

# APPROVAL SHEET

## (RoHS+HF)

CUSTOMER : 冠捷  
CUSTOMER'S PART NO. :  
DESCRIPTION : METAL STAMPING ANTENNA ASSEMBLY  
PART NO. : MSA-3410-25GC4-A5-B330MM  
DATE : 2013/5/2  
AUTHORIZED BY : *Jason Chen*

	FULLY APPROVED	PARTIALLY APPROVED	REJECTED
SIGN			
SUGGESTION			

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# Antenna Specification

## ■ ELECTRICAL PROPERTIES(With Housing)

- 1.1 Frequency Range.....2.4/5 GHz
- 1.2 Impedance.....50 Ohm Nominal
- 1.3 VSWR.....2 (Max)
- 1.4 Return Loss.....-10dB (Max)
- 1.5 Radiation.....Omni-directional
- 1.6 Gain(peak).....2.4GHz:1.52dBi  
5GHz:5.28dBi
- 1.8 Polarization.....Linear Vertical
- 1.9 Admitted Power.....1W

## ■ PHYSICAL PROPERTIES

- 2.1 Cable.....Coaxial Cable  $\phi$  1.37 (Black)
- 2.2 Antenna Material.....SUS430(Nickel Plating) T=0.3mm  
(Gnd PAD Pull  $\geq$ 0.9kg)
- 2.3 Operating Temp& Humidity.....-20°C~ +85°C RH 80% MAX
- 2.4 Storage Temp& Humidity.....-30°C~ +85°C RH 90% MAX
- 2.5 Double Tape .....G4000
- 2.6 Connector.....IPEX Compatible



# Mechanical Specification

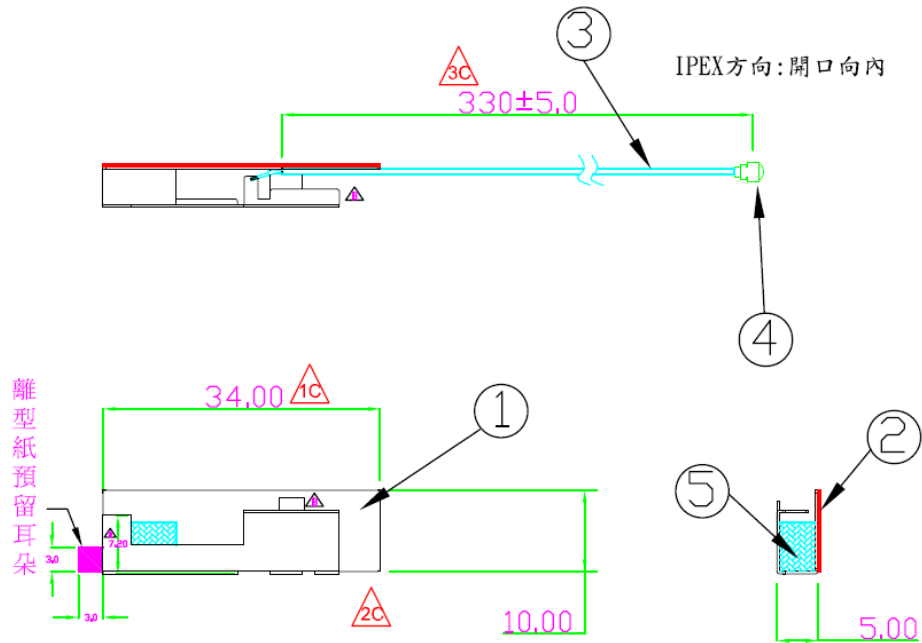
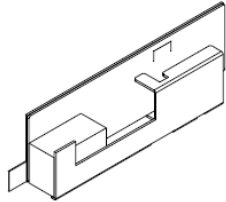
RoHS COMPLIANT

## MECHANICAL

Body: SUS430(鍍鎳) T=0.3mm

## ELECTRICAL

Frequency : 2.4GHz/5GHz



凡標註△記號者為品管檢驗之尺寸

NO	DESCRIPTION	Q'TY	REMARK
5	Sponge	EPDM L9*W6*T4.5	1
4	Connector	IPEX Compatible	1
3	Coaxial cable	Ø 1.37 Black	1
2	Double Tape	G4000 L34*W10	1
1	Bady	SUS430(鍍鎳) T=0.3mm	1

