

P/N: E42-1G241000A26

2005/12/15

REV.0

1 of 38

FULL RISE ELECTRONIC CO., LTD.

 $No.19-4, Kao\ Shan\ Hsia, Kao\ Shuang\ Village, Pin\ Chen\ City, Taoyuan, Taiwan,\ TEL: +886-3-4643715\ FAX: +886-3-4643720/21\ http://:www.fre.com.tw\\ No.22-23\ buolding, JinBi\ Industry\ Park\ , Huang\ Tian\ Village\ , Baoan\ District, Shenzhen\ City, China,\ TEL: +86-755-27511462,\ FAX: +86-755-27511578$ 

#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

Part No.: E42-1G241000A26									
Product Description:	9 2.4G ANTENNA +MI-113+I-PEX								
Customer :									
Customer Part No.:									
Sample Qty.									
	FRE								
Issued By	Checked BY	QA Inspection							
		Yahoo Shu							
		2005/12/15							
Sales&Marketing Group	R&D Group	QA Group							
	Customer								
Customer Approval:	Approved Concessiona	ry Rejected							
Issued By	Checked BY	Approved By							
Comments:									



P/N: E42-1G241000A26

2005/12/15

REV.0

2 of 38

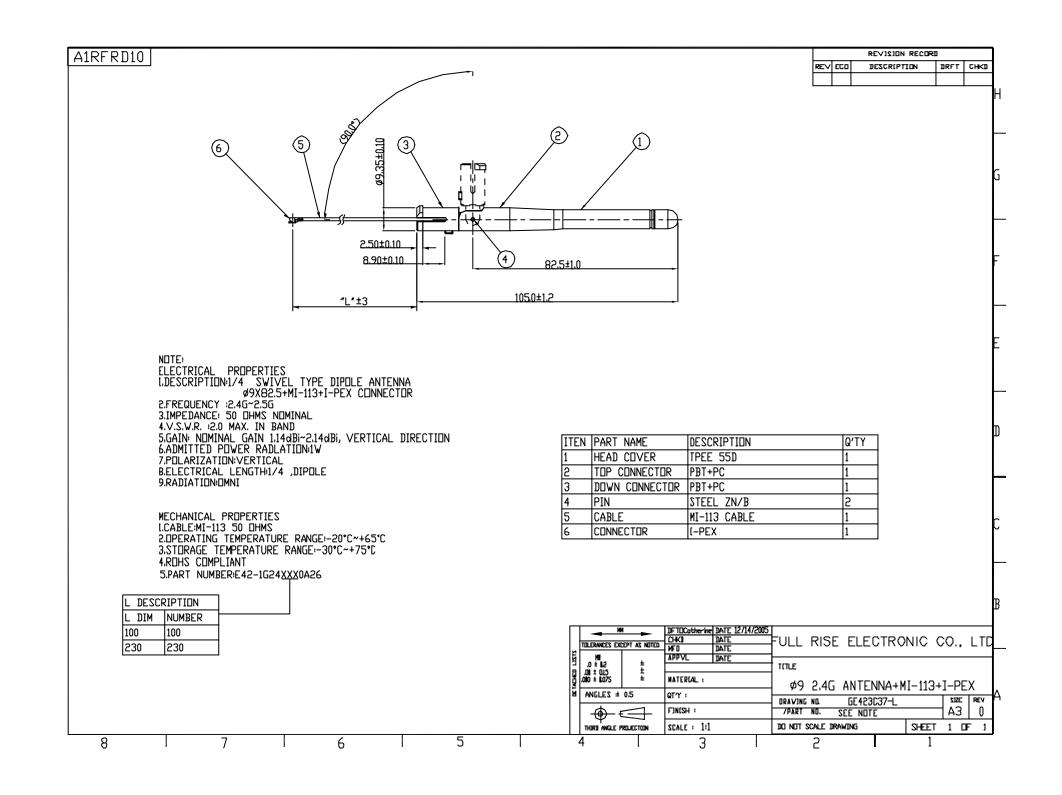
FULL RISE ELECTRONIC CO., LTD.

 $No.19-4, Kao\ Shan\ Hsia, Kao\ Shuang\ Village, Pin\ Chen\ City, Taoyuan, Taiwan,\ TEL: +886-3-4643715\ FAX: +886-3-4643720/21\ http://:www.fre.com.tw\\ No.22-23\ buolding, JinBi\ Industry\ Park\ , Huang\ Tian\ Village\ , Baoan\ District, Shenzhen\ City, China,\ TEL: +86-755-27511462,\ FAX: +86-755-27511578$ 

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CATALOGUE OF E42-1G241000A26 APPROVAL SHEETS							
ITEM/CONTENT	PAGE						
1.Coverage	1						
2.Index	2						
3.Product Drawing	3						
4.Specification & Performance	4						
5.Electrical Properties	5~12						
6.Material Identification	13~37						
7. ISO 9001:2000 Certification	38						





P/N: E42-1G241000A26 2005/12/15 REV.0 4 of 38 **FULL RISE ELECTRONIC CO., LTD.** 

 $No.19-4, Kao\ Shan\ Hsia, Kao\ Shuang\ Village, Pin\ Chen\ City, Taoyuan, Taiwan,\ TEL: +886-3-4643715\ FAX: +886-3-4643720/21\ http://:www.fre.com.tw\\ No.22-23\ buolding, JinBi\ Industry\ Park\ , Huang\ Tian\ Village\ , Baoan\ District, Shenzhen\ City, China,\ TEL: +86-755-27511462,\ FAX: +86-755-27511578$ 

#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

## **Electrical Properties:**

1. Frequency: 2.4 ~ 2.5 MHZ

2. Impedance: 50 Ohms nominal

3. VSWR: 2.0 max. IN BAND

4. Gain: 1.14 ~ 2.14 dBi, Vertical direction

5. Radiation: Omni

6. Polarization: Vertical

7. Electrical Wave: Dipole

## **Mechanical properties:**

1. Cable:MI -113 50ohm

2. Operating temperature range: -20 ~+65

3. Storage temperature range: -30 ~+75

4.HEAD COVER: TPEE 55D

5.TOP CONNECTOR : PBT + PC

6.DOWN CONNECTOR: PBT+PC

7.PIN: SITEEL ZN/B

8. CABLE: MI-113 CABLE

9.CONNECTOR: I-PEX CONNECTOR



P/N: E42-1G241000A26

2005/12/15 RI

REV.0

5 of 38

FULL RISE ELECTRONIC CO., LTD.

