

APPROVAL SHEET

CUSTOMER : 神腦國際企業股份有限公司
SENAO INTERNATIONAL CO., LTD.

MODEL NO. : IWM-144G-101(Rev.01)

DESCRIPTION : **2.4GHz Tri-Band Flying Lead (Core)
Swivel Antenna**

Customer Approval

| | | |
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| | | |
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1. Description:

The antenna is a flying lead swivel and $1/4 \lambda$ dipole antenna. It's useful for the ISM Band of 2.4~2.5 GHz.

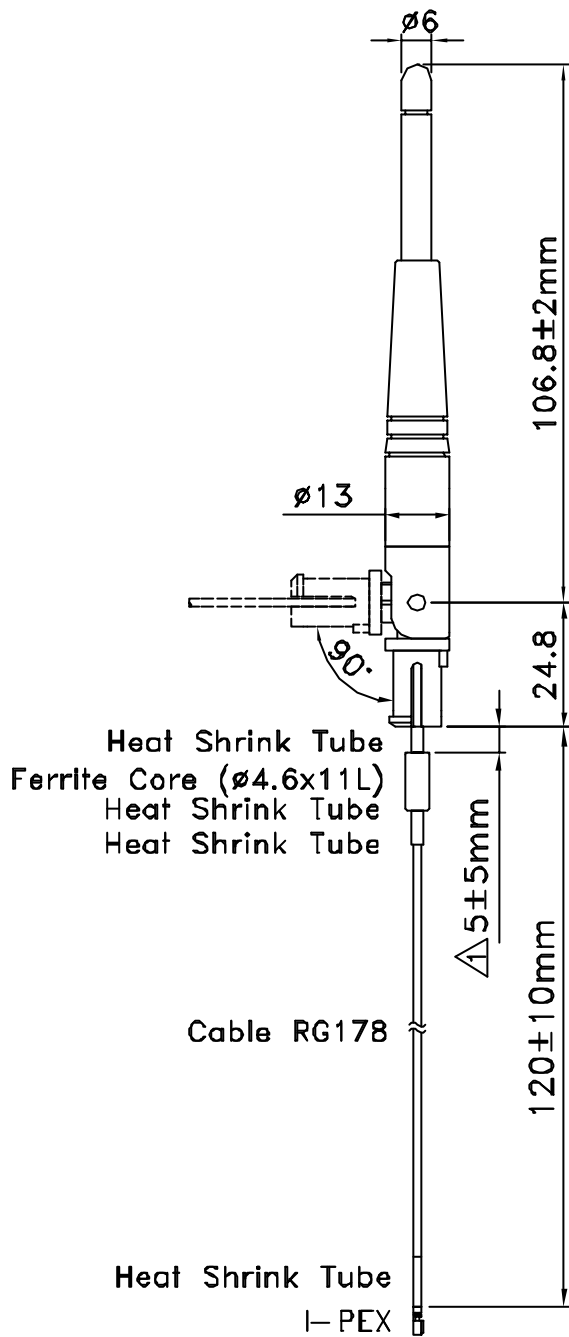
2. Electrical Properties

| | |
|--------------------------|----------------------|
| 2-1 Frequency Range..... | 2.4~2.4835GHz |
| 2-2 Impedance..... | 50 Ohms nominal |
| 2-3 S.W.R. | ≤ 2.0 |
| 2-4 Return Loss..... | ≤ -10 dB |
| 2-5 Gain..... | 2 dBi |
| 2-6 Polarization..... | Vertical |
| 2-7 Admitted Power..... | 1W |
| 2-8 Electrical Wave..... | $1/4 \lambda$ Dipole |

3. Mechanical Properties :

| | |
|------------------------------|--|
| 3-1 Connector..... | I-PEX MHF |
| 3-2 Cable..... | RG178 |
| 3-3 Antenna Cover..... | Polyurethane |
| Antenna Base..... | Polycarbonate |
| 3-4 Ferrite Core..... | RH-04 |
| 3-5 Rotating Test..... | 1.0 Kg-cm, After 2000 cycles with the rate of 30 cycles/minute (max.). It shall be possible to remain it's position. |
| 3-6 Attachment Strength..... | 2.0 Kg (30 minutes) |





