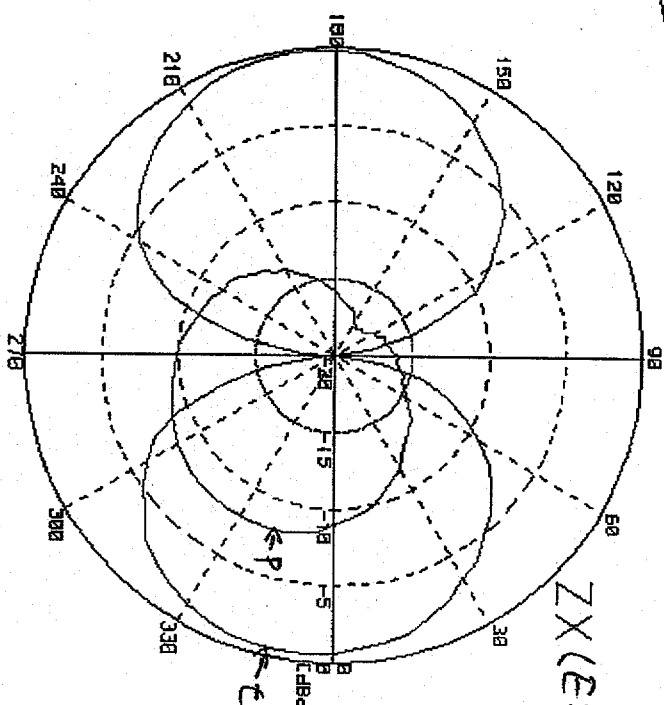


XY(4)

