

深圳市壹创商显科技有限公司

承认书
APPROVAL

版本：A1

客 户
CUSTOMER:

品 名 规 格
DESCRIPTION: 2.4/5.8 蘑菇头天线

料 号
PART NO.: YC030-0142X

客 户 料 号
CUS PART NO.:

日 期
D A T E: 2025-06-15

呈样签章:

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	业 务 SALES DEPARTMENT

客户承认签章：

工 程 ENGINEERING DEPARTMENT	品 保 Q C DEPARTMENT	采 购 PURCHASING DEPARTMENT

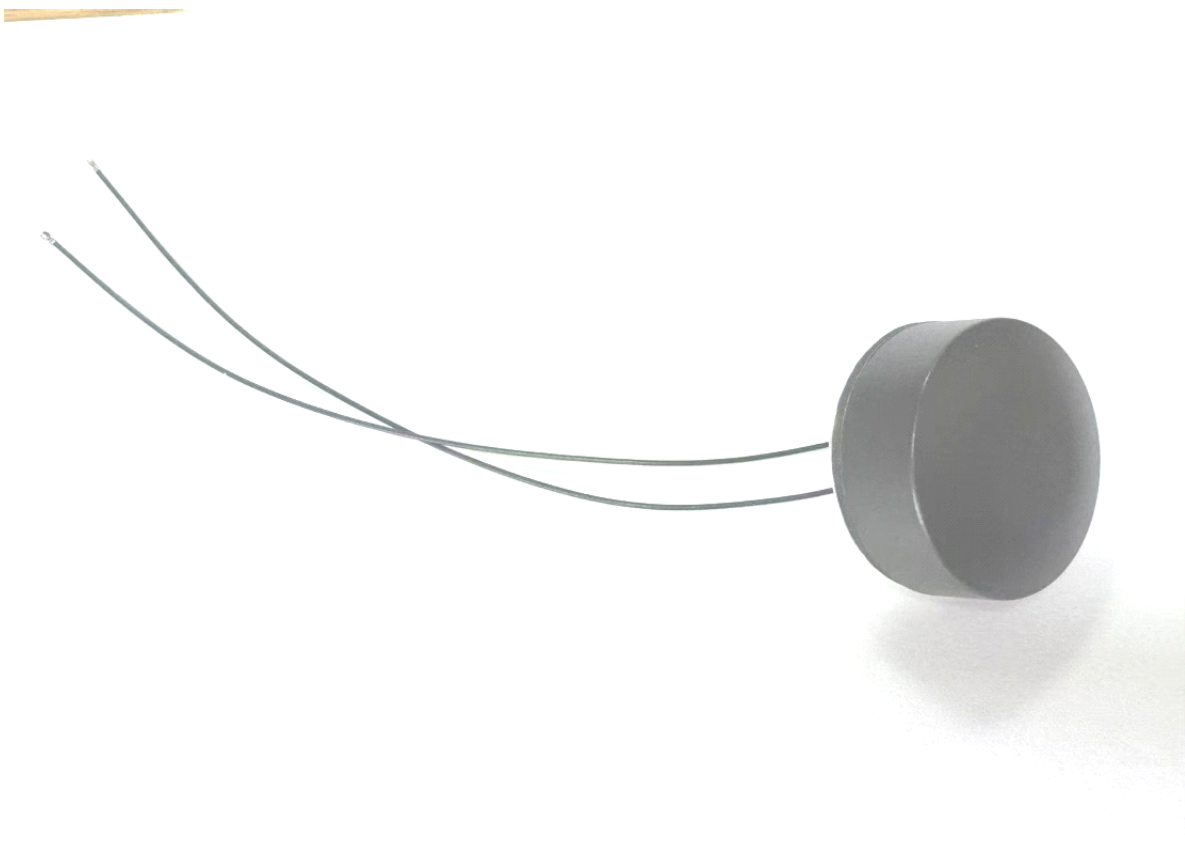
※ 客户确认样品附意栏：

深圳市壹创商显科技有限公司

电器技术参数

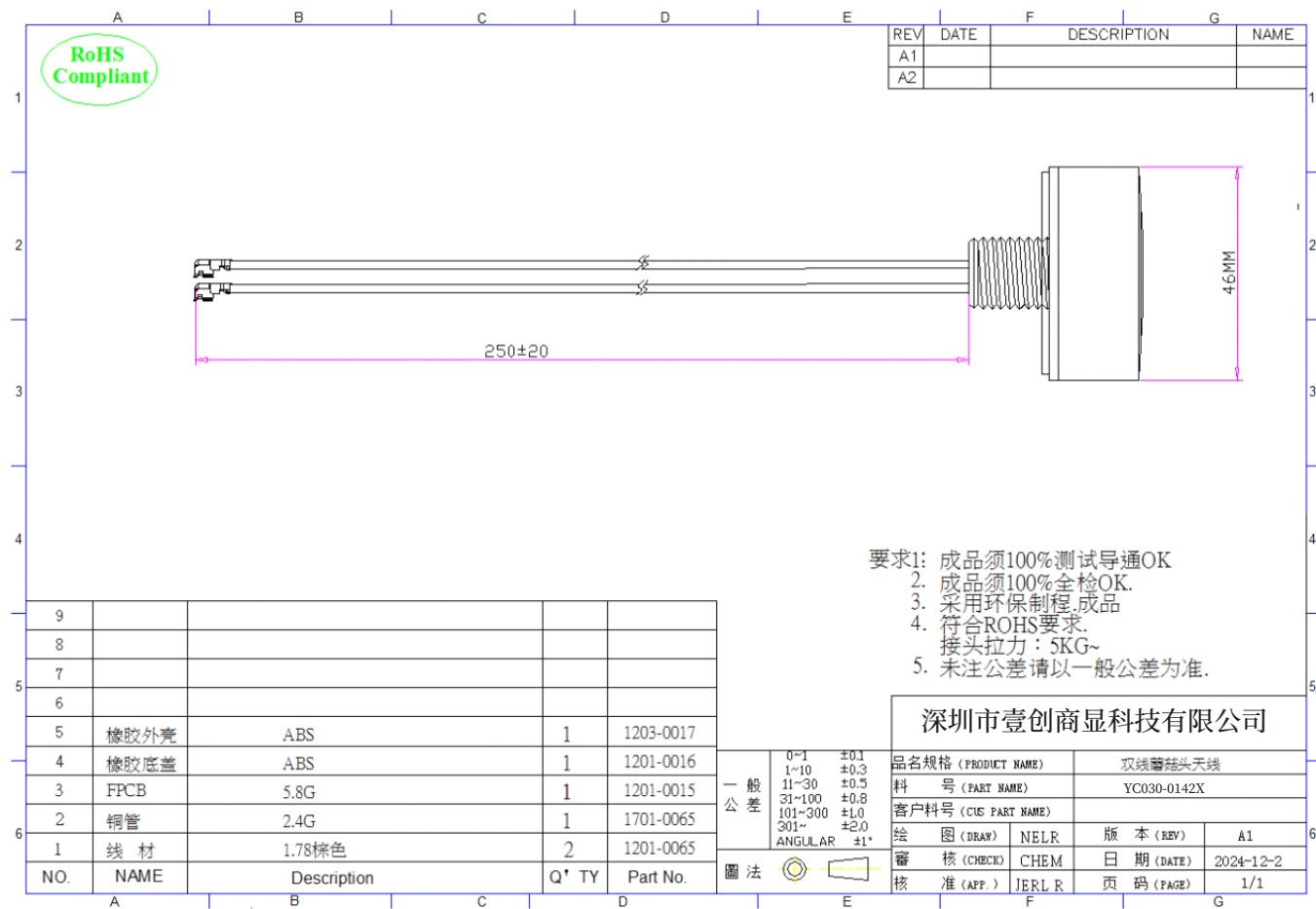
电 性 能 指 标		Electrical Specifications	
频率范围	2400/6000MHZ	Frequency Range	2400/6000MHZ
电压驻波比	≤2.0	VSWR	≤2.0
增益	5DBI	GAIN	5DBI
输入阻抗	50 Ω	Input Impedance	50 Ω
机 械 指 标		Mechanical Specifications	
天线颜色	黑色	Antenna Color	BLACK
接口形式	IPEX1.13	Input connector	IPEX1.13
天线长度	250mm	Cable length	250mm
工作温度	-40℃~+85℃	Working Temperature	-40℃~+85℃
工作湿度	20~80%	Working Humidity	20~80%

产品图片：



深圳市壹创商显科技有限公司

工程图:



环境性能测试:

项目	测试条件	规格
储存环境	在没有指定的情况下测试温度、湿度、气压如下: 1. 温度为-30℃~+80℃ 2. 相对湿度为45%-85% 3. 气压为86kpa-106kpa	电气机械性能正常
高低温试验	在70℃与40℃之间进行5次循环, 然后在正常条件下 1-2H, 检查外观质量。	尺寸应满足规定并应 满足满足 于机械、电气性能
耐恒定湿热 试验	相对湿度95±3%, 试验温度: 40℃. 持续2H作用后, 试品取出后5min之内测定电气性能, 试品在正常条 件下1-2H, 检查外观质量	尺寸应满足规定并应 满足满足 于机械、电气性能

深圳市壹创商显科技有限公司

振动试验	振频范围10-55HZ，位移幅值：0.35MM，加速度幅值：50.0M/S，扫频循环次数：30次	电气机械性能正常
跌落试验	1M高空按照互相垂直的轴方向自由跌落3次	电气机械性能正常

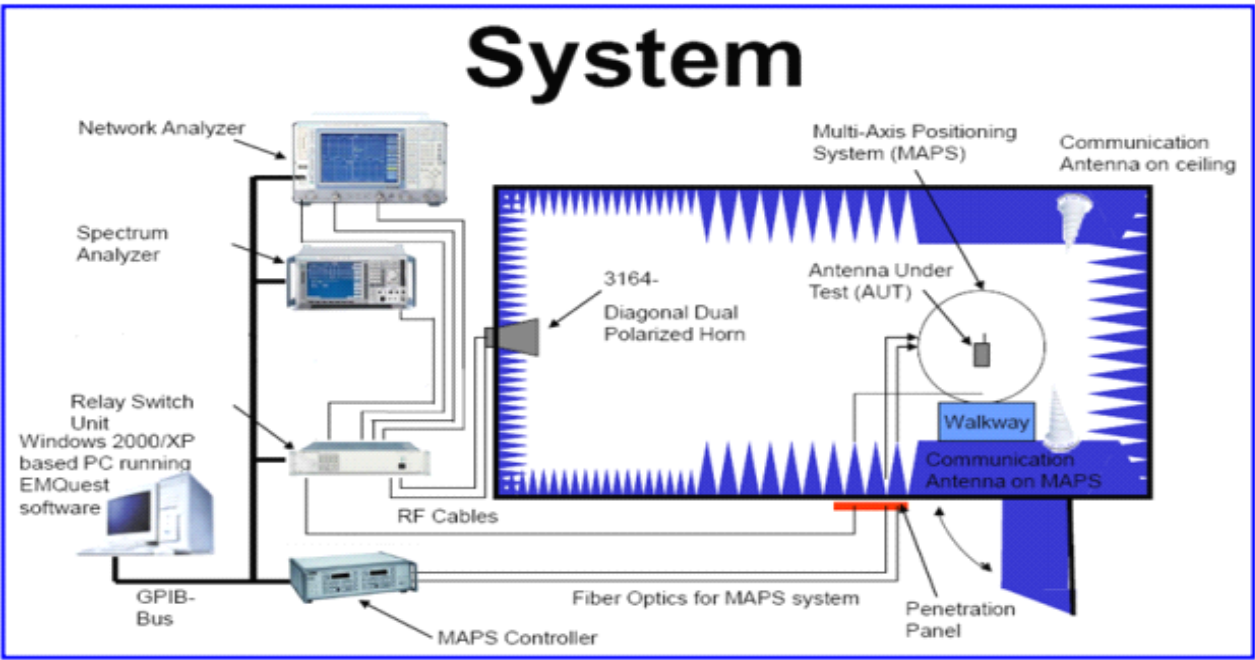
4.测试设备及原理 Testing Equipment and Principle

1. 测试设备： 网络分析仪 Network Analyzers :