| TOLERANCES: | |
|-------------|--------|
| X | ± 1 |
| X.X | ± 0.5 |
| X.XX | ± 0.25 |
| ANG. | ± 2.0° |

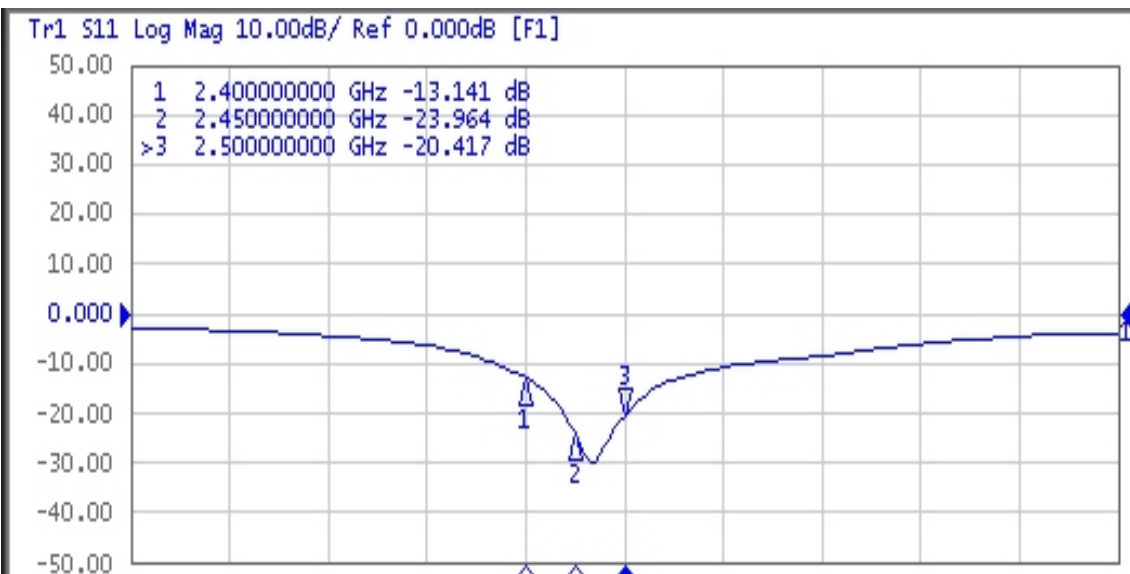
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|-----------------|------------------------------|-----------------------------------|-----------------------|---------|-----------|
| REV DESCRIPTION | ⚠ Move Core Position 50→5 | MATERIAL | MODEL: IWM-144G-101 | | |
| | | FINISH | NAME: Swivel Antenna | | |
| | | UNIT: mm | PART No: IWM-144G-101 | | |
| | | SCALE: 1/ 1.5 DATE: 12/15/2003 | DESIGN Meg Lee | APPROVE | REV 01 |

QP0502-01-02



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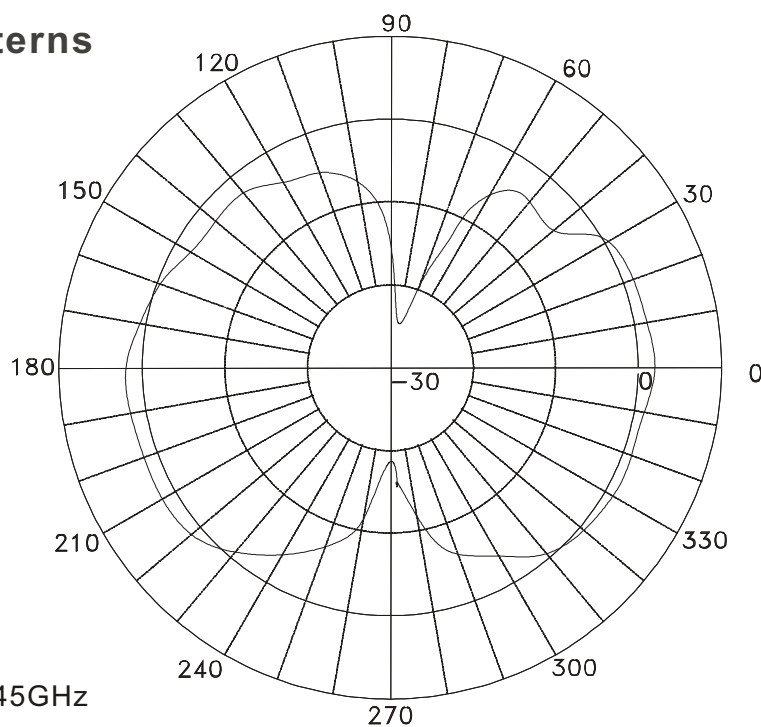
Return Loss



S.W.R.