894MHz
 NO. 1



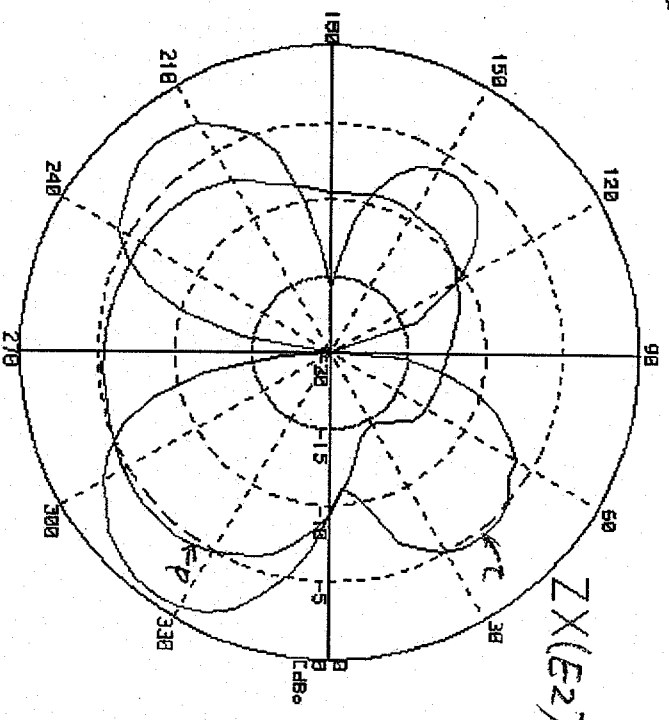
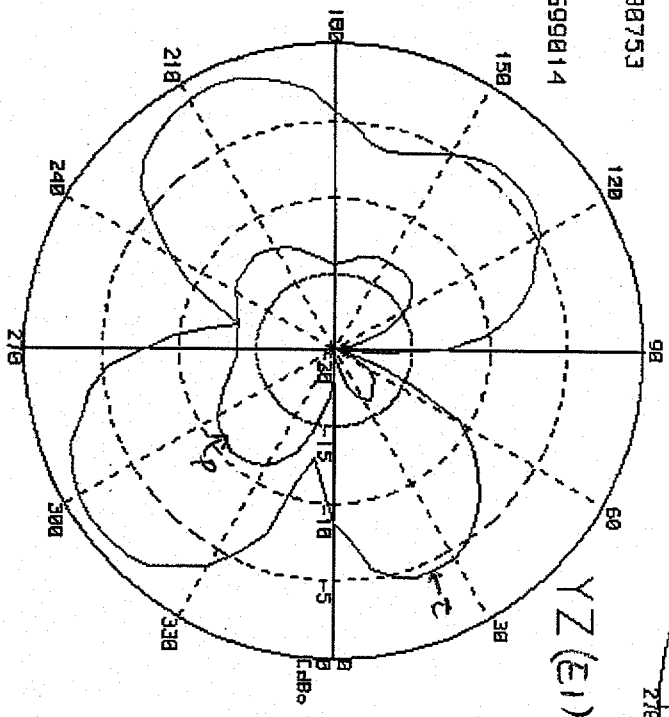
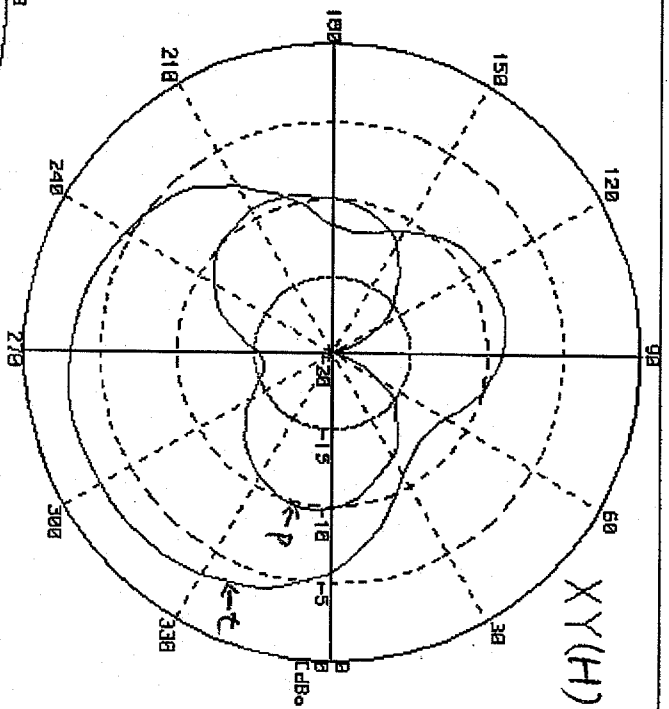
YZ(E1)



ZX(E2)