No.19-4,Kao Shan Hsia,Kao Shuang Village,Pin Chen City,Taoyuan,Taiwan, TEL:+886-3-4643715 FAX:+886-3-4643720/21 http://:www.fre.com.tw No.22-23 buolding,JinBi Industry Park ,Huang Tian Village ,Baoan District,Shenzhen City,China, TEL:+86-755-27511462, FAX:+86-755-27511578

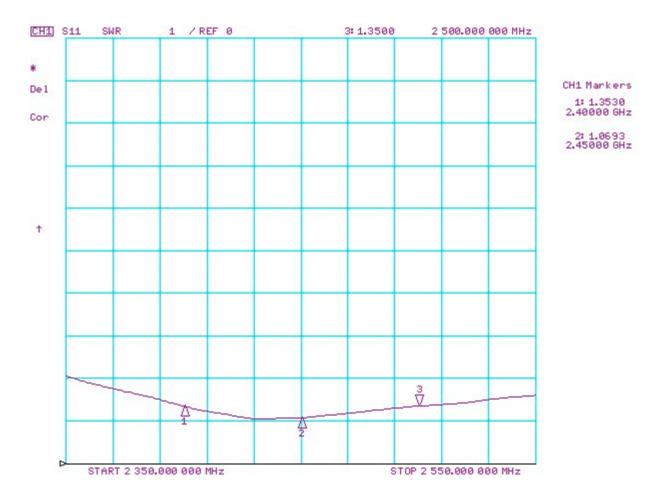
#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

#### **Electrical Properties:**

V.S.W.R: 2.0 Maximal in Band

Frequency	2.4 GHz	2.45 GHz	2.5 GHz
Sample 1	1.3530	1.0693	1.3500
Sample 2	1.3162	1.0592	1.3341
Sample 3	1.3090	1.0467	1.3265
Sample 4	1.3344	1.0749	1.3598
Sample 5	1.3491	1.0831	1.3675





P/N: E42-1G241000A26

2005/12/15

REV.0

6 of 38

FULL RISE ELECTRONIC CO., LTD.

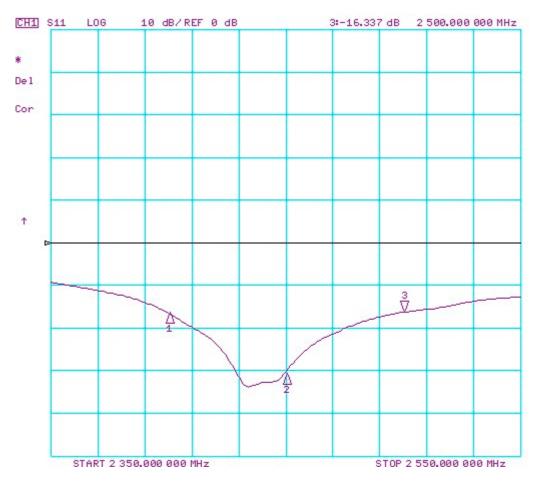
No.19-4,Kao Shan Hsia,Kao Shuang Village,Pin Chen City,Taoyuan,Taiwan, TEL:+886-3-4643715 FAX:+886-3-4643720/21 http://:www.fre.com.tw No.22-23 buolding,JinBi Industry Park ,Huang Tian Village ,Baoan District,Shenzhen City,China, TEL:+86-755-27511462, FAX:+86-755-27511578

#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

#### Return Loss: -10 dB Maximal in Band

Frequency	2.4 GHz	2.45 GHz	2.5 GHz
Sample 1	-16.569 dB	-30.833 dB	-16.337 dB
Sample 2	-16.751 dB	-30.421 dB	-16.691 dB
Sample 3	-16.877 dB	-30.538 dB	-16.509 dB
Sample 4	-16.545 dB	-30.217 dB	-16.213 dB
Sample 5	-16.419 dB	-30.189 dB	-16.137 dB



CH1 Markers

1:-16.569 dB 2.40000 GHz

2:-30.833 dB 2.45000 GHz



P/N: E42-1G241000A26 2005/12/15

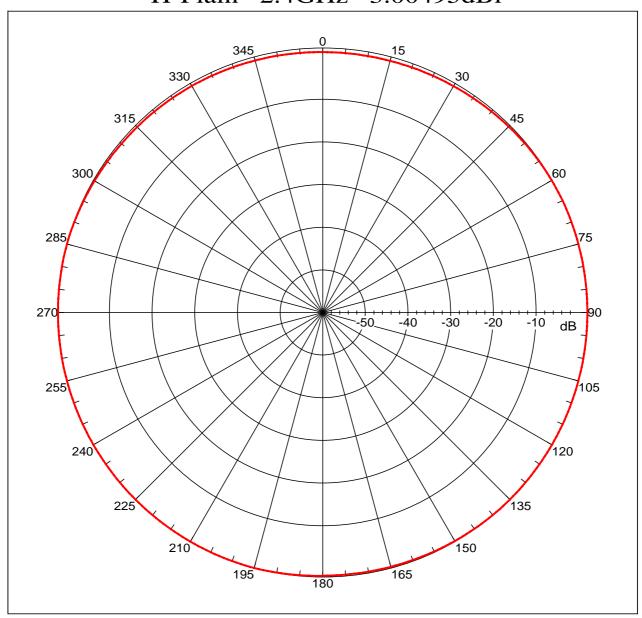
REV.0 7 of 38 FULL RISE ELECTRONIC CO., LTD.