設計 DR. HWCHAN 2013/04/12	核准 APPD. Marco 2013/04/12	容許公差 .XXX ±0.1 .XX ±0.5 .X ±1.0 X ±3.0 ANG ±5	TOLERANCE	品名 ARTICLE  MSA-3410-25GC4-A5-B330MM
版本說明 REVISION NOTE				單位 UNIT mm
<b>MAGLAYERS</b>				比例 SCALE ****
				張數 SHEET 1
				版本 REV. B



# Test Report

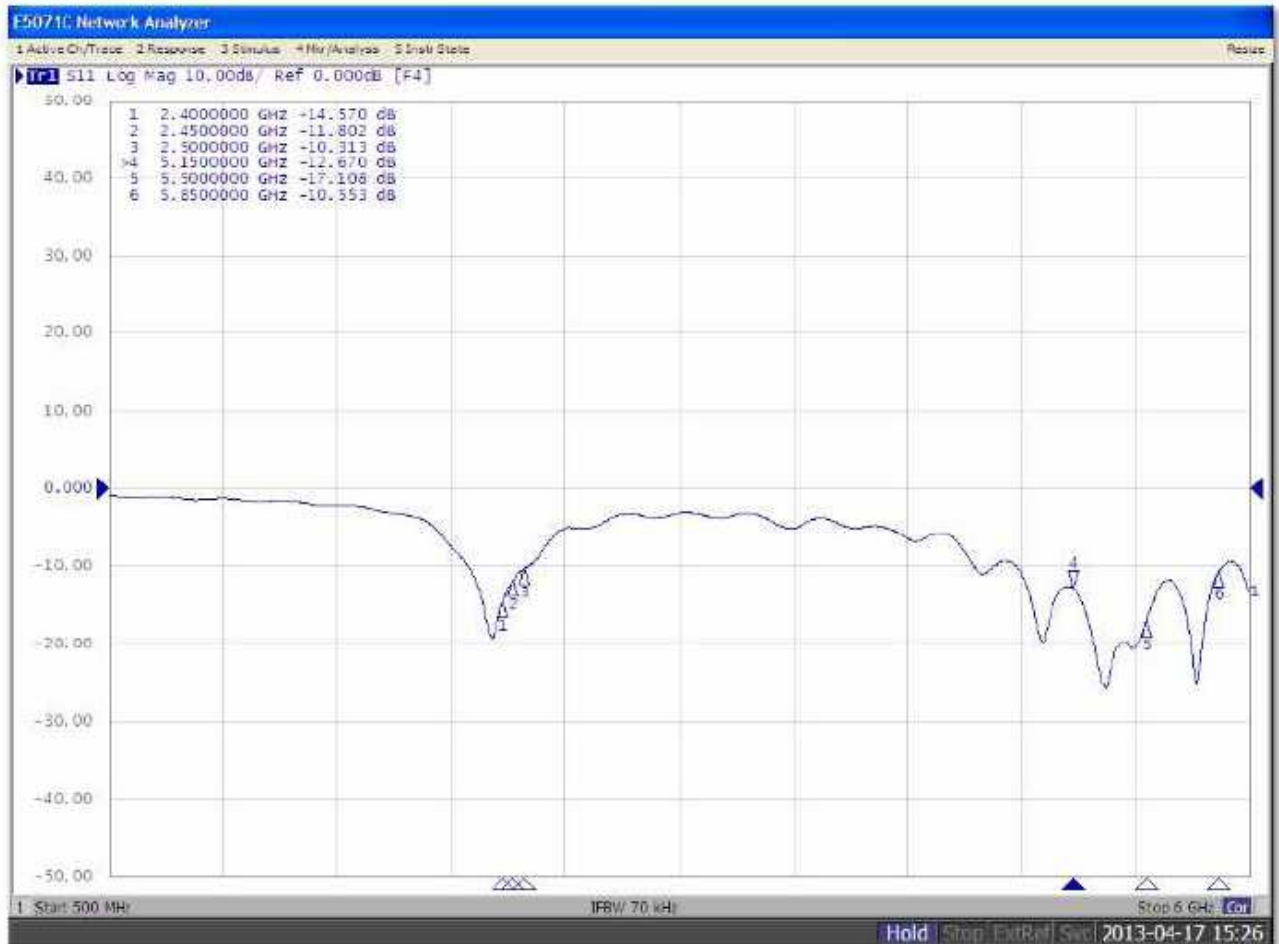
## ELECTRICAL CHARACTERISTICS

P/NO: MSA-3410-25GC4-A5-B330MM

