

LG

		ISSUE	
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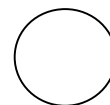
--

: Fixed Helical Antenna  
:  
: C1-1-L1-04900  
: RD7230

: 1. \_\_\_\_\_  
2. \_\_\_\_\_  
3. \_\_\_\_\_  
4. \_\_\_\_\_

LG					
	/				
	/				

: EMW ANTENNA  
: 가 371-62 A 3  
: TEL :02)854-4258 FAX : 02)837-6350



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<div> <div>-</div> <div>-</div> <div>1. LIST</div> <div>2.</div> <div>2.1</div> <div>2.2</div> <div>2.3</div> <div>3.</div> <div>3.1</div> <div>3.2</div> <div>3.3</div> <div>3.4 GAIN</div> <div>3.5 Power Rating</div> <div>4.</div> <div>4.1</div> <div>4.2 Helix Bending test</div> <div>4.3 Helix Torque test</div> <div>4.4 Helix Tensile Load test</div> <div>4.5 Drop test</div> <div>4.7</div> <div>5.</div> <div>5.1 Cycling</div> <div>5.2</div> <div>5.3</div> <div>5.4</div> <div>5.5</div> <div>5.6</div> <div>5.7 Aging</div> <div>5.8 U.V Resistance</div> <div>6. ANTENNA</div> <div>7.</div> <div>8. DATA</div> <div>8.1 VSWR</div> <div>8.2 H PATTERN</div> <div>8.3 E1 PATTERN</div> <div>8.4 E2 PATTERN</div> </div>					

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1.

LIST

NO.	REV				
1	-	2002.09.05	-	-	
2	1	2002.10.15	: TPU	: NYLON12	
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

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2.					
2.1					
SINGLE BAND(DCN)			FIXED TYPE HELICAL ANTENNA		
.					
2.2					
E.M.W Antenna			: C1 - 1 - L1 - 04900		
2.3					
, SI .					
Tx Transmit Band					
Rx Receive Band					
PCB Printed Circuit Board					
VSWR Voltage Standing Wave Ratio					
Room temperature 20±3					
dBi dB relative to a Isotropic					
CW Continuous Wave					
g Acceleration of gravity = 9.8m/s <sup>2</sup> 가					
RH Relative Humidity					

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3.

3.1 (Frequency Bands(MHz))

	824~849 MHz	869~894 MHz

3.2 (Impedance)

3.2.1  
50

3.2.2  
E.M.W. ANTENNA

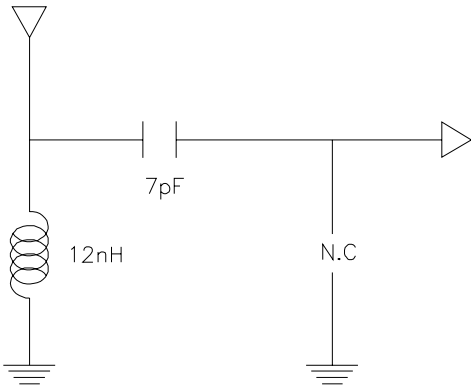
50 가

3.3 (VSWR)

3.3.1

	(824MHz~849MHz)	(869MHz~894MHz)
VSWR(CLOSED)	4.5 : 1	3.0 : 1
VSWR(OPEN)	3.0 : 1	2.0 : 1

\* MATCHING CIRCUIT



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### 3.3.2

50 50 (Soldering) .

, .

. ( , <feeding>  
.)

Specification .

(Free space) 가

. (Talk position)

## 3.4 GAIN (H-PLANE(dBi))

### 3.4.1 (Open )

Mode	Tx	Rx
OPEN	-4dBi	-4dBi
CLOSED	-4dBi	-5dBi

### 3.4.2

Mode	Tx	Rx
OPEN	-6dBi	-6dBi
CLOSED	-6dBi	-6dBi

### 3.4.3

SHX2 3.4.2 .