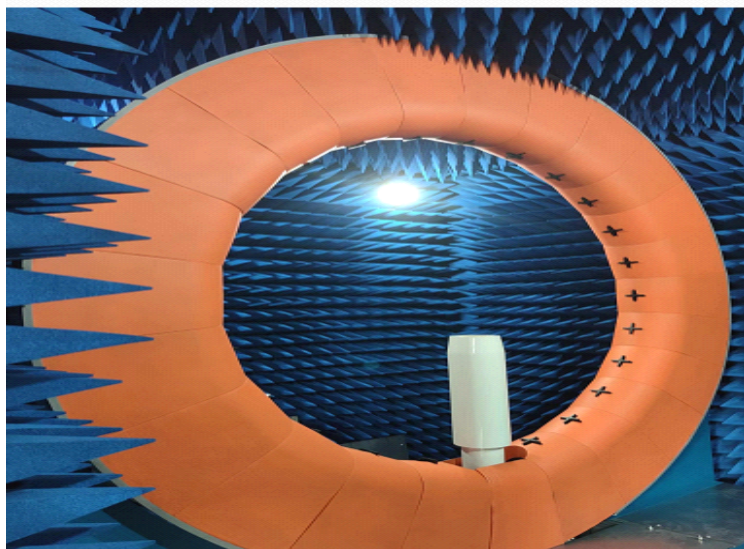
Agilent 8753D 5071B 综合测试仪 Communications Test Set:

Agilent E5515C CMW5003D 暗室测试系统 3D Chamber Test System:

2. 测试原理:

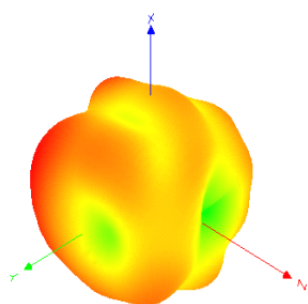


深圳市壹创商显科技有限公司

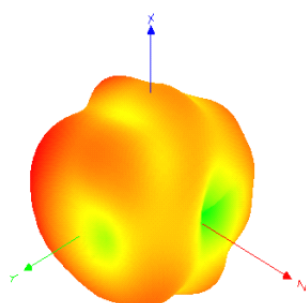


24 探头微波暗室测试设备

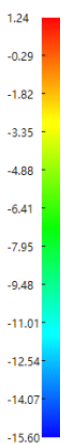
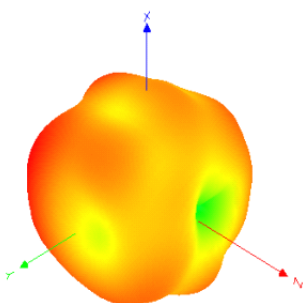
Frequency (MHz) : 2410



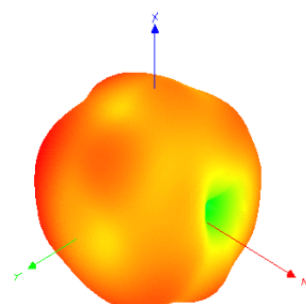
Frequency (MHz) : 2430



Frequency (MHz) : 2450

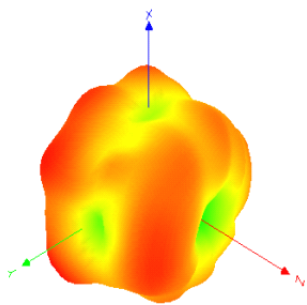


Frequency (MHz) : 2480

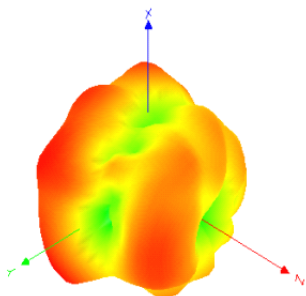


深圳市壹创商显科技有限公司

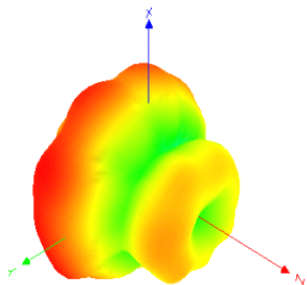
Frequency (MHz) : 5150



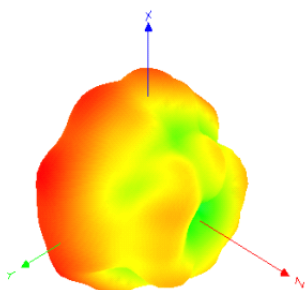
Frequency (MHz) : 5200



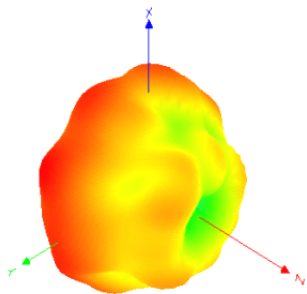
Frequency (MHz) : 5350



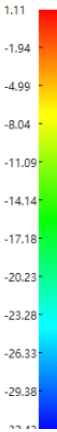
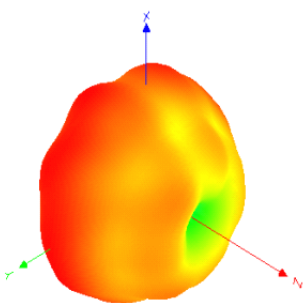
Frequency (MHz) : 5450