Free Space

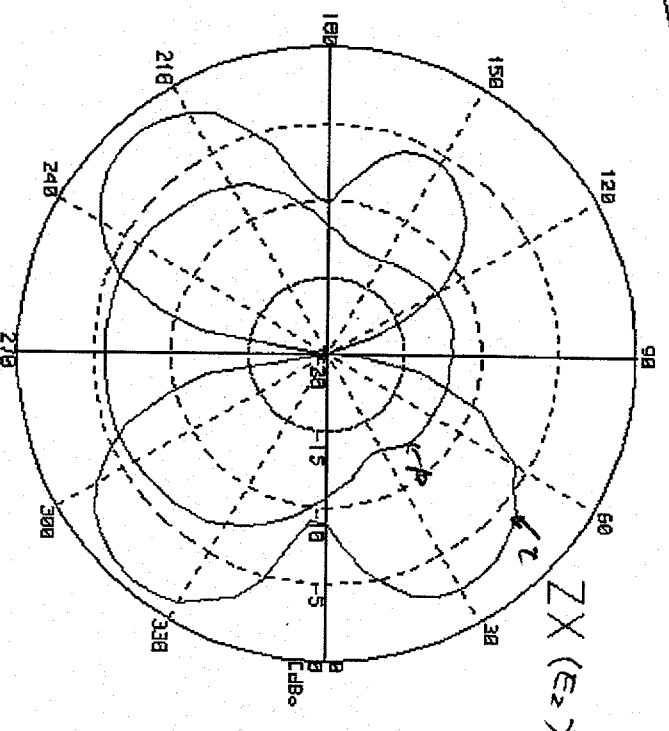
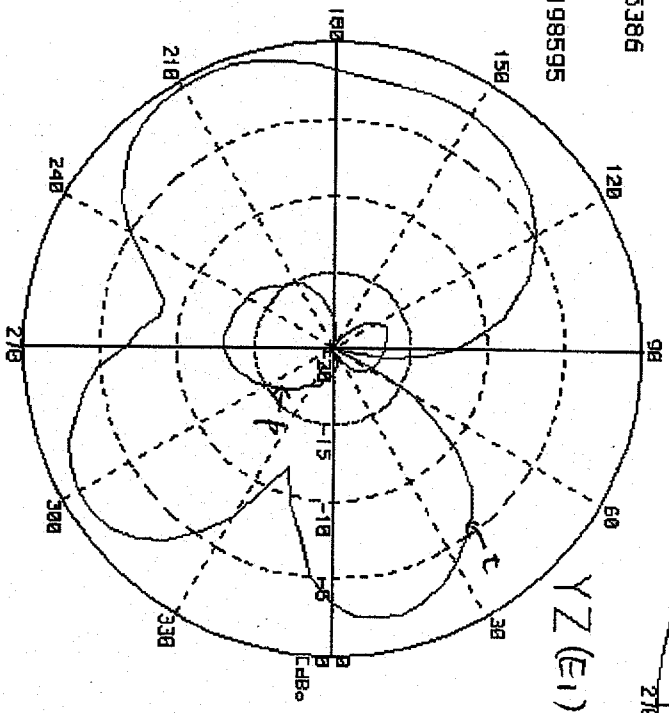
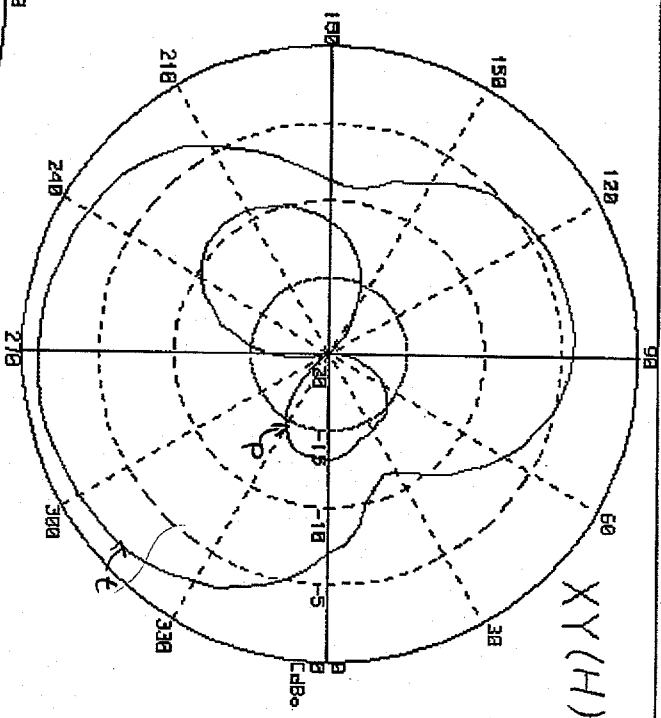
Date : 5 Dec 2001
 Name : LG158
 Polarization : UH
 Plane : XY, YZ, ZX
 Refl. V : CdBm : -37.23228
 Refl. H : CdBm : -37.035
 Start Angle : 0
 Stop Angle : 365
 Turntable [rpm] : 10
 Height [cm] : 148
 Frequency [Hz] : 0.50325E+8
 H XY-t: PAgCdBdJ=-6.25066626306
 MRGdCdJ=-2.65272
 XY-p: PAgCdBdJ=-12.1740918411
 MRGdCdJ=-9.302
 E1 YZ-t: PAgCdBdJ=-4.81895937128
 MRGdCdJ=-.876
 YZ-p: PAgCdBdJ=-13.9602497797
 MRGdCdJ=-10.64872
 E2 ZX-t: PAgCdBdJ=-5.75574220262
 MRGdCdJ=-.579
 ZX-p: PAgCdBdJ=-7.85270298753
 MRGdCdJ=-4.41772
 Kc Efficiency[dB] :-1.5041869814