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3.4.4

3.4.3 4

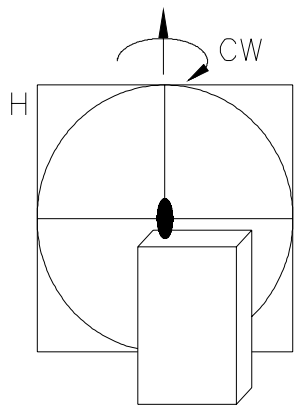
Txmin.,Txmax. Rxmin.,Rxmax. 3.4.2(a)

(XY ) ±45°

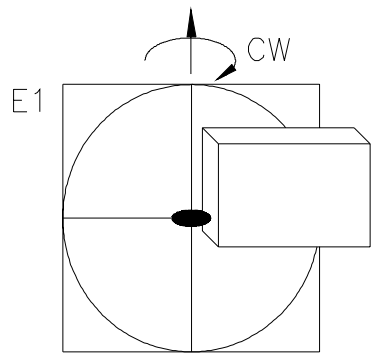
3.4.2(b,c) 2 E - planes(E1, E2)

H - Plane

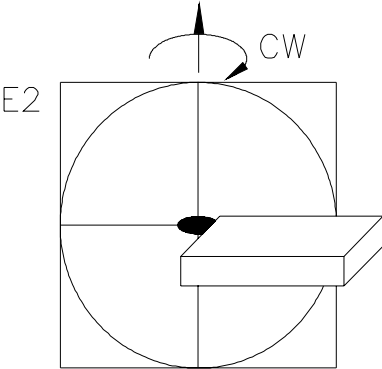
Pattern



( a )



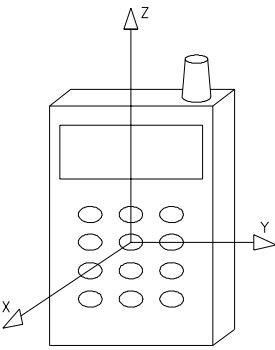
( b )



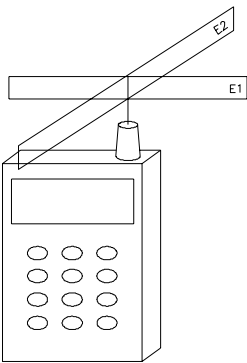
( c )

3.4.2 GAIN

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(a)



(b) E - Plane

3.4.3

3.5 Power Rating

3.5.1

$P = 2W$  (CW)

3.5.2

, 3.3.1 3.4.1

2.5.3

2.3.2

Power P 5 가 .



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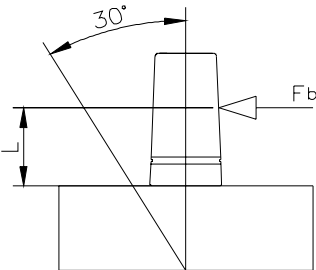
4.

4.1

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4.2 Helix Bending Test

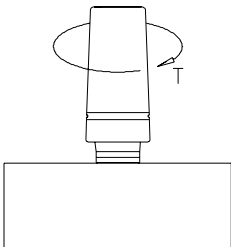
30° 5Kg 가 L(ANTENNA 2/3) 0° , 3.3.1  
3.4.1



4.2 Helix Bending Test

4.3 Helix Torque Test

T (3Kg.cm) 가  
3.3.1 3.4.1

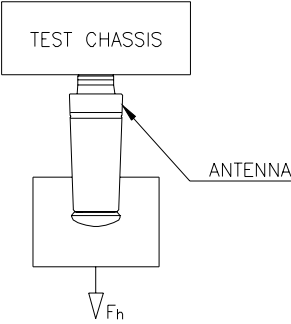


4.3 Helix Torque Test

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4.4 Helix Tensile Load Test

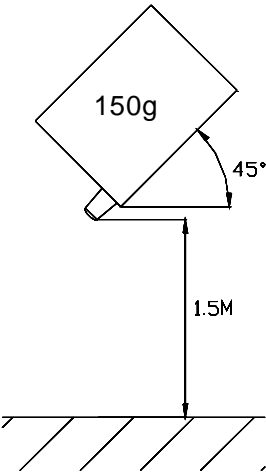
4.4  
Fh(5Kg.f) 30 가 .  
, 3.3.1 3.4.1 .