Spec: 2.4 GHz ~2.5GHz

S33

## Return Loss

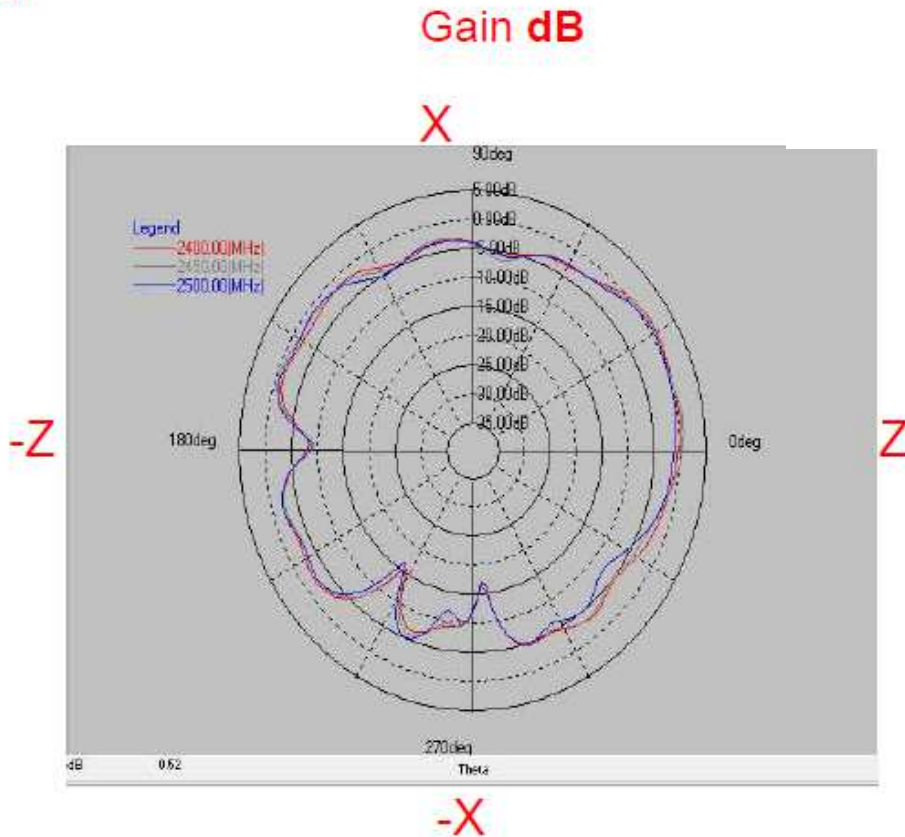


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## A2072PWH 2.4G 2D Radiation Patterns

Phi=0.00deg

Z-X Cut



Layer	Max value	Min value	Average
2400(MHz)	1.11 dB	-16.85 dB	-2.95 dB
2450(MHz)	0.88 dB	-17.44 dB	-2.98 dB
2500(MHz)	0.45 dB	-17.24 dB	-3.37 dB