1850MHz
 NO. 1

Free Space

Date : 5 Dec 2001
 Name : LG159
 Polarization : UGH
 Plane : XY, YZ, ZX
 Refl. V [dBm] : -36.69614
 Refl. H [dBm] : -36.722
 Start Angle : 0
 Stop Angle : 355
 Turntable [rpm] : 10
 Height [cm] : 148
 Frequency [Hz] : 19.98595E+8
 H XY-t: PAgCdBd]=-4.14880218407
 MRGdBd]=-1.95386
 XY-p: PAgCdBd]=-13.8183918788
 MRGdBd]=-9.268
 E1 YZ-t: *PAgCdBd]=-3.86466424604
 *MRGdBd]=-1.324
 YZ-p: *PAgCdBd]=-16.2128235495
 *MRGdBd]=-12.98286
 E2 ZX-t: *PAgCdBd]=-5.10369052809
 *MRGdBd]=-0.724
 ZX-p: *PAgCdBd]=-8.7718845386
 *MRGdBd]=-5.78686
 Kc
 Efficiency[dB] : -1.1288198595



1990MHz
 ND.1

Talk Position

Date : 10 Dec 2001
Name : LG176

Polarization : V&H
Plane : XY

Reff. V [dBm] : -29.03338
Reff. H [dBm] : -27.544

Step Angle : 5
Turntable [rpm] : 10

Height [cm] : 148

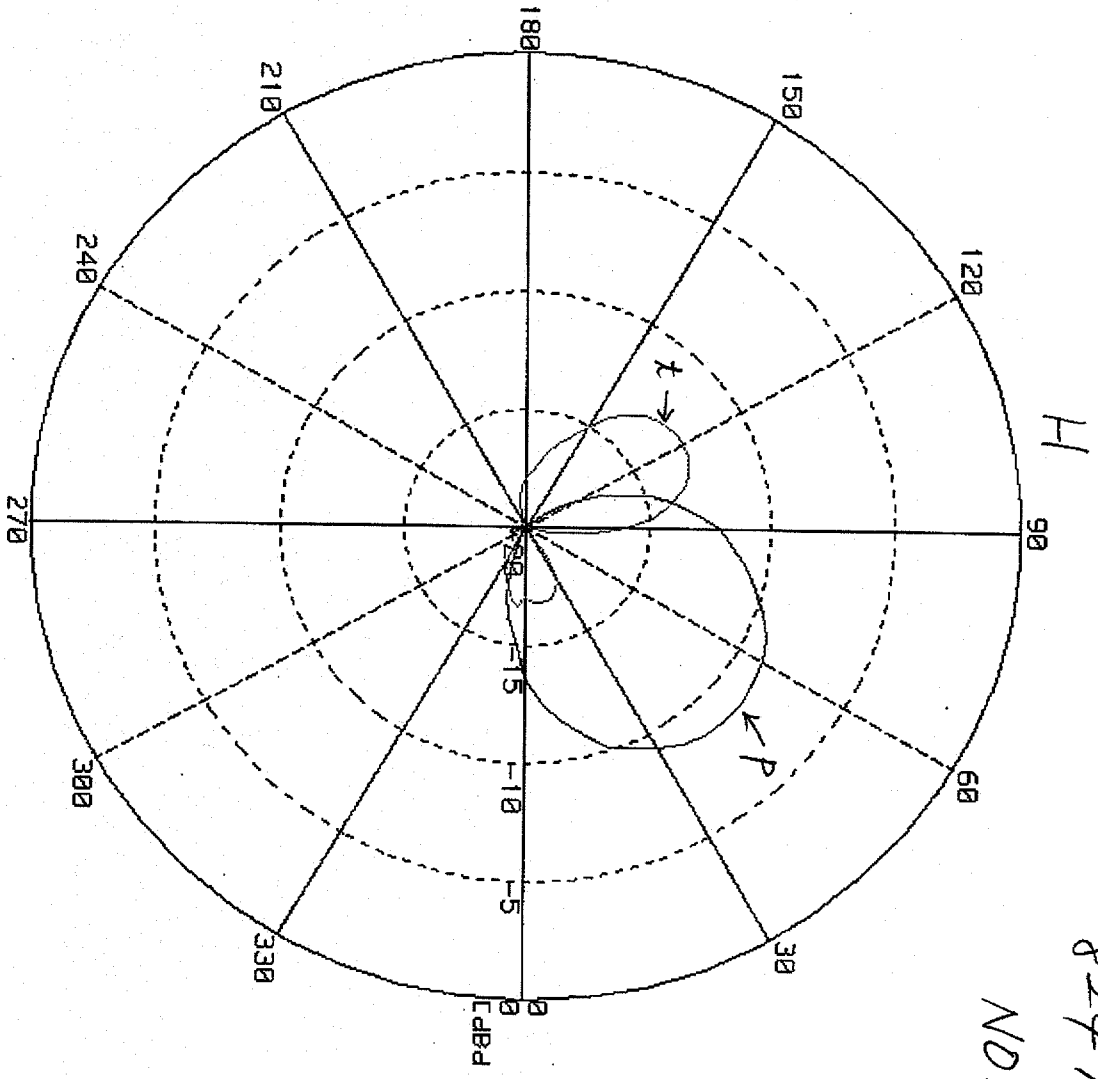
XY-t: PAG[dbd] = -17.5796105067