4.4 Helix Tensile Load Test

4.5 Drop Test

(150g) 1.5M 45°  
1m X 1m X 0.02m 5 가 ,  
3.3.1 3.4.1 .



4.5 Drop Test

4.7

100 / 1 ,  
.



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5.3

: -30 ~ + 80 ( 50%)  
가 , 3.3.1 3.4.1  
.

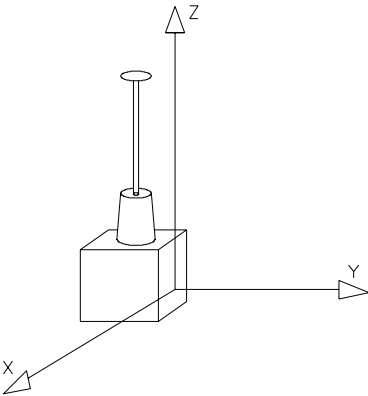
5.4

/ , -30℃ 96  
24 .  
80℃ 96 24 .  
95% .  
가 , 3.3.1 3.4.1  
.

5.5 (Random vibration)

5.4 X.Y.Z 1 .

	Sweep time		가
10 ~ 55 Hz	1	1.52mm	2g



5.5

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<div>5.6<div>+ 35 , 5%9624 가 , 3.3.1 3.4.1</div></div> <div>5.7 Aging<div>3 (Poly Urethane, Nylon )</div></div> <div>5.8 U.V Resistance<div>IEC 68-2-5 PART 2 TEST Sa4010CYCLE 가 , 3.3.1 3.4.1</div></div>					

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6. ANTENNA

MARK

△ X1

품질 향상을 위한 제3차 변경

REVISION

DATE

2002.10.15

SIGN

이강희

NOTES

1. 동일형상은 동일치수이며, ( )는 참고치수임.

2. 도면상에 지시되지 않은 ROUNDE는 가공상의 자연ROUND(R0.1 이하)임.

③	METAL CAP	BsBM 2호	1	MBCr5	
②	BODY PLASTIC	NYLON 12 △	1	COOL GRAY 6C	
①	T.M	BsBM 2호	1	MBNi3	
NO	PART NO	PART NAME	MATERIAL	Q'TY	FINISH/COLOR
GENERAL TOLERANCE		DESIGNED	CHECKED	APPROVAL	MODEL
DWG. GRADE	A B C				SHX2
1~6	±0.05/±0.10/±0.25				PART NAME
6~18	±0.07/±0.14/±0.35				ANT. ASM
18~50	±0.10/±0.20/±0.50				PART NO
50~120	±0.15/±0.30/±0.80				C1-1-L1-04900
120~250	±0.20/±0.50/±1.00				
250~500	±0.30/±1.50/±2.00				

SCALE

5/1

UNIT

mm

THIRD ANGLE

DIMENSION

E.M.W. Antenna Co., LTD

Shinjo, Nagasaki, Japan

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7.

MARK	REVISION	DATE	SIGN

① ANTENNA

③ PAD

② INNER CASE(25 ROW)

④ C/T BOX

(ANTENNA TOTAL : 2,500 PCS)

