

SPECIFICATION FOR APPROVAL

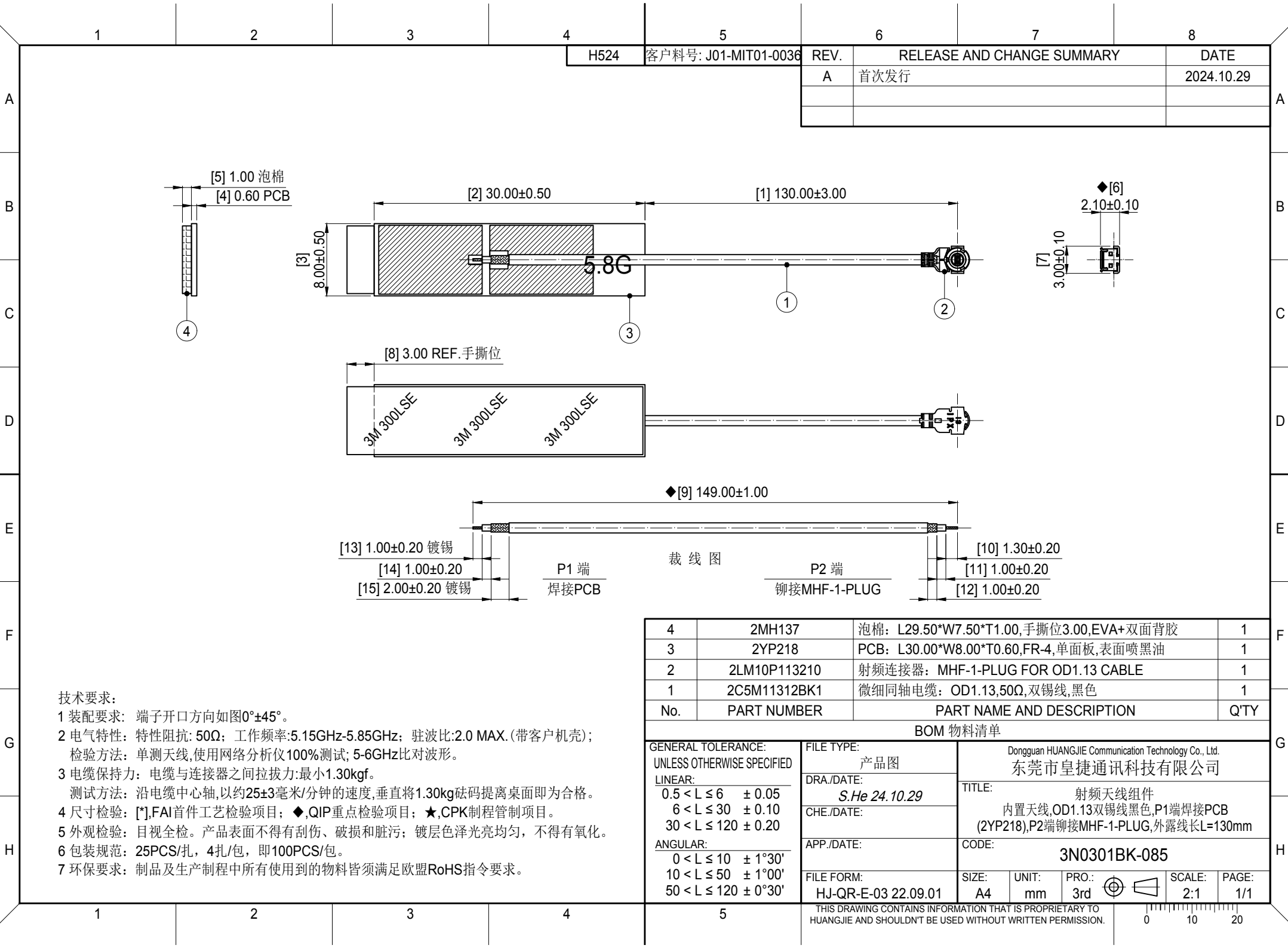
CUSTOMER	
CUS. CODE	
CUS. MODEL	
HJ-Tech CODE	3N0301BK-085
PRO. NAME	Internal Antenna
SPECIFICATION DESCRIPTION	Built in antenna, 0D1.13 double tin wire black, P1 end soldered PCB (2YP218), P2 end riveted MHF-1-PLUG, exposed wire length L=130mm
DATE	2024/11/22