No.19-4, Kao Shan Hsia, Kao Shuang Village, Pin Chen City, Taoyuan, Taiwan, TEL:+886-3-4643715 FAX:+886-3-4643720/21 http://:www.fre.com.tw No.22-23 buolding, JinBi Industry Park , Huang Tian Village ,Baoan District, Shenzhen City, China, TEL:+86-755-27511462, FAX:+86-755-27511578

#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

## H-Plain 2.4GHz 3.00495dBi





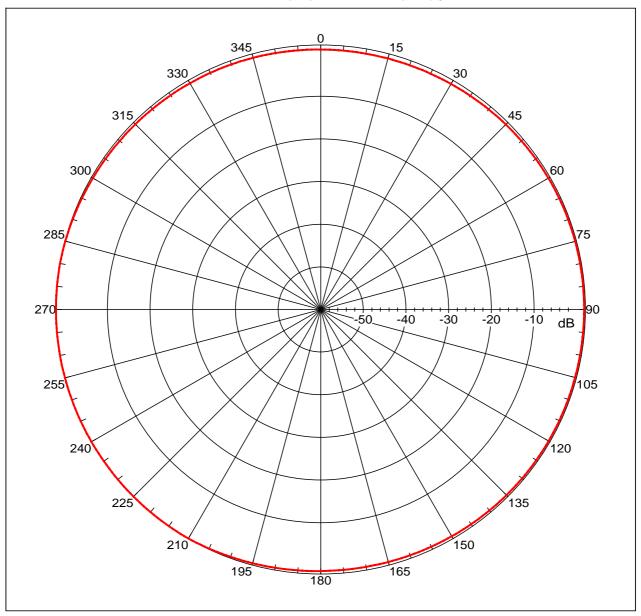
P/N: E42-1G241000A26 2005/12/15 REV.0 8 of 38 **FULL RISE ELECTRONIC CO., LTD.** 

No.19-4,Kao Shan Hsia,Kao Shuang Village,Pin Chen City,Taoyuan,Taiwan, TEL:+886-3-4643715 FAX:+886-3-4643720/21 http://:www.fre.com.tw No.22-23 buolding,JinBi Industry Park ,Huang Tian Village ,Baoan District,Shenzhen City,China, TEL:+86-755-27511462, FAX:+86-755-27511578

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C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

## H-Plain 2.45GHz 2.62092dBi





P/N: E42-1G241000A26 2005/12/15

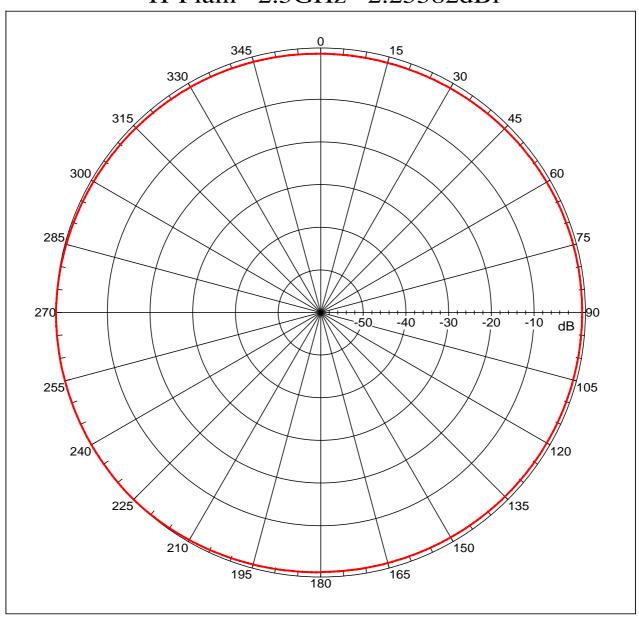
REV.0 9 of 38 FULL RISE ELECTRONIC CO., LTD.

No.19-4, Kao Shan Hsia, Kao Shuang Village, Pin Chen City, Taoyuan, Taiwan, TEL:+886-3-4643715 FAX:+886-3-4643720/21 http://:www.fre.com.tw No.22-23 buolding, JinBi Industry Park , Huang Tian Village ,Baoan District, Shenzhen City, China, TEL:+86-755-27511462, FAX:+86-755-27511578

#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

## H-Plain 2.5GHz 2.25582dBi





10 of 38

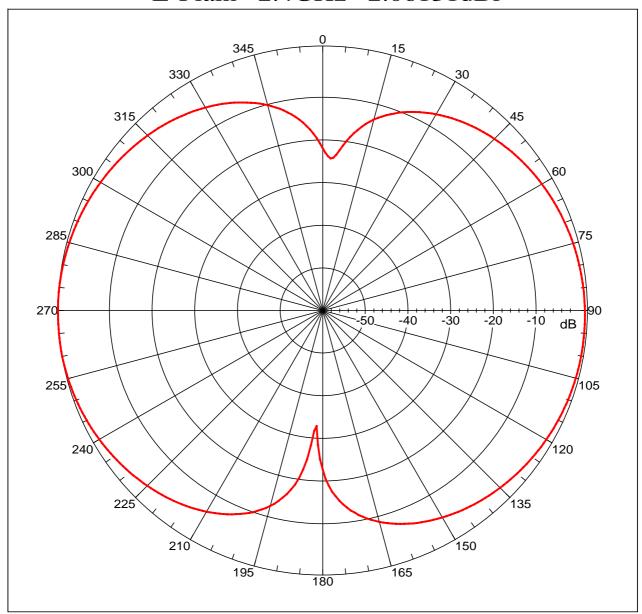
P/N: E42-1G241000A26 2005/12/15 REV.0 **FULL RISE ELECTRONIC CO., LTD.** 

No.19-4,Kao Shan Hsia,Kao Shuang Village,Pin Chen City,Taoyuan,Taiwan, TEL:+886-3-4643715 FAX:+886-3-4643720/21 http://:www.fre.com.tw No.22-23 buolding,JinBi Industry Park ,Huang Tian Village ,Baoan District,Shenzhen City,China, TEL:+86-755-27511462, FAX:+86-755-27511578