⑤ PACKING TAPE

SUPPLIER NAME

PRINTED TABLE

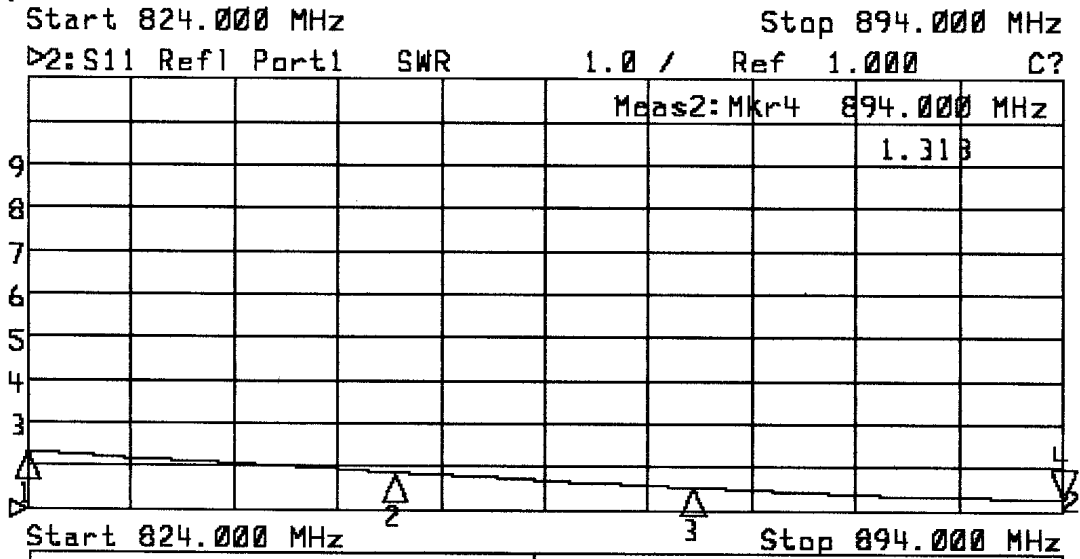
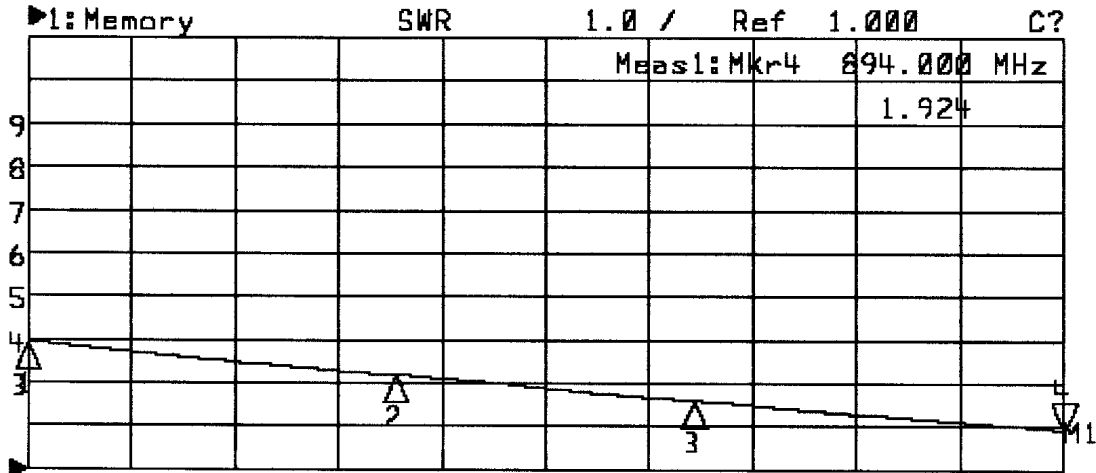
품명	
색상	
CODE NO.	
LOT NO.	
수량	
비고	

⑤	PACKING TAPE	-	-		
④	C/T BOX	SW2	1		
③	PAD	SW1	1		
②	INNER CASE	P.S	25		
①	ANTENNA	-	2,500		
NO	PART NAME	MATERIAL	Q'TY	FINISH/COLOR	REMARKS
GENERAL TOLERANCE		DESIGNED	CHECKED	APPROVAL	MODEL
DIM	GRADE	A	B	C	공용 (FIXED-2500)
1~6		±0.05	±0.10	±0.25	
6~18		±0.07	±0.14	±0.36	
18~50		±0.10	±0.20	±0.60	
50~120		±0.15	±0.30	±0.80	
120~250		±0.20	±0.50	±1.00	
250~500		±0.30	±1.50	±2.00	
METRIC A4		SCALE	N/S	THIRD ANGLE DIMENSION	PART NO
		UNIT	mm		60-7-00-00100
		E.M.W. Antenna Co.,LTD			