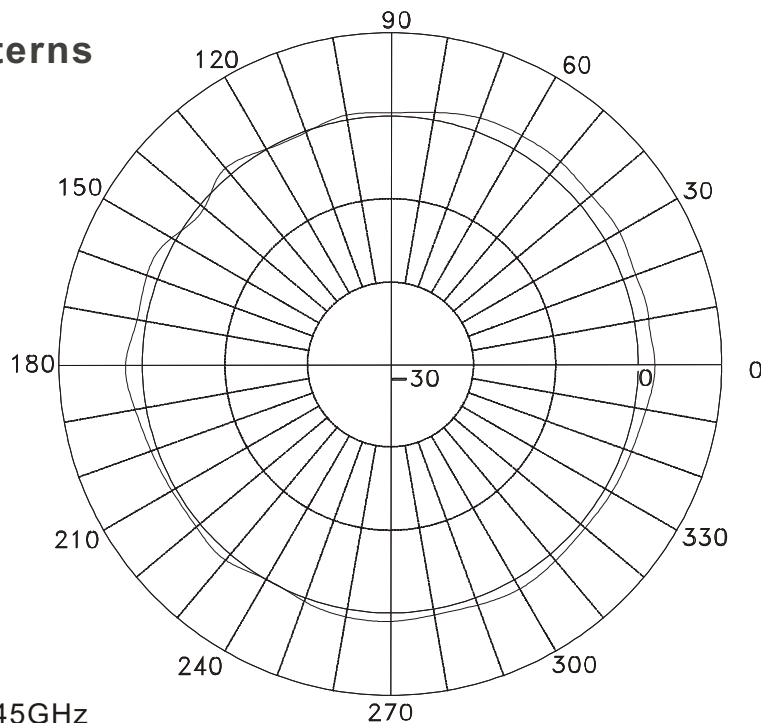


E-Plane Field Patterns



Frequency: 2.45GHz

H-Plane Field Patterns



Frequency: 2.45GHz



1. 材料
 (1)ハウジング : PBT, UL94V-0, 黒色
 (2)コンタクト : 銅
 : 金メッキ
 (3) グランドコンタクト : 銅
 : 金メッキ
 : 銅
 2. Packing : reel
 3. Mating partner part No. : 20279-001E-01

5-2 Unmating.
 (1) In case of unmatting by pulling tool.
 Please use the pulling drawing, and please pull plug to vertical direction as directly as possible.
 (2) In case of unmatting directly by hand
 Please catch the catching area of plug, and please pull plug to vertical direction as directly as possible.

4. Permissible load of cable at mating

5. Suggestions for mating & unmating operation.
 5-1 Mating.
 Please mate the connector straightly to vertical direction as much as possible, adjusting the mating axis of plug and receptacle.
 As excessive slant angle mating may break the connector, please don't do it.

5-1 コネクタ挿入時
 PlugとReceptacleの方向を合わせ、できるだけ垂直に挿入して下さい。極端な斜め挿入は行わないで下さい。コネクタ破損の原因となりますので、過度な斜め挿入は行わないで下さい。

5-2 コネクタ抜き時
 (1) 抜きシクを用いる場合
 下図のようにできるだけ垂直に引き抜いて下さい。
 (2) 手で直接引き抜く場合
 下部の保持部をつかみ、できるだけ垂直に引き抜いて下さい。

5-1 Mating

5-2 Unmating

GENERAL TOLERANCE
 6 MAX. ±0.2
 6 OVER MAX. 30 ±0.3
 30 OVER MAX. 120 ±0.5
 ANGLE ±2

MATING

Receptacle
 P/N 20279-001E-01

Plug
 P/N 90192-001

DESIGN D BY DATE
CHK D BY DATE
APP D BY DATE

110656000

I-PEX
 Interconnect
 and Packaging Electronics
 TOKYO, JAPAN

REV. ECN BY DATE APP
REV. RECORD

TITLE MHF series micro coaxial connector plug vertical

CUSTOMER COPY

PROJECTION SCALE UNIT mm

SERIES No. 2814

DMG. No. 20278

REV. SHEET 2/2

REV. 2

| Rev | Change | By | Date |
|-----|----------------|-----|----------|
| A | General Update | MTP | 03/04/02 |

A: Center Conductor
B: Dielectric
C: Shield
D: Jacket

Attenuation:

| | |
|----------|-----------------|
| 0.10 GHz | 14.0 dB/100ft. |
| 0.40 GHz | 28.2 dB/100ft. |
| 1.00 GHz | 45.0 dB/100ft. |
| 2.00 GHz | 64.4 dB/100ft. |
| 2.45 GHz | 71.6 dB/100ft. |
| 3.00 GHz | 79.7 dB/100ft. |
| 4.00 GHz | 92.7 dB/100ft. |
| 5.00 GHz | 104.3 dB/100ft. |
| 6.00 GHz | 115.0 dB/100ft. |

Construction:

A) Center Conductor:
30 7/38 SPCW*
OD .012" ± .001"

B) Dielectric:
Extruded PTFE
OD .033" ± .002"

C) Shield:
38 AWG SPC*
OD .051" Nom.

D) Jacket:
FEP - Brown Tint
OD .071" ± .004"
Surface Printed:
"RG178HF HARBOUR INDUSTRIES 2747B"

Electricals:

Impedance:
50 ± 2 Ohms

Capacitance:
32 pF/ft Max.