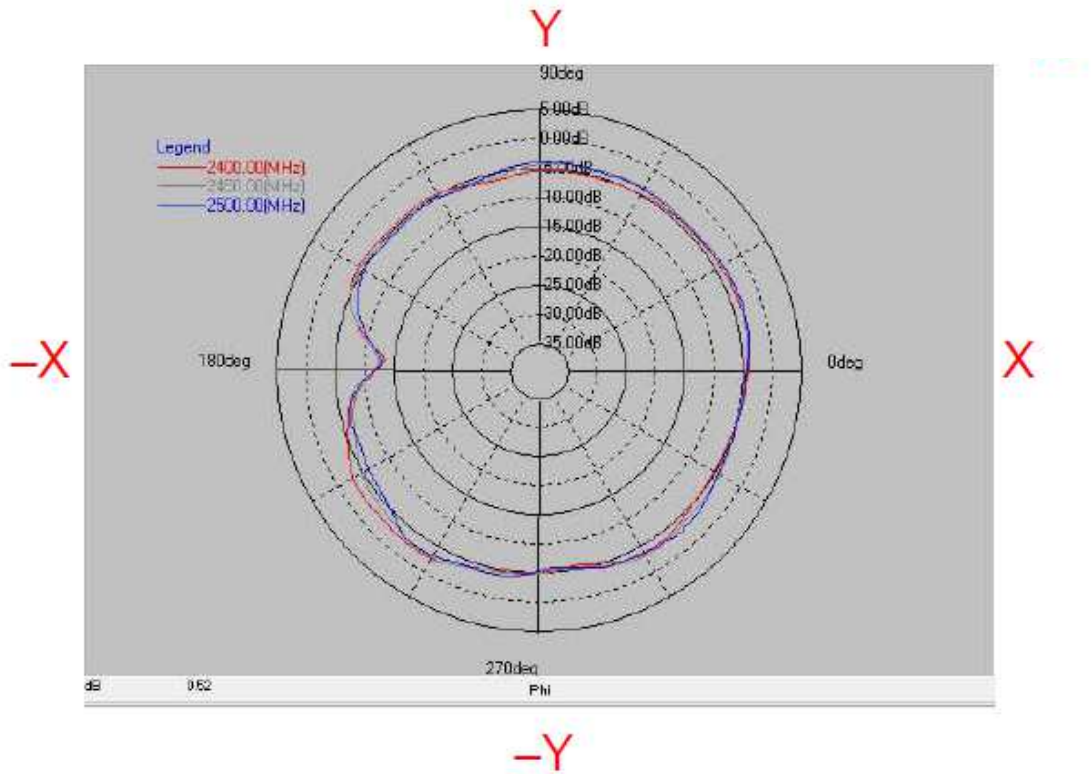


Frequency(MHz) : 2400~2500 X-Y Plane

Theta=90.00deg

X-Y Cut

Gain dB



Layer	Max value	Min value	Average
2400(MHz)	-2.54 dB	-13.36 dB	-4.77 dB
2450(MHz)	-2.84 dB	-12.42 dB	-4.66 dB
2500(MHz)	-3.09 dB	-12.98 dB	-4.80 dB



Frequency(MHz) : 5150~5850 Z- X Plane

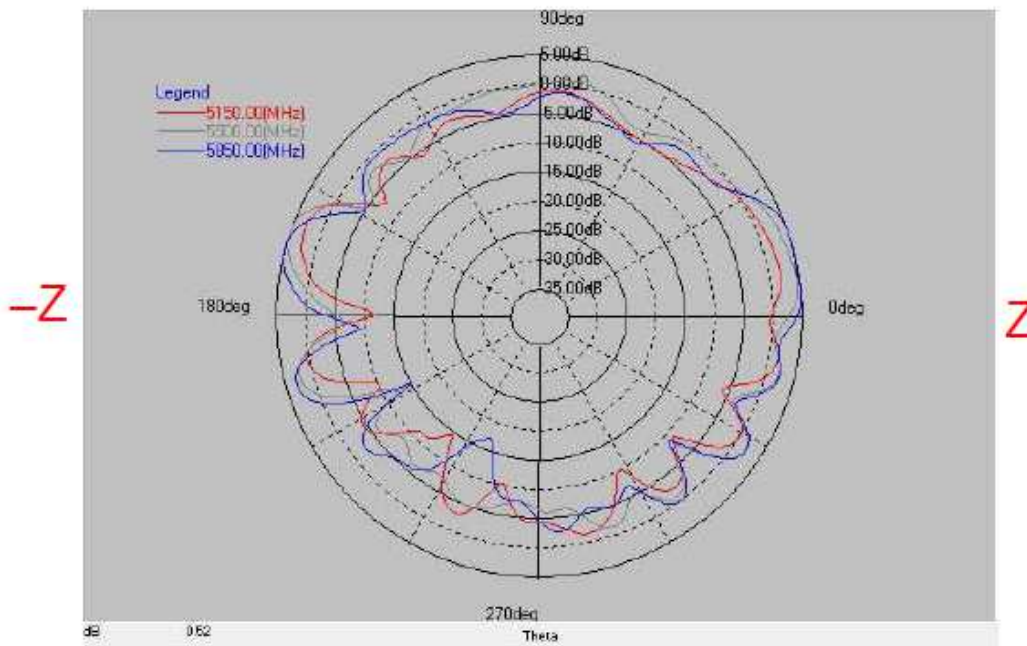
# A2072 PWH 5G

Phi=0.00deg

Z-X Cut

Gain dB

X



-X

Layer	Max value	Min value	Average
5150(MHz)	2.94 dB	-14.76 dB	-2.31 dB
5500(MHz)	5.28 dB	-12.66 dB	-0.50 dB
5850(MHz)	5.19 dB	-17.34 dB	-0.41 dB