#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

## E-Plain 2.4GHz 2.06131dBi





11 of 38

P/N: E42-1G241000A26 2005/12/15 REV.0

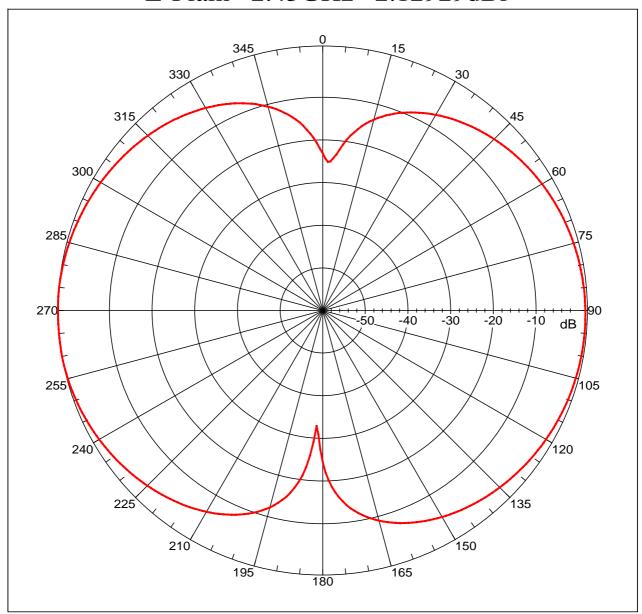
FULL RISE ELECTRONIC CO., LTD.

No.19-4,Kao Shan Hsia,Kao Shuang Village,Pin Chen City,Taoyuan,Taiwan, TEL:+886-3-4643715 FAX:+886-3-4643720/21 http://:www.fre.com.tw No.22-23 buolding,JinBi Industry Park ,Huang Tian Village ,Baoan District,Shenzhen City,China, TEL:+86-755-27511462, FAX:+86-755-27511578

#### MAXTOP TELECOM ELECTRONICS CO., LTD.

C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

## E-Plain 2.45GHz 2.12929dBi





P/N: E42-1G241000A26 2005/12/15

12/15 REV.0 12 of 38

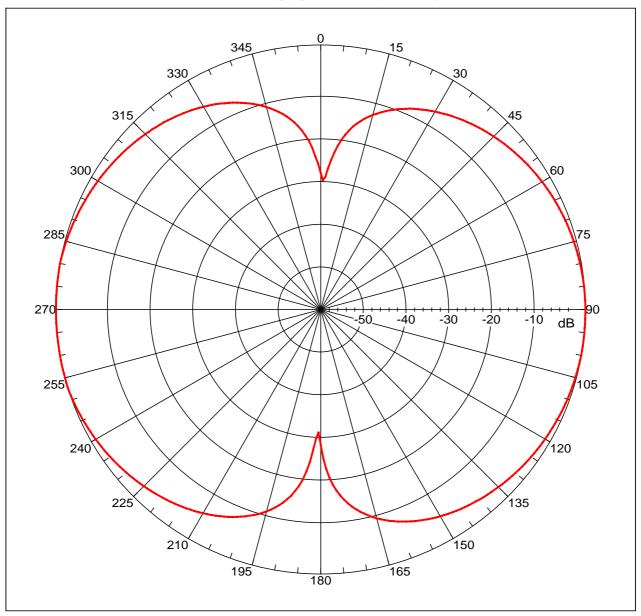
FULL RISE ELECTRONIC CO., LTD.

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C2 Area, Far East Industrial Park, Yu Yao City, Zhejiang, China TEL:+86-574-62887000~62887003 FAX:+86-574-62887063

## E-Plain 2.5GHz 2.44202dBi





FULL RISE ELECTRONIC CO., LTD. Report No. : CE/2005/83922

NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN Date : 2005/08/23

HSIEN, TAIWAN Page : 1 of 4

#### The following merchandise was (were) submitted and identified by the client as:

Type of Product TOP CONNECTOR, DOWN CONNECTOR, HEAD COVER,

FIXED PLATE, PBT + PC, BLACK

(1) P4201-0116H1(2) P4201-0156H1(3) P4201-0186H1 Style/Item No

> (4) P4201-01A6H1(5) P4201-01C6H1(6) P4201-01E6H1 (7) P4201-01F6H1(8) P4201-01G6H1(9) P4201-01M6H1

(10) P4201-01T6H1(11) P4201-01U6H1(12) P4201-01Y6H1

(13) P4201-0256H1(14) P4201-02A6H1(15) P4201-02C6H1

(16) P4201-02F6H1(17) P4201-02N6H1(18) P4201-0316H1

(19) P4201-03F6H1(20) P4201-03N6H1(21) P4201-0816H1

(22) P4201-1016H1(23) P4201-1116H1(24) P4201-1616H1

(25) P4201-1716H1(26) P4201-2116H1(27) P4201-2256H1

(28) P4201-2356H1(29) P4202-0156H1(30) P4202-0186H1

(31) P4202-01A6H1(32) P4202-01C6H1(33) P4202-01E6H1

(34) P4202-01F6H1(35) P4202-01G6H1

(36) P4202-01M6H1(37) P4202-01T6H1(38) P4202-01Y6H1

(39)P4202-0216H1 (40) P4202-02N6H1(41) P4202-05R6H1

(42) P4202-0916H1(43) P4202-0716H1(44) P4202-1116H1

(45) P4202-1416H1(46) P4203-01U6H1(47) P4203-02U6H1

(48) P4206-0166H1

Sample Received 2005/08/16

**Testing Date** 2005/08/16 TO 2005/08/23

- Please see the next page -Test Result

Deration Manager igned for and on behalf of

SGS TAIWAN LTD.