/ SUPPLIER		
PREPARER	CHECKER	APPROVER
S. He		

/ CUSTOMER		
TRANSCTOR	CHECKER	APPROVER

Dongguan Huangjie Communication Technology Co., Ltd

Address: Quantang Daxiandi Industrial Zone, Liaobu Town, Dongguan City, Guangdong Province



H524	客户料号: J01-MIT01-0036	REV.	RELEASE AND CHANGE SUMMARY		DATE
		A	首次发行		2024.10.29

4	2MH137	泡棉: L29.50*W7.50*T1.00,手撕位3.00,EVA+双面背胶	1
3	2YP218	PCB: L30.00*W8.00*T0.60,FR-4,单面板,表面喷黑油	1
2	2LM10P113210	射频连接器: MHF-1-PLUG FOR OD1.13 CABLE	1
1	2C5M11312BK1	微细同轴电缆: OD1.13,50Ω,双锡线,黑色	1
No.	PART NUMBER	PART NAME AND DESCRIPTION	Q'TY

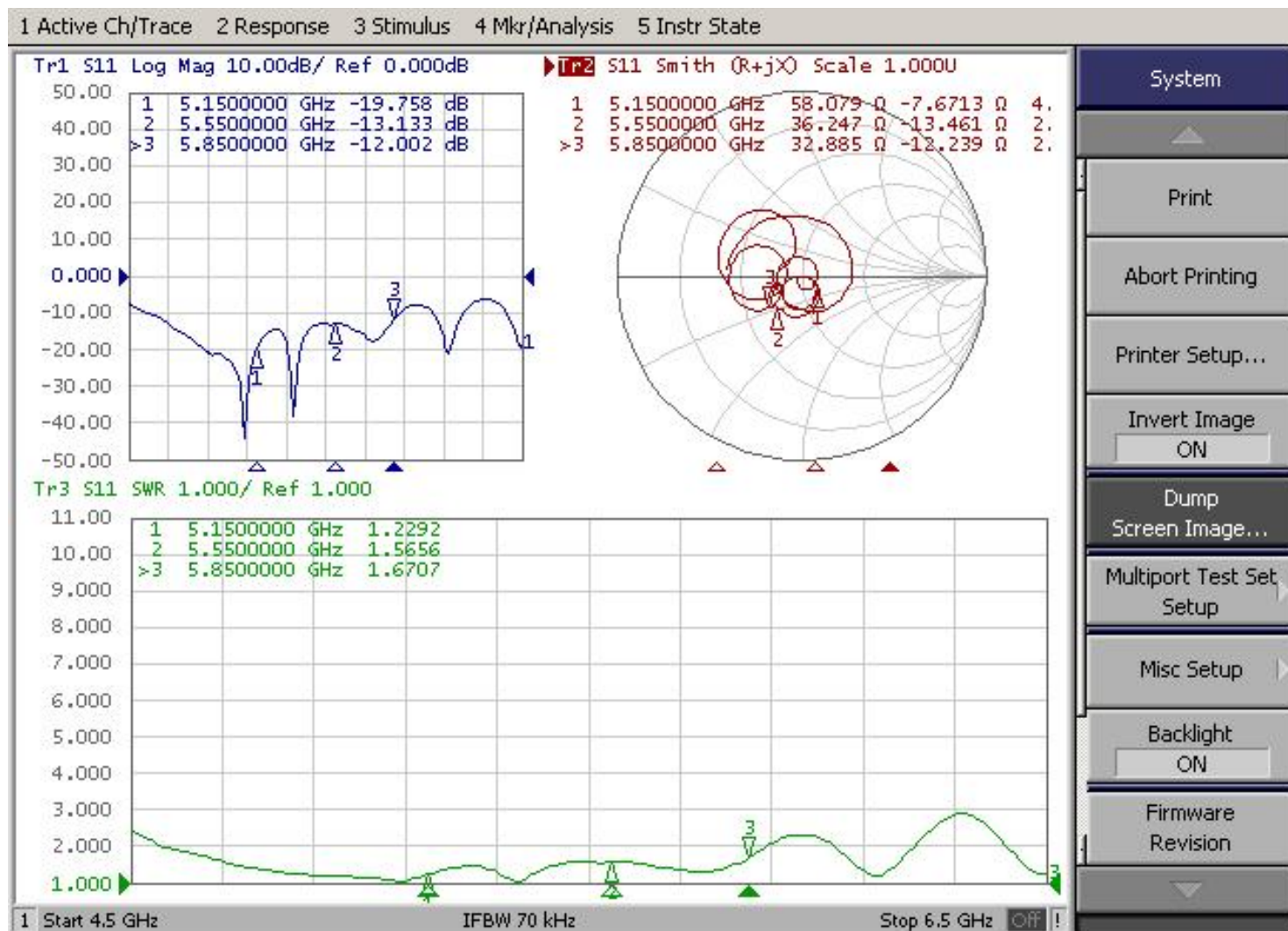
BOM 物料清单			
GENERAL TOLERANCE: UNLESS OTHERWISE SPECIFIED LINEAR: 0.5 < L ≤ 6 ± 0.05 6 < L ≤ 30 ± 0.10 30 < L ≤ 120 ± 0.20 ANGULAR: 0 < L ≤ 10 ± 1°30' 10 < L ≤ 50 ± 1°00' 50 < L ≤ 120 ± 0°30'		FILE TYPE: 产品图	Dongguan HUANGJIE Communication Technology Co., Ltd. 东莞市皇捷通讯科技有限公司 TITLE: 射频天线组件 内置天线,OD1.13双锡线黑色,P1端焊接PCB (2YP218),P2端铆接MHF-1-PLUG,外露线长L=130mm CODE: 3N0301BK-085
		DRA./DATE: S.He 24.10.29	
		CHE./DATE:	
		APP./DATE:	
		FILE FORM: HJ-QR-E-03 22.09.01	SIZE: A4
		UNIT: mm	PRO.: 3rd
		SCALE: 2:1	PAGE: 1/1