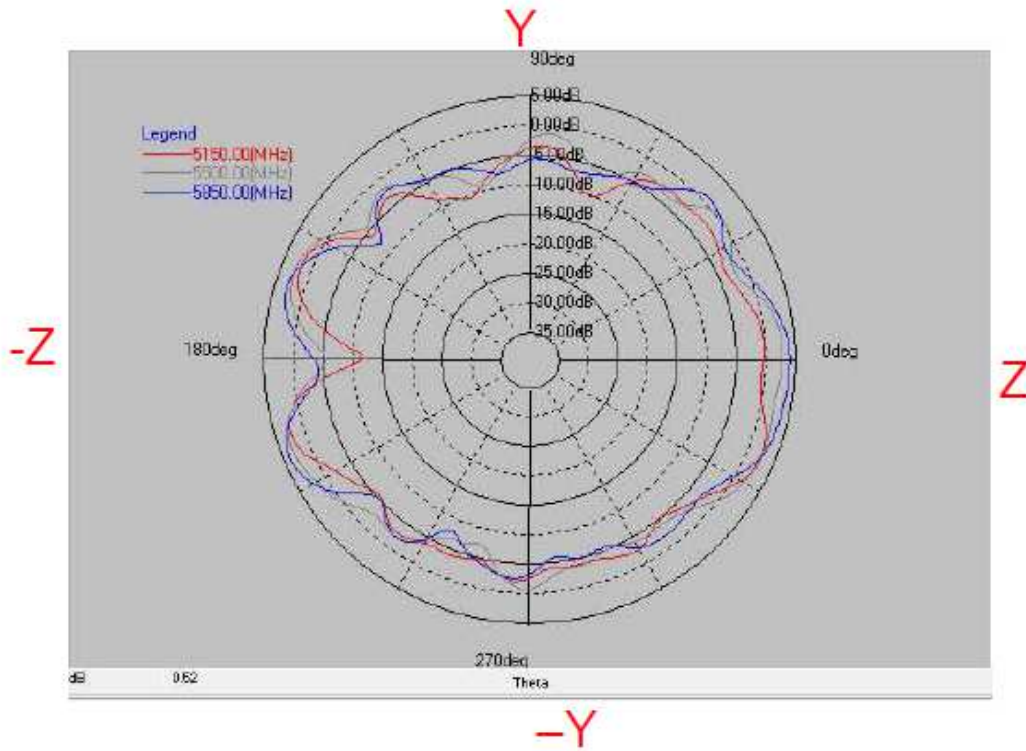


Frequency(MHz) : 5150~5850 Z- YPlane

Phi=90.00deg

Z-Y Cut

Gain dB



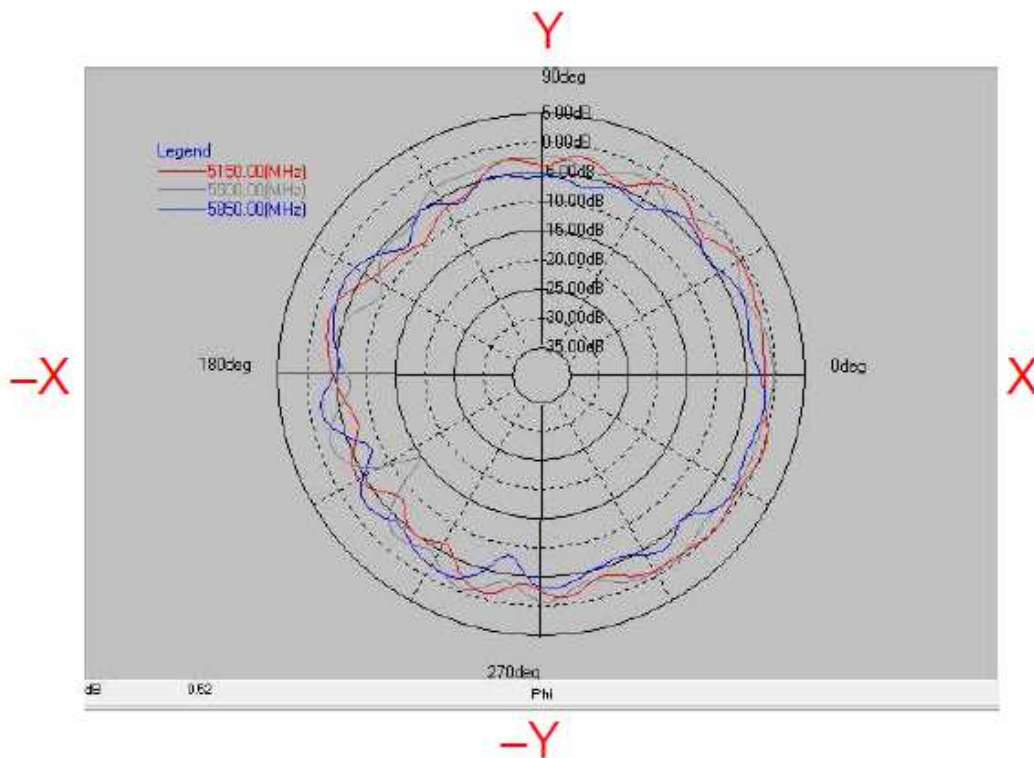
Layer	Max value	Min value	Average
5150(MHz)	2.54 dB	-11.98 dB	-2.34 dB
5500(MHz)	3.07 dB	-9.52 dB	-0.91 dB
5850(MHz)	4.22 dB	-8.25 dB	-0.81 dB