FULL RISE ELECTRONIC CO., LTD. Report No. : CE/2005/83922

NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN Date: 2005/08/23

HSIEN, TAIWAN Page : 2 of 4

#### **Test Result**

PART NAME NO.1 : MIXED ALL BLACK PLASTIC (PLEASE REFER TO

THE PHOTO ATTACHED)

(Don't Thous (a))	TT 34	Madh a d	MDI	Result
Test Item (s):	Unit	Method	MDL	No.1
Monobromobiphenyl	%		0.0005	N.D.
Dibromobiphenyl	%	7	0.0005	N.D.
Tribromobiphenyl	%	7	0.0005	N.D.
Tetrabromobiphenyl	%	With reference to	0.0005	N.D.
Pentabromobiphenyl	%	USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS.	0.0005	N.D.
Hexabromobiphenyl	%		0.0005	N.D.
Heptabromobiphenyl	%		0.0005	N.D.
Octabromobiphenyl	%		0.0005	N.D.
Nonabromobiphenyl	%	(RoHS), 83/264/EEC, and	0.0005	N.D.
Decabromobiphenyl	%	76/769/EEC)	0.0005	N.D.
Total PBBs (Polybrominated biphenvls)/Sum of above	%		-	N.D.
Monobromobiphenyl ether	%		0.0005	N.D.
Dibromobiphenyl ether	%	]	0.0005	N.D.
Tribromobiphenyl ether	%	7	0.0005	N.D.
Tetrabromobiphenyl ether	%	With reference to	0.0005	N.D.
Pentabromobiphenyl ether	%	USEPA3540C or	0.0005	N.D.
Hexabromobiphenyl ether	%	USEPA3550C. Analysis was	0.0005	N.D.
Heptabromobiphenyl ether	%	performed by HPLC/DAD,	0.0005	N.D.
Octabromobiphenyl ether	%	LC/MS or GC/MS. (prohibited by 2002/95/EC	0.0005	N.D.
Nonabromobiphenyl ether	%	(RoHS), 83/264/EEC, and	0.0005	N.D.
Decabromobiphenyl ether	%		0.0005	N.D.
Total PBBEs(PBDEs)(Polybromin ated biphenyl ethers)/Sum of above	%		-	N.D.



FULL RISE ELECTRONIC CO., LTD. Report No. : CE/2005/83922

NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN Date : 2005/08/23

HSIEN, TAIWAN Page : 3 of 4

Mant Thank (a)	TT 34	Madh a d	MDI	Result
Test Item (s):	Unit	Method	MDL	No.1
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	N.D.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	N.D.

NOTE: (1) N.D. = Not detected (<MDL)

(2) ppm = mg/kg

(3) MDL = Method Detection Limit

(4) " - " = No Regulation



FULL RISE ELECTRONIC CO., LTD. NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN HSIEN, TAIWAN

Report No. : CE/2005/83922

Date : 2005/08/23

Page : 4 of 4





FULL RISE ELECTRONIC CO., LTD.

NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN

HSIEN, TAIWAN

Report No. : CE/2005/83918

: 2005/08/23 Date

Page : 1 of 4

#### The following merchandise was (were) submitted and identified by the client as:

Type of Product HEAD COVER, BLACK

Style/Item No (1) P4203-01YP13 (2) P4203-015P13 (3) P4203-205P13

> (4) P4203-03FP02 (5) P4203-01CP13 (6) P4203-01CP01 (7) P4203-01GP13 (8) P4203-01GP01 (9) P4203-01EP13 (10) P4203-01TP13(11) P4203-01MP13 (12) P4203-018P13 (13) P4203-01NP13(14) P4203-016P01 (15) P4203-207P01 (16) P4203-016P13 (17) P4203-021P13(18) P4203-01AP13

(19) P4203-01AP01

Sample Received 2005/08/16

Testing Date 2005/08/16 TO 2005/08/23

**Test Result** - Please see the next page -

signed for and on behalf of SGS TAIWAN LTD.

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FULL RISE ELECTRONIC CO., LTD. Report No. : CE/2005/83918

NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN Date: 2005/08/23

HSIEN, TAIWAN Page : 2 of 4

#### **Test Result**

PART NAME NO.1 : MIXED ALL BLACK PLASTIC (PLEASE REFER TO

THE PHOTO ATTACHED)

(Don't Thous (a))	TT 34	Madh a d	MDI	Result
Test Item (s):	Unit	Method	MDL	No.1
Monobromobiphenyl	%		0.0005	N.D.
Dibromobiphenyl	%	7	0.0005	N.D.
Tribromobiphenyl	%	7	0.0005	N.D.
Tetrabromobiphenyl	%	With reference to	0.0005	N.D.
Pentabromobiphenyl	%	USEPA3540C or USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS.	0.0005	N.D.
Hexabromobiphenyl	%		0.0005	N.D.
Heptabromobiphenyl	%		0.0005	N.D.
Octabromobiphenyl	%		0.0005	N.D.
Nonabromobiphenyl	%	(RoHS), 83/264/EEC, and	0.0005	N.D.
Decabromobiphenyl	%	76/769/EEC)	0.0005	N.D.
Total PBBs (Polybrominated biphenvls)/Sum of above	%		-	N.D.
Monobromobiphenyl ether	%		0.0005	N.D.
Dibromobiphenyl ether	%	]	0.0005	N.D.
Tribromobiphenyl ether	%	7	0.0005	N.D.
Tetrabromobiphenyl ether	%	With reference to	0.0005	N.D.
Pentabromobiphenyl ether	%	USEPA3540C or	0.0005	N.D.
Hexabromobiphenyl ether	%	USEPA3550C. Analysis was	0.0005	N.D.
Heptabromobiphenyl ether	%	performed by HPLC/DAD,	0.0005	N.D.
Octabromobiphenyl ether	%	LC/MS or GC/MS. (prohibited by 2002/95/EC	0.0005	N.D.
Nonabromobiphenyl ether	%	(RoHS), 83/264/EEC, and	0.0005	N.D.
Decabromobiphenyl ether	%		0.0005	N.D.
Total PBBEs(PBDEs)(Polybromin ated biphenyl ethers)/Sum of above	%		-	N.D.



FULL RISE ELECTRONIC CO., LTD. Report No. : CE/2005/83918

NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN Date : 2005/08/23

HSIEN, TAIWAN Page : 3 of 4

M - 4 74 4 1	TT 14	35.451	MDI	Result
Test Item (s):	Unit	Metnod	Method MDL	
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	N.D.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3050B or other acid digestion.	2	N.D.

NOTE: (1) N.D. = Not detected (<MDL)

- (2) ppm = mg/kg
- (3) MDL = Method Detection Limit
- (4) " " = No Regulation



FULL RISE ELECTRONIC CO., LTD. NO. 26, KAO CHING RD., YANG MEI CHEN, TAOYUAN HSIEN, TAIWAN

Report No. : CE/2005/83918

Date : 2005/08/23

Page : 4 of 4





HSIEH SHUN PLATING CO., LTD.