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO HUANGJIE AND SHOULDN'T BE USED WITHOUT WRITTEN PERMISSION.

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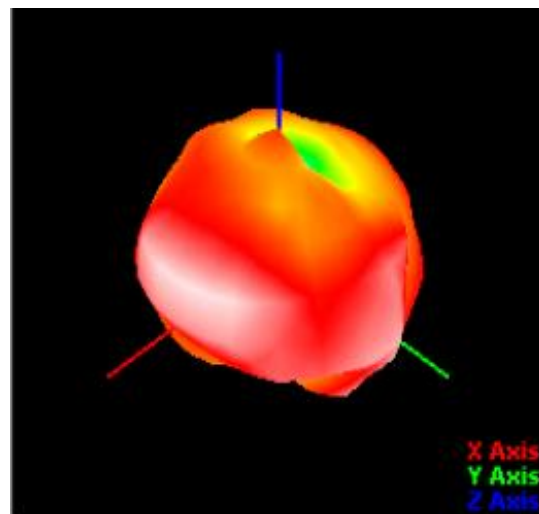
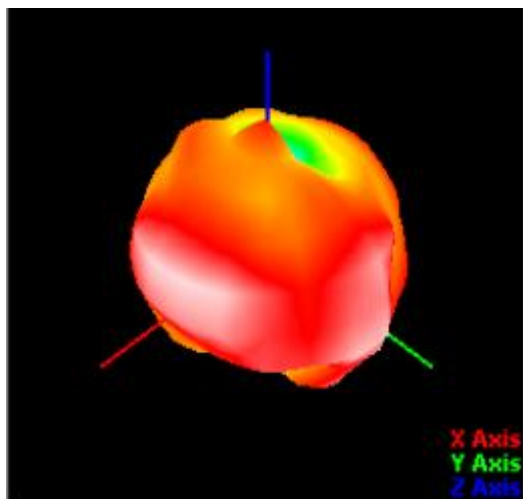