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# 8. DATA

## 8.1 VSWR



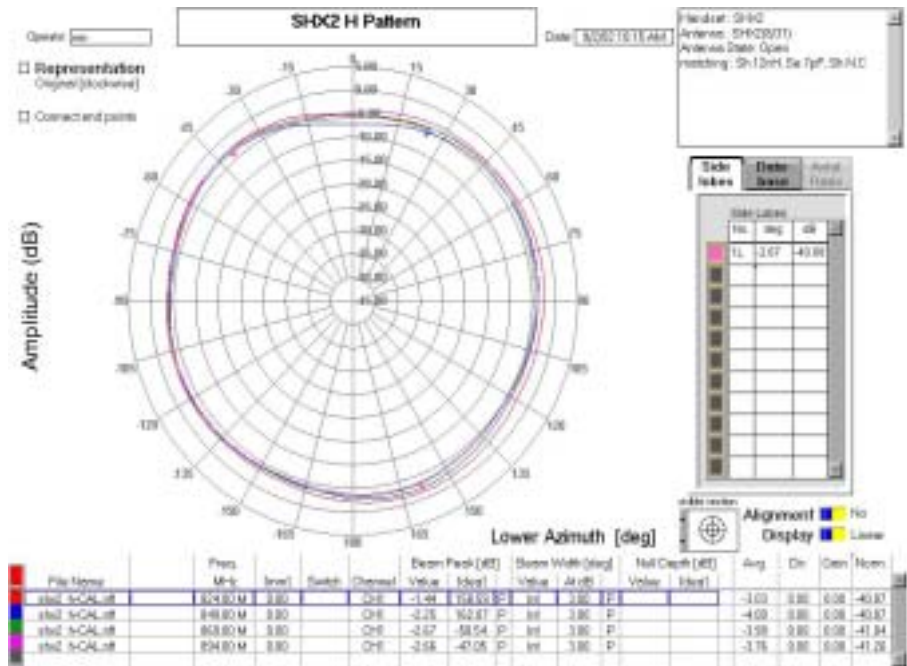
1: Mkr (MHz)		2: Mkr (MHz)	
1:	824.0000 3.926	1:	824.0000 2.333
2:	849.0000 3.181	2:	849.0000 1.871
3:	869.0000 2.599	3:	869.0000 1.540
4>	894.0000 1.924	4>	894.0000 1.313



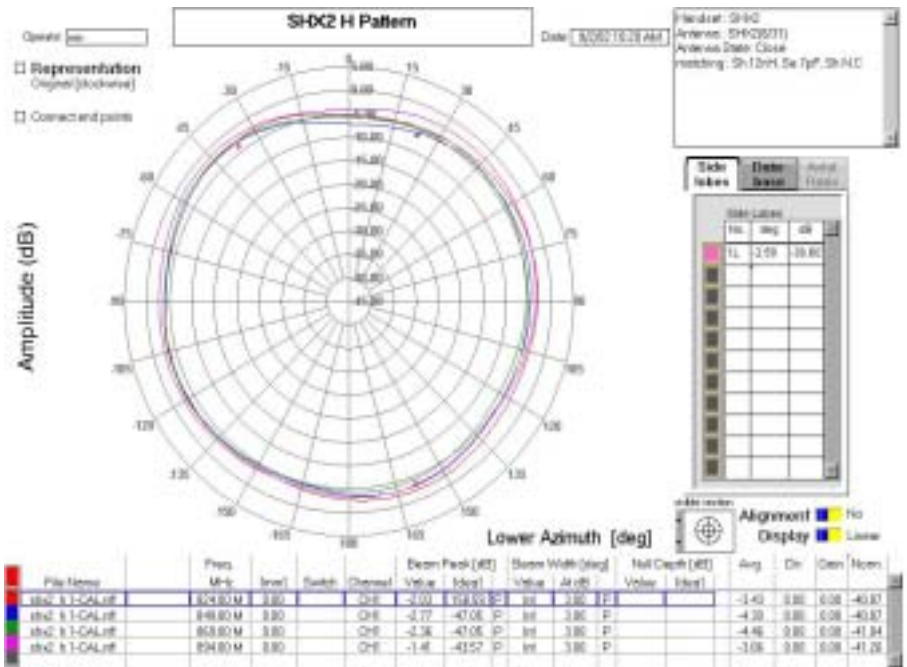
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## 8.2 H PATTERN