MRG[dbd] = -12.67162

XY-p: PAG[dbd] = -14.8896380914

MRG[dbd] = -8.551

Hit Enter Key



Talk Position

Date : 10 Dec 2001

Name : LG177

Polarization : V&H

Plane : XY

Reff. V [dBm] : -29.60387

Reff. H [dBm] : -27.505

Step Angle : 5

Turntable [rpm] : L0

Height [cm] : 148

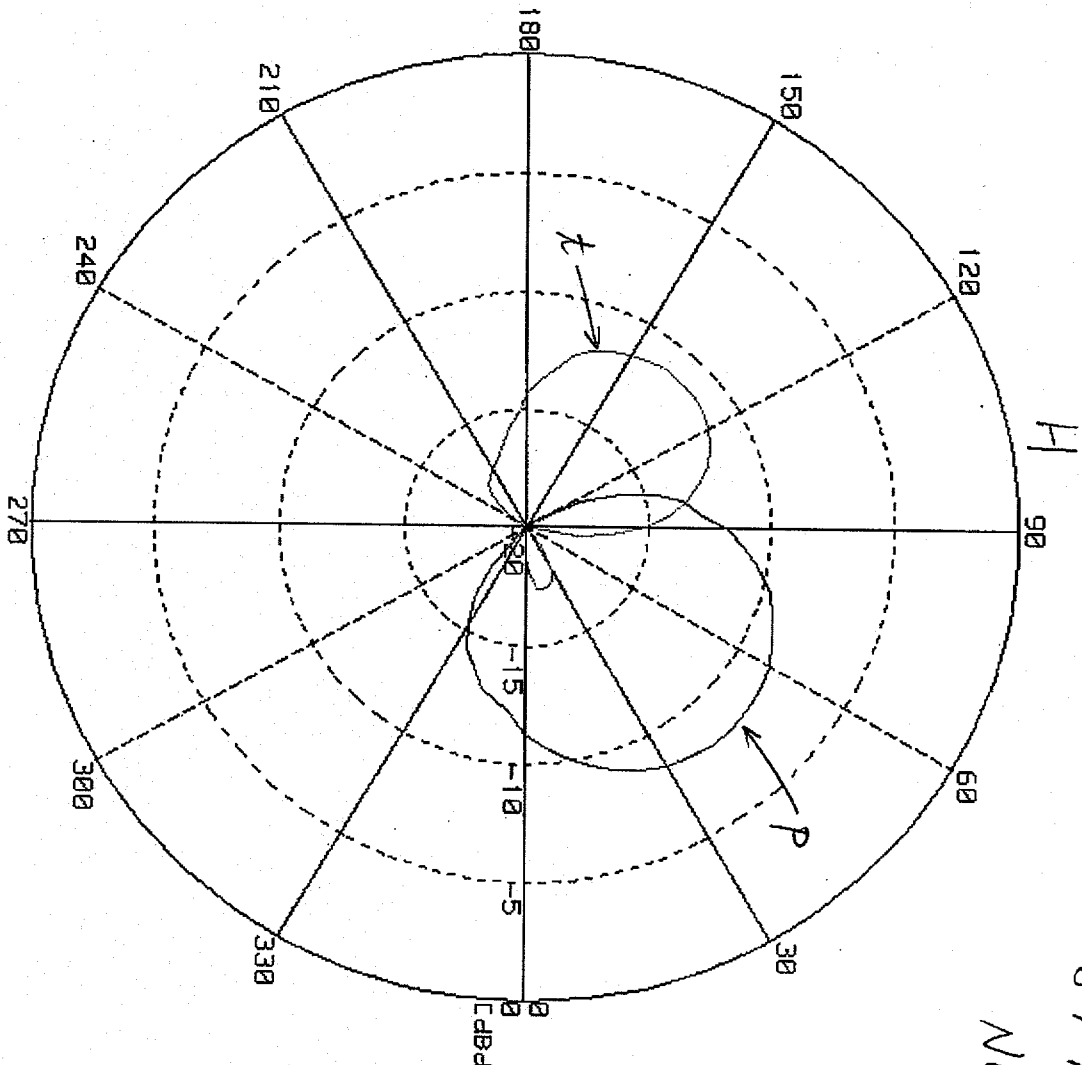
XY-t: PAGE[dbd]=-16.3176956673

MRC[dbd]=-11.17313

XY-p: PAGE[dbd]=-13.9356368584

MRC[dbd]=-8.08