Report No. : CE/2004/C4060

NO. 19, KUNG YEH 1TH RD., PING CHEN TSUEN Date

: 2004/12/28

TAOYUAN, TAIWAN, R. O. C.

Page : 1

## The following merchandise was (were) submitted and identified by the client as :

Type of Product

: 三價絡測試片

Sample Received

: 2004/12/22

Testing Date

: 2004/12/22 TO 2004/12/28

## Test Result

PART NAME NO.1

: SILVER-COLORFUL METAL SHEET (PLEASE REFER TO THE PHOTO ATTACHED)

				Result					
Test Item (s):	Unit	Method	MDL	No.1				T	
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.	i) (03)				
Cadmium (Cd)	ppm	ICP-AES after as per EN 1122, method B:2001 or other acid digestion.	2	N.D.					
Mercury (Hg)	ppm	ICP-AES after as per US EPA 3052 or other acid digestion.	2	N.D.					
Lead (Pb)	ppm	ICP-AES after as per US EPA 3050B or other acid digestion.		23.4	E KAN	The G	eštus i		

NOTE: (1) N.D. - Not detected (<MDL)

, M.R. / Operation Manager

(2) ppm = mg/kg

(3) MDL - Method Detection Limit

Signed for and on behalf of

**SGS TAIWAN** LTD.

This Tries Report is require by the Company subject to its General Contitions of Survice entered quarter? Attention is drawn to the Rendelines of nations, independent, and Attention is drawn to the Rendelines of nations. The results shown in this trial report to the sample of the control of the Company of the control of the control of the Company of the control of

TN 1337228



HUOM MING METAL'CO., UTD.

NO. 5, LINE 548 SEC. 3, CHAN TAI RD., WUGU, TAIPEI,

Report No. : CE/2005/55761

Date

; 2005/05/02

Page

The following merchaudies was (were) submitted and identified by the client as t

Type of Product

LEAD LESS FREE CUTTING BRASS

Style/Item No

Secrete Received

2005/05/30

Testing Date

2005/05/30 TO 2005/06/02

#### Test Result

PART NAME NO.1

COPPER COLORED METAL STICK

Test Item (s):	Unit	Method	MDL	Result No.1
Chromium VI (Cr+6)	bles	UV-VIS after reference to US BPA 3060A.	2	N.D.
Cadeshun (Cd)	bbçz	ICP-Alife after reference to EN 1192, method B:2001 or other acid digestion.	2	M.D.
Mercury (Flg)	3-pto	ICP-ABS after reference to US BPA 3059 or other sold digestion.	2	N.D.
Load (Pb)	ppm	ICP-ARS after reference to US MPA 2000B or other acid digestion.	2	20.9

NOTE: (1) N.D. . Not detected (<MDL)

(2) ppm = mg/lcg

(3) MDL = Method Detection Limit





WONDERFUL HI-TECH CO., LTD.

NO. 17, PEI-YUAN ROAD., CHUNG-LI IND, PARK,

TAOYUAN TAIWAN, R. O. C.

Report No. : CE/2004/C1639A

Date : 2004/12/16

Page : 1 of 3

#### The following merchandise was (were) submitted and identified by the client as:

Type of Product : MINI COAXIAL CABLE 1.13MM SERIES

Sample Received : 2004/12/09

**Testing Date** : 2004/12/09 TO 2004/12/16

\_\_\_\_\_\_

: - Please see the next page -**Test Result** 

Operation Manager igned for and on behalf of SGS TAIWAN LTD.



WONDERFUL HI-TECH CO., LTD. Report No. : CE/2004/C1639A

NO. 17, PEI-YUAN ROAD., CHUNG-LI IND, PARK, Date : 2004/12/16

TAOYUAN TAIWAN, R. O. C. Page : 2 of 3

#### **Test Result**

PART NAME NO.1 : RED FEP JACKET(PLEASE REFER TO THE PHOTO ATTACHED)

				Result			
Test Item (s):	Unit	Method	MDL	No.1			
PBBs(Polybrominated biphenyls)(CAS NO:059536-65-1)	%	With reference to USEPA3540 or USEPA3550. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and	0.0005	N.D.			
		76/769/EEC)					
PBBEs(PBDEs)(Polybromi nated biphenyl ethers)	%	With reference to USEPA3540 or USEPA3550. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.			

				Result			
Test Item (s):	Unit	Method	MDL	No.1			
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.			
Cadmium (Cd)	ppm	ICP-AES after as per EN 1122, method B:2001 or other acid digestion.	2	N.D.			
Mercury (Hg)	ppm	ICP-AES after as per US EPA 3052 or other acid digestion.	2	N.D.			
Lead (Pb)	ppm	ICP-AES after as per US EPA 3050B or other acid digestion.	2	N.D.			

NOTE: (1) N.D. = Not detected (<MDL)

(2) ppm = mg/kg

(3) MDL = Method Detection Limit



WONDERFUL HI-TECH CO., LTD. NO. 17, PEI-YUAN ROAD., CHUNG-LI IND, PARK, TAOYUAN TAIWAN, R. O. C. Report No. : CE/2004/C1639A

Date : 2004/12/16

Page : 3 of 3





I-PEX JP CO., LTD. Report No. : CE/2005/61647A

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 1 of 12 Page

#### The following merchandise was (were) submitted and identified by the client as:

Type of Product MHF SERIES CONNECTOR

Style/Item No 20278-XXXR-XX/20311-XXXR-XX/20351-XXXR-XX/

20367-XXXR/20279-001E-01/20369-001E

Sample Received 2005/06/08

**Testing Date** 2005/06/08 TO 2005/06/15

**Test Result** : - Please see the next page -

Signed for and on behalf of SGS TAIWAN LTD.



I-PEX JP CO., LTD. Report No. : CE/2005/61647A

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

JAPAN Page : 2 of 12

#### **Test Result**

PART NAME NO.1 : COPPER METAL (PLEASE REFER TO THE PHOTO

ATTACHED)

PART NAME NO.2 BLACK AND WHITE PLASTIC (PLEASE REFER TO THE

PHOTO ATTACHED)

Test Item (s):	TIm:4	Unit Method	MDI	Res	sult
	Unit		MDL	No.1	No.2
Carbon tetrachloride		With reference to US EPA 8260. Analysis was performed by GC/MS linked Headspace.	1	N.D.	N.D.