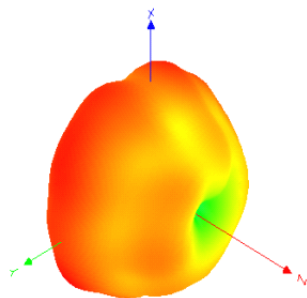
Frequency (MHz) : 5500



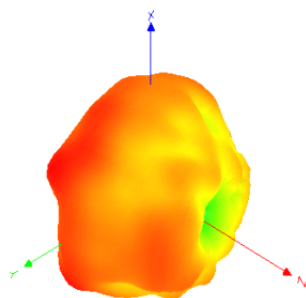
Frequency (MHz) : 5650



Frequency (MHz) : 5800



Frequency (MHz) : 6000



深圳市壹创商显科技有限公司

● 增益测试

Frequency / MHz	Efficiency / %	Gain/ dB
2400	52.66	2.73
2410	60.12	2.32
2420	57.41	2.05
2430	55.08	2.51
2440	52.6	2.59
2450	60.38	2.6
2460	61.55	2.73
2470	62.43	2.34
2480	63.11	2.05
2490	60.32	2.47
2500	61.66	2.35

Frequency / MHz	Efficiency / %	Gain/ dB
5000	50.39	1.16
5100	50.53	1.38
5200	51.52	1.25
5300	50.39	1.18
5400	56.75	2.08
5500	57.81	2.69
5600	56.36	2.88
5700	60.39	3.25
5800	63.1	3.43
5900	60.79	3.45
6000	62.11	3.48

深圳市壹创商显科技有限公司

Active Test_WIFI_B					
Channel	Frequency				
			TRP (11bPS)		TIS (11MbPS)
1	2412		22.5		-90.4
6	2437		20.7		-90.7
13	2472		22.1		-91.6
Channel	Frequency		TRP (78bPS)		TIS (78MbPS)
36	5180		19.6		-74.6
64	5320		19.6		-74.5
165	5825		19.1		-72.2