Hit Enter Key



894MHz
NO. 1

Talk Position

Date : 10 Dec 2001

Name : LG178

Polarization : V&H

Plane : XY

Ref. V [dBm] : -37.23228

Ref. H [dBm] : -37.035

Step Angle : 5

Turntable [rpm] : L0

Height [cm] : 148

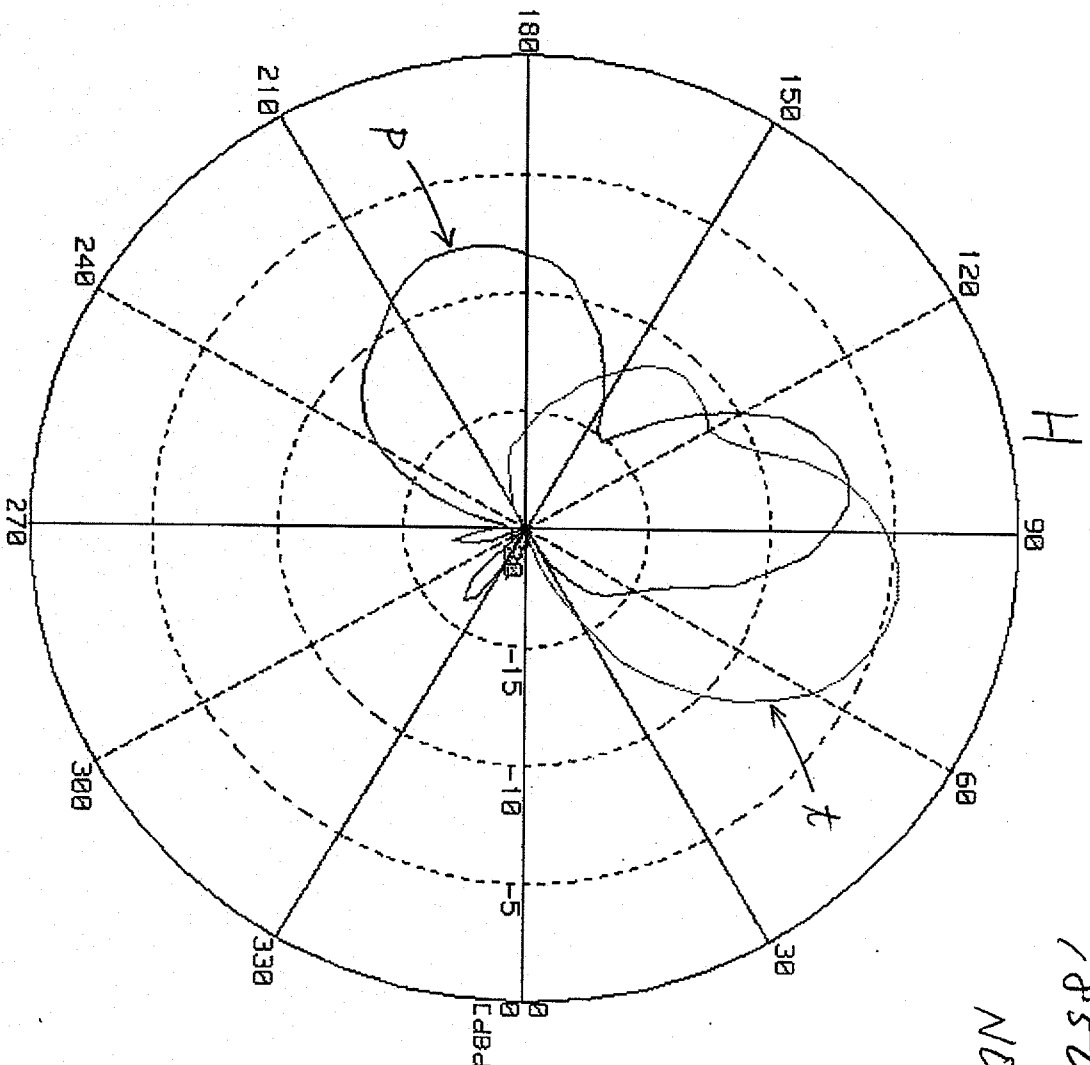
XY-t: PAGE[dbd]=-12.0057307518

MARGE[dbd]=-4.64072

XY-p: PAGE[dbd]=-12.1363764882

MARGE[dbd]=-6.673

Hit Enter Key



EDIT 2CONTINUE3 RUN 4SCRATCH

5LOAD 6

7HELP 8RE-STORE ?