Velocity of Prop.:
70% Nom.

Cut off Frequency:
116 GHz

VSWR(.10 - 6.0 GHz):
1.20:1 Mean

Ramp Function:
0.10GHz: 1.10:1
6.00GHz: 1.40:1

Physical Properties:

Weight per 1000 ft:
6.3 lbs Max.

Minimum Band Radius:
.35"

Operating Temperature Range:
-55°C to 200°C

Conductor Break Strength:
4.6 lbs.

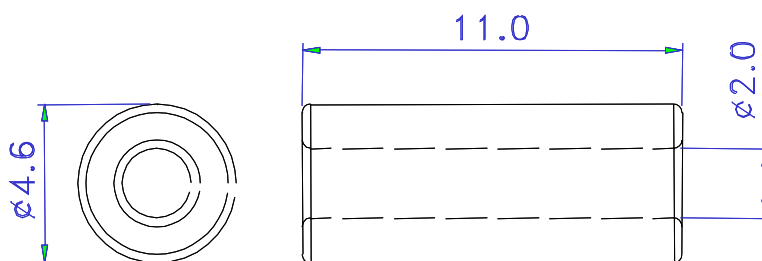
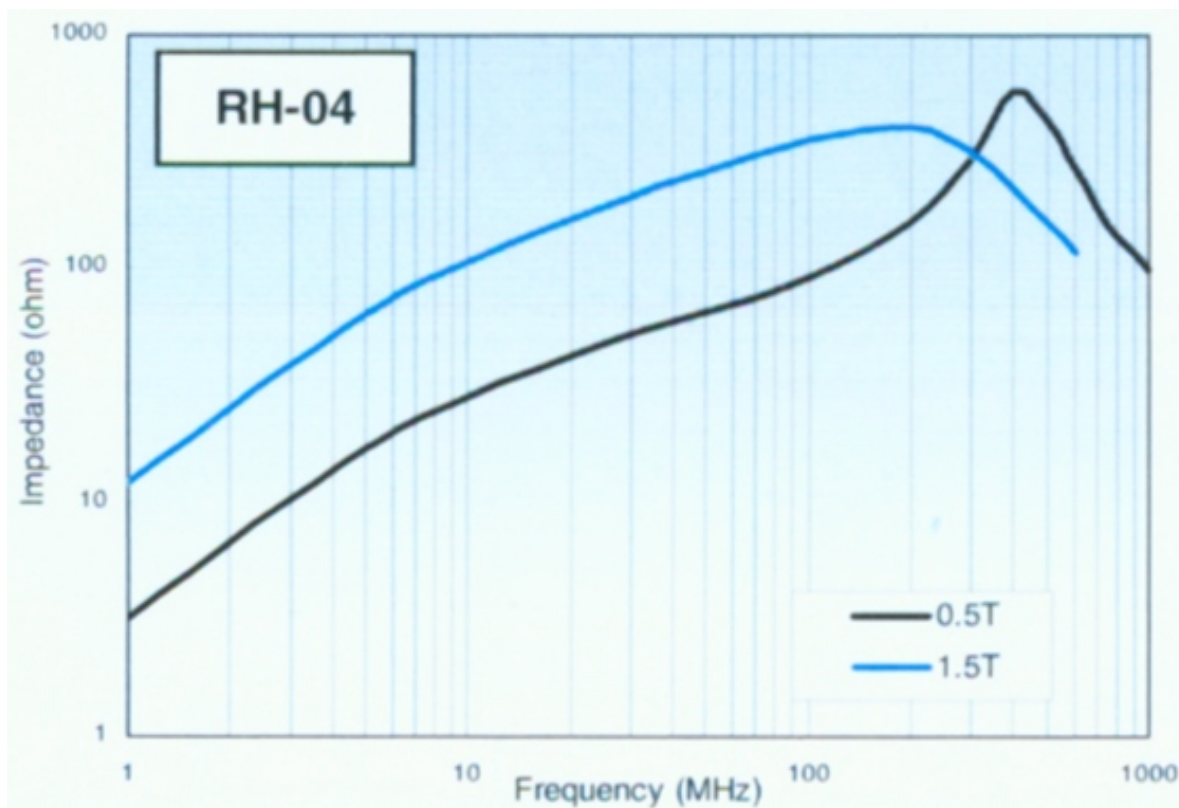
Harbour Industries

| | | | |
|---------------|----------|-----------------|----------|
| Date: | 12/17/01 | Scale: | None |
| Drawn By: | MTP:ner | Approved By: | MTP:ner |
| Drawing Name: | RG178HF | Rev: | A |
| Part Number: | TBD | Drawing Number: | 121701_1 |

* Silver plating thickness is a minimum of 40µ.
Per MIL-C-17 and ASTM B28B.

alldoc\crawing\block





RH-04-Core