-5.8G



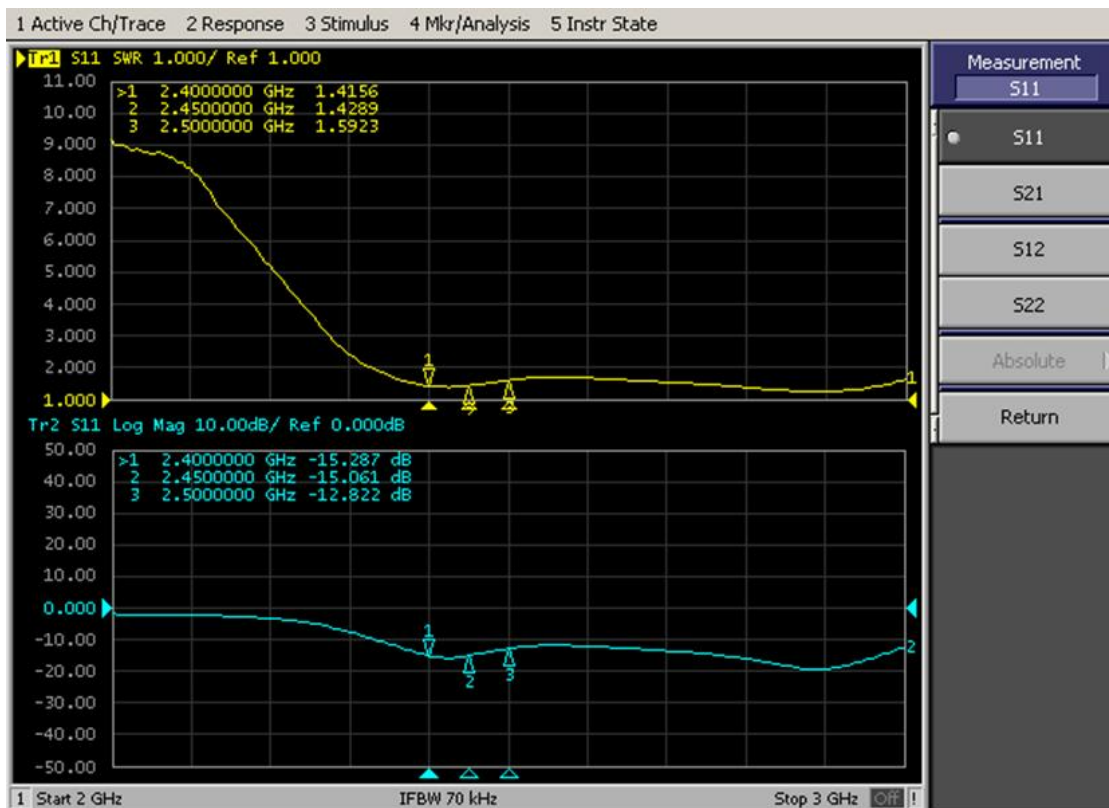
5.8G

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	5150.0	5200.0	5250.0	5300.0	5350.0	5400.0	5450.0	5500.0	5550.0	5600.0	5650.0	5700.0	5750.0	5800.0	5850.0
Point Values															
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-3.09	-2.69	-2.62	-2.87	-3.41	-1.91	-1.78	-2.10	-3.01	-2.49	-2.36	-2.71	-2.33	-1.96	-2.12
Peak EIRP (dBm)	2.54	2.56	2.62	2.53	1.96	2.54	2.77	2.51	2.13	2.14	2.66	2.40	1.88	1.86	2.51
Gain (dBi)	5.63	5.25	5.23	5.80	5.37	5.45	5.55	5.60	5.14	4.62	4.02	5.11	4.21	3.82	3.63
Efficiency (%)	59.10	63.80	64.70	61.60	65.60	64.40	66.40	61.70	60.00	66.40	58.00	63.60	58.50	63.70	61.40