User 1 Input

Talk Position

Date : 10 Dec 2001

Name : LG179

Polarization : V&H

Plane : XY

Ref. V [dBm] : -36.69614

Ref. H [dBm] : -36.722

Step Angle : 5

Turntable [rpm] : L0

Height [cm] : 148

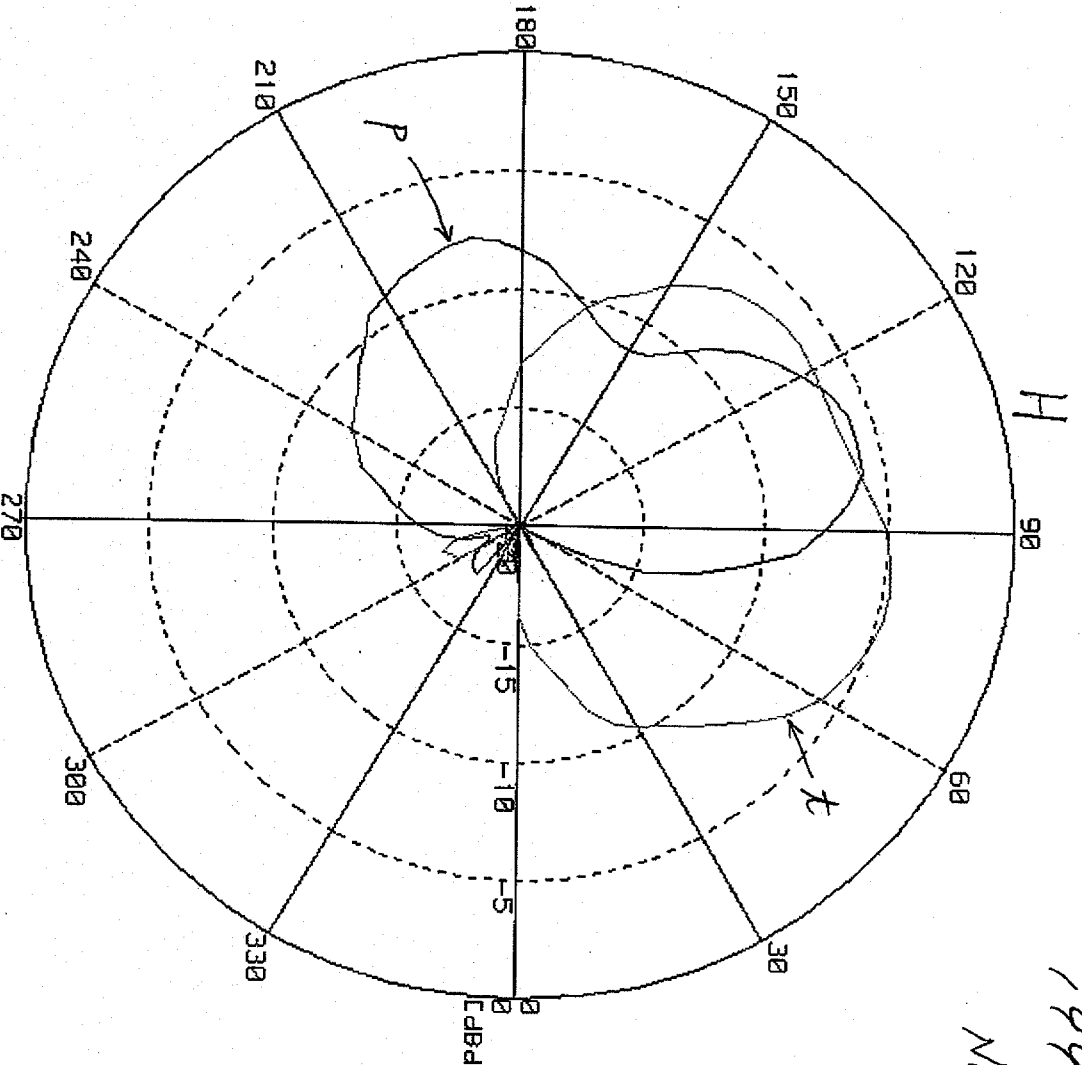
XY-t: PAG[dBd] = -10.1649160454

MRG[dBd] = -4.76086

XY-p: PAG[dBd] = -11.3850296308

MRG[dBd] = -5.84

Hit Enter Key



1 EDIT 2 CONTINUE 3 RUN 4 SCRATCH

5 LOAD 6 7 HELP 8 RE-STORE

User 1 Input