				Result	
Test Item (s):	Unit	Method	MDL	No.1	No.2
CFC's(Chlorofluorocarbons)		Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]			
Group I					
Chlorofluorocarbon-11(CAS No:000075-69-4)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.
Chlorofluorocarbon-12(CAS No:000075-71-8)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.
Chlorofluorocarbon-113(CAS No:000076-13-1)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.
Chlorofluorocarbon-114(CAS No:000076-14-2)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.
Chlorofluorocarbon-115(CAS No:000076-15-3)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.
Group III					
Chlorofluorocarbon-13(CAS No:000075-72-9)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.

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Report No. : CE/2005/61647A I-PEX JP CO., LTD.

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 3 of 12 Page

Test Item (s):	TI34	Broth od	MDL	Result		
Test Item (s):	Unit	Method	MIDL	No.1	No.2	
Chlorofluorocarbon-111(CAS No:000354-56-3)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-112(CAS No:000076-12-0)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-211(CAS No:135401-87-5)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-212(CAS No:076564-99-3)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-213(CAS No:060285-54-3)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-214(CAS No:002268-46-4)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-215(CAS No:000076-17-5)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-216(CAS No:001652-80-8)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	
Chlorofluorocarbon-217(CAS No:000422-86-6)	ppm	Analysis was performed by GC/MS. [CFC's (Chlorofluorocarbons)]	1	N.D.	N.D.	

Test Item (s):	Unit	Method	MDL	Res	sult
	Onic	method	MIDL	No.1	No.2
PCTs(Polychlorinated Terphenyls)	ppm	Analysis was performed by GC/MS or GC/ECD.	0.5	N.D.	N.D.



Report No. : CE/2005/61647A I-PEX JP CO., LTD.

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 4 of 12 Page

Test Item (s):	TT-si4	Unit Method	MDL	Res	sult
	Onit Method	MIDL	No.1	No.2	
Halon		With reference to US EPA 8260.			
Halon-1211(CAS No:000353-59-3)	ppm	Analysis was performed by GC/MS.	1	N.D.	N.D.
Halon-1301(CAS No:000075-63-8)	ppm	Analysis was performed by GC/MS.	1	N.D.	N.D.
Halon-2402(CAS No:000124-73-1)	ppm	Analysis was performed by GC/MS.	1	N.D.	N.D.

Thorat Thoras (a)	Unit	Method	MDL	Res	sult
Test Item (s):		Method	MDL	No.1	No.2
HCFC's(Hydrogenated chlorofluorocarbons)		With reference to US EPA 8260.			
Hydrochlorofluorocarbon- 21(CAS No.:000075-43-4)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 22(CAS No.:000075-45-6)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon-31(CAS No.:000593-70-4)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 121(CAS No.:000354-14-3)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 122(CAS No.:000354-21-2)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 123(CAS No.:000306-83-1)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.

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Report No. : CE/2005/61647A I-PEX JP CO., LTD.

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 5 of 12 Page

	,		157	Re	sult
Test Item (s):	Unit	Method	MDL	No.1	No.2
Hydrochlorofluorocarbon- 124(CAS No.:002837-89-0)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 131(CAS No.:000359-28-4)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 132b(CAS No.:000471-43-2)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 133a(CAS No.:000075-88-7)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 141b(CAS No.:001717-00-6)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 221	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 222(CAS No.:000422-30-0)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 223	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 224	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.



Report No. : CE/2005/61647A I-PEX JP CO., LTD.

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 6 of 12 Page

	,		1477	Res	sult
Test Item (s):	Unit	Method	MDL	No.1	No.2
Hydrochlorofluorocarbon- 225ca(CAS No.:000422-56- 0)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 226(CAS No.:000431-87-8)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 231	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 232	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 233	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 234	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 235(CAS No.:013838-16-9)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 241	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 242	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.



I-PEX JP CO., LTD. Report No. : CE/2005/61647A

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

JAPAN Page : 7 of 12

Toot Itom (a):	TT 14	W. d. d	MDI	Res	sult
Test Item (s):	Unit	Method	MDL	No.1	No.2
Hydrochlorofluorocarbon- 243(CAS No.:000338-75-0)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 251	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 252	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 253(CAS No.:000354-06-1)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 261(CAS No.:000420-97-3)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 262(CAS No.:000420-97-3)	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.
Hydrochlorofluorocarbon- 271	ppm	Analysis was performed by GC/MS. [HCFC's (Hydrogenated chlorofluorocarbons)]	1	N.D.	N.D.



Report No. : CE/2005/61647A I-PEX JP CO., LTD.

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 8 of 12 Page

Test Item (s):	TIm:4	7	MDI	Res	sult
	Unit Method	MDL	No.1	No.2	
PCBs(Polychlorinated Biphenyls)(CAS NO:001336- 36-3)	ppm	With reference to USEPA 8082A. Analysis was performed by GC/MS or GC/ECD.	0.5	N.D.	N.D.

Test Item (s):	TIm:4	77	MDI	Res	sult
	Unit Method	MDL	No.1	No.2	
Polychlorinated Naphthalene	ppm	With reference to 83/264/EEC & EPA 8270D. Analysis was performed by GC/MS.	5	N.D.	N.D.

Test Item (s):	TT \$4	Unit Method	MDI	Res	sult
	Unit		MDL	No.1	No.2
PVC (CAS No:9002-86-2)	**	With reference to ASTM E1252 method. Analysis was performed by FTIR/ATR and Pyro-GC/MS.	-	Negative	Negative

Test Item (s):	TT 34	Unit Method	MDL	Result	
	Unit			No.1	No.2
Chlorinated Paraffin (C10~C13) (CAS NO:010871- 26-2)	%	With reference to USEPA3540C or USEPA3550C. Analysis was performed by GC/MS or GC/ECD.	0.01	N.D.	N.D.



Report No. : CE/2005/61647A I-PEX JP CO., LTD.