Frequency(MHz) : 5150~5850 X- Y Plane

Theta=90.00deg

X-Y Cut

Gain dB



Layer	Max value	Min value	Average
5150(MHz)	0.36 dB	-9.71 dB	-2.83 dB
5500(MHz)	-0.17 dB	-14.58 dB	-2.73 dB
5850(MHz)	-1.37 dB	-8.61 dB	-4.04 dB



# Cable Specification

江阴神宇通信www.shenyucable.com

型号 Type	RF-1.37/50	料号 P/N	SY137/50-003(Black)	
结构图 Structure drawing				
<b>结构特性 Structure characteristics</b>				
结构 Structure	项目 Item	标准值 Standard value		
①内导体 Inner conductor	材料 Material	镀银铜线 Silverplated copper wire		
	组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)	7/0.102		
	(绞合)标称外径(mm) (Intertwist)NOM.O.D.(mm)	0.306±0.02		
②绝缘层 Insulation	材料 Material	聚全氟乙丙烯 FEP		
	颜色 Color	透明 Clarity		
	标称外径(mm) NOM.O.D.(mm)	0.9±0.03		
③外导体 Outer conductor	材料 Material	镀锡铜线 Tinned copper wire		
	组成:总根数/单根外径(mm) Makeup:total / O.D. of every wire(mm)	5/0.05		
	标称外径(mm) NOM.O.D.(mm)	1.13±0.05		
	覆盖率(%) Coverage ratio(%)	90±5		
④护套层 Jacket	材料 Material	聚全氟乙丙烯 FEP		
	颜色 Color	黑 Black		
	标称外径(mm) NOM.O.D.(mm)	1.37±0.05		
<b>电性能特性 Electrical characteristics</b>				
项目 Item	标准值 Standard value	项目 Item	频率 Frequency	标准值 Standard value 单位 Unit:dB/m
电容(pF/m) Capacitance(pF/m)	96	衰减 Attenuation	1GHz	≤1.7
速率(%) Velocity(%)	70		2GHz	≤2.5
阻抗(Ω) Impedance(Ω)	50±2		3GHz	≤3
驻波比 Standing wave ratio	≤1.3@0-6GHz		4GHz	≤3.5
最大工作电压(V) Max.operating voltage(V)	1000		5GHz	≤4
最大工作频率(GHz) Max.operating frequency(GHz)	6		6GHz	≤4.5
<b>可靠性 Dependability</b>				
项目 Item	单位 Unit	标准值 Standard value		
最小弯曲半径(一次) Min.bending radius static	mm	5		
最小弯曲半径(重复) Min.bending radius repeated	mm	—		
工作温度范围 Operating temperature	℃	-55~+200		
<b>包装 Packing</b>				
项目 Item	单位 Unit	标准值 Standard value		
包装方式 Packing mode	/	纸盘 Papery plate		
每盘长度 The length of each plate	m	500		
每盘接头数 Each connector plate number	/	≤3		
每段最短长度 The shortest length of each root	m	≥10		