● 驻波测试

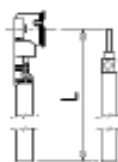


深圳市壹创商显科技有限公司

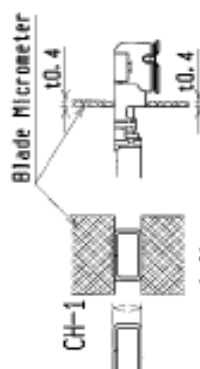
Material Data Sheet MHF Connector

PART NO. 20278-11R-08		Ground contact Housing Contact Connector end (notch)	Part No. 20278-101R-08 20278-102R-08 20278-101R-13 20278-102R-13 20278-101R-32 20278-102R-32 For hand tool (with notch)	Connector end	Part No. 20278-111R-08 20278-112R-08 20278-111R-13 20278-112R-13 20278-111R-32 20278-112R-32 For seal auto termination machine (without notch)	Cable Ass'y Plus P/N 20278-11R-08 P/N 20278-11R-13 P/N 20278-11R-32 Coaxial cable Receptacle Part No. 20279-001E-01 20441-001E-01 MATING	<table border="1"> <tr> <td data-bbox="1246 1727 1430 1962"> GENERAL TOLERANCE 6 MAX. ± 0.2 6 OVER MAX. 30 ± 0.3 30 OVER MAX. 120 ± 0.5 ANGLE ± 2° </td> <td data-bbox="1246 752 1430 1727"> <table border="1"> <tr> <td data-bbox="1246 752 1318 1211"> I-PEX Interconnect and Precision Electronics TOKYO, JAPAN </td> <td data-bbox="1318 752 1430 1211"> TITLE MH series micro coaxial connector plus vertical (ground contact : with electric) SCALE UNIT Dwg. No. 6/1 mm 20278 SHEET REV. 1/4 19C </td> </tr> </table> </td> <td data-bbox="1246 367 1430 752"> <table border="1"> <tr> <td data-bbox="1246 367 1318 752"> I-PEX Interconnect and Precision Electronics TOKYO, JAPAN </td> <td data-bbox="1318 367 1430 752"> DATE JUN/13/01 DESIGN BY K. Ohbayashi CHK BY T.H APP BY K. Katayuchi CUST COPY </td> </tr> </table> </td> </tr> </table>	GENERAL TOLERANCE 6 MAX. ± 0.2 6 OVER MAX. 30 ± 0.3 30 OVER MAX. 120 ± 0.5 ANGLE ± 2°	<table border="1"> <tr> <td data-bbox="1246 752 1318 1211"> I-PEX Interconnect and Precision Electronics TOKYO, JAPAN </td> <td data-bbox="1318 752 1430 1211"> TITLE MH series micro coaxial connector plus vertical (ground contact : with electric) SCALE UNIT Dwg. No. 6/1 mm 20278 SHEET REV. 1/4 19C </td> </tr> </table>	I-PEX Interconnect and Precision Electronics TOKYO, JAPAN	TITLE MH series micro coaxial connector plus vertical (ground contact : with electric) SCALE UNIT Dwg. No. 6/1 mm 20278 SHEET REV. 1/4 19C	<table border="1"> <tr> <td data-bbox="1246 367 1318 752"> I-PEX Interconnect and Precision Electronics TOKYO, JAPAN </td> <td data-bbox="1318 367 1430 752"> DATE JUN/13/01 DESIGN BY K. Ohbayashi CHK BY T.H APP BY K. Katayuchi CUST COPY </td> </tr> </table>	I-PEX Interconnect and Precision Electronics TOKYO, JAPAN	DATE JUN/13/01 DESIGN BY K. Ohbayashi CHK BY T.H APP BY K. Katayuchi CUST COPY
GENERAL TOLERANCE 6 MAX. ± 0.2 6 OVER MAX. 30 ± 0.3 30 OVER MAX. 120 ± 0.5 ANGLE ± 2°	<table border="1"> <tr> <td data-bbox="1246 752 1318 1211"> I-PEX Interconnect and Precision Electronics TOKYO, JAPAN </td> <td data-bbox="1318 752 1430 1211"> TITLE MH series micro coaxial connector plus vertical (ground contact : with electric) SCALE UNIT Dwg. No. 6/1 mm 20278 SHEET REV. 1/4 19C </td> </tr> </table>	I-PEX Interconnect and Precision Electronics TOKYO, JAPAN	TITLE MH series micro coaxial connector plus vertical (ground contact : with electric) SCALE UNIT Dwg. No. 6/1 mm 20278 SHEET REV. 1/4 19C	<table border="1"> <tr> <td data-bbox="1246 367 1318 752"> I-PEX Interconnect and Precision Electronics TOKYO, JAPAN </td> <td data-bbox="1318 367 1430 752"> DATE JUN/13/01 DESIGN BY K. Ohbayashi CHK BY T.H APP BY K. Katayuchi CUST COPY </td> </tr> </table>	I-PEX Interconnect and Precision Electronics TOKYO, JAPAN	DATE JUN/13/01 DESIGN BY K. Ohbayashi CHK BY T.H APP BY K. Katayuchi CUST COPY								
I-PEX Interconnect and Precision Electronics TOKYO, JAPAN	TITLE MH series micro coaxial connector plus vertical (ground contact : with electric) SCALE UNIT Dwg. No. 6/1 mm 20278 SHEET REV. 1/4 19C													
I-PEX Interconnect and Precision Electronics TOKYO, JAPAN	DATE JUN/13/01 DESIGN BY K. Ohbayashi CHK BY T.H APP BY K. Katayuchi CUST COPY													