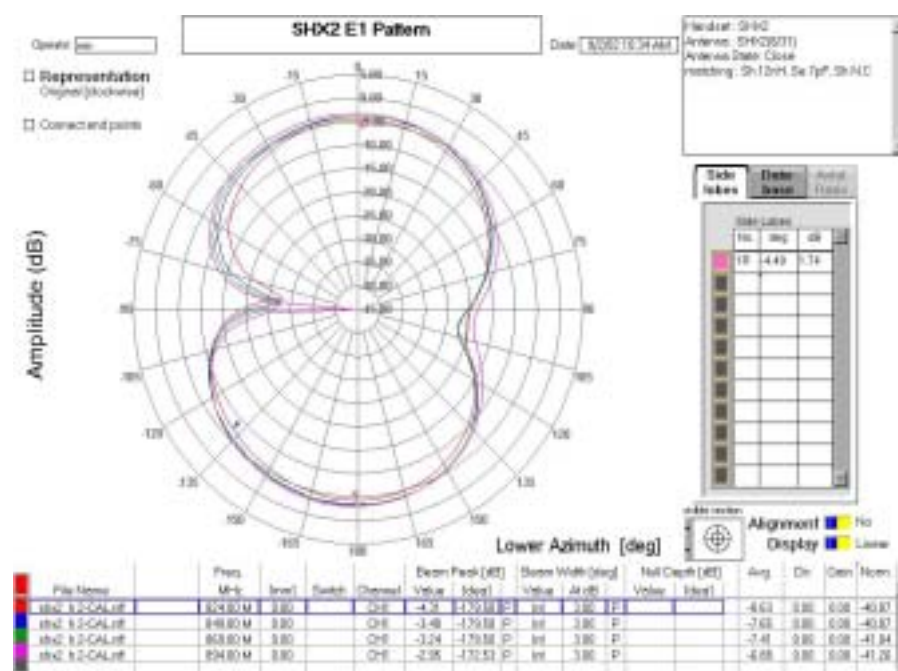
### 8.2.1 FOLDER Open



### 8.2.2 FOLDER Close



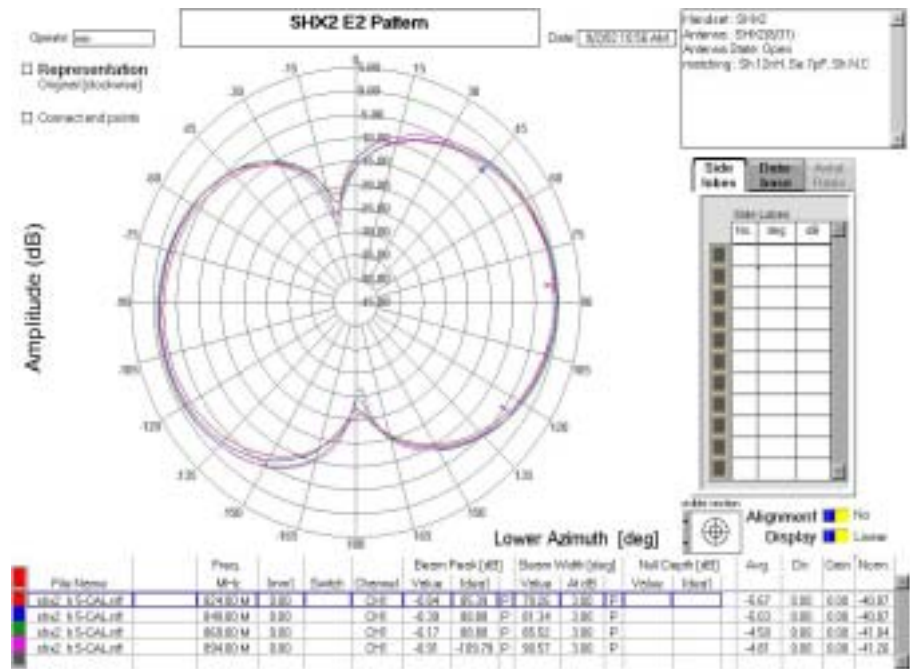
### 8.3.1 FOLDER Open



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8.4 E2 PATTERN

8.4.1 FOLDER Open



8.4.2 FOLDER Close