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 9 of 12 Page

Test Item (s):	Unit	Method	MDL	Result	
				No.1	No.2
Halogen		As per EN14582 method B.			
Halogen-Chlorine (Cl)(CAS No:007782-50-5)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it, the absorb solution was analyzed by IC method.	50	N.D.	N.D.
Halogen-Fluorine (F)(CAS No:007782-41-4)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it, the absorb solution was analyzed by IC method.	50	N.D.	3410.0
Halogen-Bromine (Br)(CAS No:007726-95-6)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it, the absorb solution was analyzed by IC method.	50	N.D.	74650.0
Halogen-Iodine (I)(CAS No:007553-56-2)	ppm	Filling the oxygen and absorb solution in the flask and take sample in the flask and burn it, the absorb solution was analyzed by IC method.	50	N.D.	N.D.

Test Item (s):	Unit	Method	MDL	Result	
				No.1	No.2
Methyl chloroform(CAS No.:000071-55-6)	ppm	With reference to US EPA 8260. Analysis was performed by GC/MS linked Headspace.(CFC's(Chloroflu orocarbons))	1	N.D.	N.D.



I-PEX JP CO., LTD. Report No. : CE/2005/61647A

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

JAPAN Page : 10 of 12

Test Item (s):	TT \$4	Method	MDL	Result	
	Unit	Method		No.1	No.2
Monobromobiphenyl	%	With reference to	0.0005	N.D.	N.D.
Dibromobiphenyl	%		0.0005	N.D.	N.D.
Tribromobiphenyl	%		0.0005	N.D.	N.D.
Tetrabromobiphenyl	%		0.0005	N.D.	N.D.
Pentabromobiphenyl	%	USEPA3540C or	0.0005	N.D.	N.D.
Hexabromobiphenyl	%	USEPA3550C. Analysis was performed by HPLC/DAD,	0.0005	N.D.	N.D.
Heptabromobiphenyl	%	LC/MS or GC/MS.	0.0005	N.D.	N.D.
Octabromobiphenyl	%	(prohibited by 2002/95/EC	0.0005	N.D.	N.D.
Nonabromobiphenyl	%	(RoHS), 83/264/EEC, and	0.0005	N.D.	N.D.
Decabromobiphenyl	%	76/769/EEC)	0.0005	N.D.	N.D.
Total PBBs	%	1	-	N.D.	N.D.
(Polybrominated					
biphenyls)/Sum of above					
Monobromobiphenyl ether	%	]	0.0005	N.D.	N.D.
Dibromobiphenyl ether	%		0.0005	N.D.	N.D.
Tribromobiphenyl ether	%		0.0005	N.D.	N.D.
Tetrabromobiphenyl ether	%	With reference to	0.0005	N.D.	N.D.
Pentabromobiphenyl ether	%	USEPA3540C or	0.0005	N.D.	N.D.
Hexabromobiphenyl ether	%	USEPA3550C. Analysis was performed by HPLC/DAD, LC/MS or GC/MS. (prohibited by 2002/95/EC (RoHS), 83/264/EEC, and 76/769/EEC)	0.0005	N.D.	N.D.
Heptabromobiphenyl ether	%		0.0005	N.D.	N.D.
Octabromobiphenyl ether	%		0.0005	N.D.	N.D.
Nonabromobiphenyl ether	%		0.0005	N.D.	N.D.
Decabromobiphenyl ether	%		0.0005	N.D.	N.D.
Total	%		-	N.D.	N.D.
PBBEs(PBDEs)(Polybromin ated biphenyl ethers)/Sum of above					



I-PEX JP CO., LTD. Report No. : CE/2005/61647A

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

JAPAN Page : 11 of 12

Test Item (s):	Unit	Method	MDL	Result	
				No.1	No.2
Chromium VI (Cr+6)	ppm	UV-VIS after reference to US EPA 3060A.	2	N.D.	N.D.
Cadmium (Cd)	ppm	ICP-AES after as per EN 1122, method B:2001 or other acid digestion.	2	N.D.	N.D.
Mercury (Hg)	ppm	ICP-AES after as per US EPA 3052 or other acid digestion.	2	N.D.	N.D.
Lead (Pb)	ppm	ICP-AES after as per US EPA 3050B or other acid digestion.	2	22.1	14.7

NOTE: (1) N.D. = Not detected (<MDL)

- (2) ppm = mg/kg
- (3) MDL = Method Detection Limit
- (4) " " = No Regulation
- (5) " --- " = Not Applicable
- (6) \* = Results shown are of the adjusted analytical results
- (7) \*\* = Qualitative analysis (No Unit)
- (8) Negative = Undetectable / Positive = Detectable
- (9) The MDL is 5ppm for the single compound of CP



I-PEX JP CO., LTD. Report No. : CE/2005/61647A

6-27-19 HARAMACHIDA MACHIDA-CITY TOKYO 194-0013 Date : 2005/06/15

**JAPAN** : 12 of 12 Page





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#### Certification

Awarded to

#### **FULL RISE ELECTRONIC CO., LTD.**

NO. 26, KAO CHING ROAD, KAO SHAN LI, YANG MEI, TAOYUAN

TAIWAN, R.O.C.

BVQI certify that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

STANDARD

## ISO 9001:2000

Scope of supply

Design, manufacture and supply the following:

- 1.PCB modular jack and plugs.
- 2. Telecom accessories C3, C4, C5, C5e, C6.
- 3.PC & IA connectors,
- 4.Card and board to board connectors
- 5. Wireless passive components
- 6. Mobile phone connectors.
- 7. Transformer jack Original Approval Date:

3 March, 1998

Subject to the continued satisfactory operation of the organisation's Management System, this certificate is valid until: 31 March, 2008

To check the validity of this certificate please call (886-2-25707656)

Further clarification regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organisation

Certificate Number:

172475

Date: 21 April, 2004

Sandy Chen



land ing office : BVQi (Taiwan) Co., Ltd. 6th Floor, No. 3, Tun S. Rd., Sec. 1, Taipei, Taiwan, R. O. C.

For BVQi (Holding) S. A Using the accreditation certification number 008