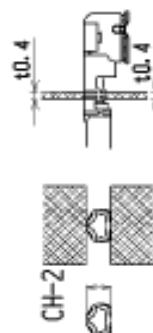
Cable cut length



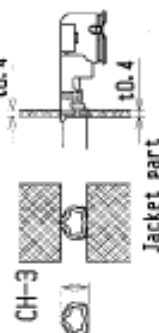
Cr Imp Height



-flt part



Outer conductor part



Jacket part

Part No. of non halogen free type	20270-101R-00 20270-111R-00		20270-101R-13 20270-111R-13		20270-101R-32 20270-111R-32		20270-101R-18 20270-111R-18	
	20270-102R-00 20270-112R-00		20270-102R-13 20270-112R-13		20270-102R-32 20270-112R-32		20270-102R-18 20270-112R-18	
Housing color	White		Black		Black		White	
Applicable cable nominal dimension								
Braided shield of Outer conductor 外部導体の編組	Single / 1層編組		Single / 1層編組		Double / 2層編組		Single / 1層編組	
P/N of hand Tool	90187-008C		90187-013C		90187-032C		90233-018	
P/N of seal auto termination machine	90213-008C		90213-013C		90213-032C		90232-018	
Sect. M-M								
Sect. L-L								
Crimp Height	CH-1 0.75~0.84		1.34~1.40 1.06~1.14		1.34~1.40 1.20~1.30		1.34~1.40 1.41~1.49	
	CH-3 0.85~0.97		1.15~1.35		1.26~1.46		1.70~1.80	

NOTE-1
中心導体、外部導体への半田コティングは不可
Must not use solder coated
Inner conductor and outer conductor.

I-PEX
Interconnect
and Prototyping Electronics

TITLE	General	TOKYO, JAPAN
HP series micro coaxial connector plug vertical (ground contact - gold plating)		

General

REV.	DATE	BY	CUSTOMER	PROJECTION SCALE UNIT	DWG. No.	SHEET	REV.
2814			COPY	1:100	20728	3/4	19C

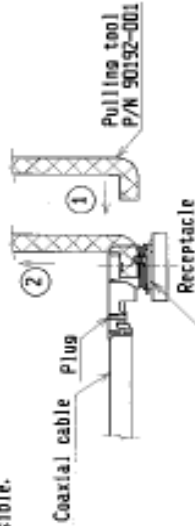
FORM REV. 4

WAS T

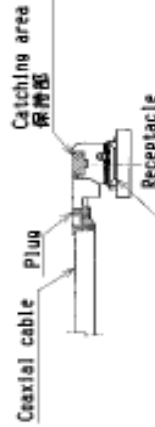
深圳市壹创商显科技有限公司

5-2 Unmating.

- (1) In case of unmating by pulling tool.
Please use the pulling tool as the following drawing, and please pull plug to vertical direction as directly as possible.



- (2) In case of unmating directly by hand.
Please catch the catching area of plug, and please pull plug to vertical direction as directly as possible.



- (3) Crimp over standards of outer conductor

Standards: Less than 10% from total numbers of outer conductor
(Numbers of outer conductor's crimp over from outer conductor's barrel)

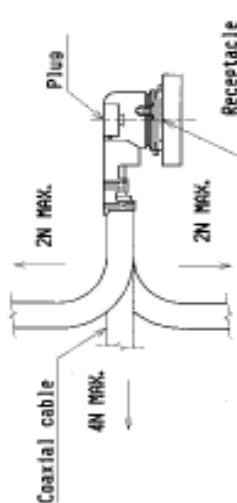
- (4) Caution about heat shrinkage tubes

Please be careful not to melt housing when using heat shrinkage tubes.
It will become cause of open circuit.

- (5) This is 'Pb-free' connector.

Notes

- Material
(1) Housing : PBT, UL94V-0
(2) Contact
phosphor bronze
gold plating 0.1μm MIN.
over nickel 1.27μm MIN.
(3) Ground contact
phosphor bronze
gold plating 0.05μm MIN.
over nickel 1.27μm MIN.
(4) Packing : reel
(5) Mating partner part No.
: 20279-001E-01, 20441-001E-01
(6) Permissible load of cable at mating



- (7) 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.

- (8) Connector cannot be inserted by force

5-1 Connector insertion
Plug and Receptacle cannot be inserted by force.
Please insert the plug and receptacle 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.

GENERAL TOLERANCE		DESIGN BY		DATE	
6 MAX.	±0.2	CHK'D BY		DATE	
6 OVER MAX. 30	±0.3	APP'D BY		DATE	
30 OVER MAX. 120	±0.5	REV. RECORD		DATE	
ANGLE	±2°	SERIES No.	2814		
		CUSTOMER	COPY	PROJECTION	
		TITLE		I-PEX	
		Interconnect and Passive Electronics		TOKYO, JAPAN	
		NF series ultra coaxial connector plug vertical (formed contact, solid plating)		General	
		SCALE UNIT		20278	
		SHEET REV.		4/4 19C	