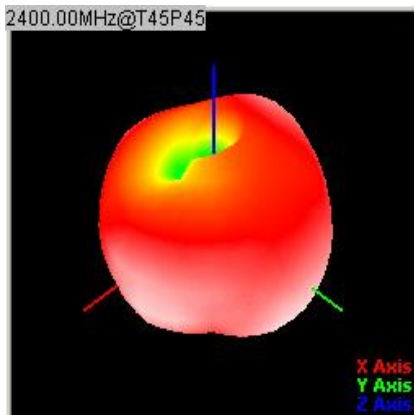
2.4G



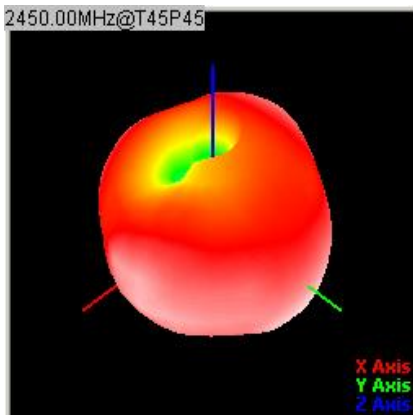
Antenna - Radiation Pattern Test Data

Frequency (MHz)	2400.0	2450.0	2500.0
Efficiency (%)	83.80	85.60	82.40
Gain (dBi)	2.36	2.48	2.42

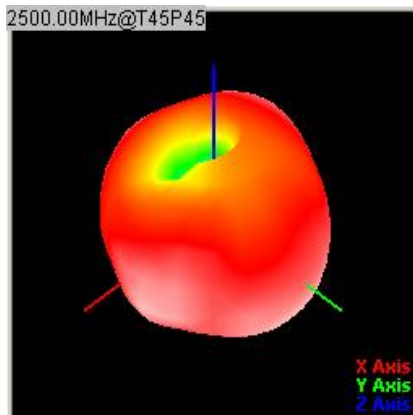
2400.00MHz@T45P45

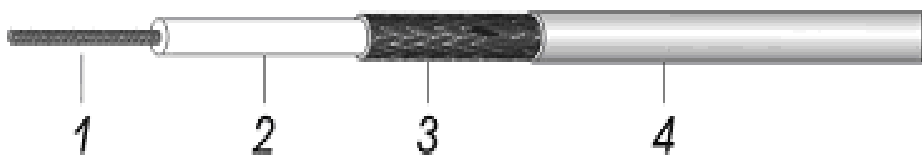


2450.00MHz@T45P45



2500.00MHz@T45P45



型号 Type	RF-1.13/50	料号 P/N	2C5M11312BK1 (Black)	
结构图 Structure drawing				
结构特性 Structure characteristics				
结构 Structure	项目 Item		标准值 Standard value	
①内导体 Inner 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)		7/0.08	
	(绞合)标称外径(mm) (Intertwist)NOM.O.D.(mm)		0.24±0.02	
②绝缘层 Insulation	材料 Material		聚全氟乙丙烯/FEP	
	颜色 Color		本色 Natural	
	标称外径(mm) NOM.O.D.(mm)		0.7±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)		16/4/0.05	
	标称外径(mm) NOM.O.D.(mm)		0.92±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		黑色 Black	
	标称外径(mm) NOM.O.D.(mm)		1.13±0.05	
电性能特性 Electrical characteristics				
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)	98	衰减 Attenuation	1GHz	≤2. 32
速率(%) Velocity(%)	70		2GHz	≤3. 27
阻抗(Ω) Impedance(Ω)	50±3		3GHz	≤4. 01
驻波比 Standing wave ratio	≤1.4@0~6GHz		4GHz	≤4. 64
最大工作电压(V) Max.operating voltage(V)	1000		5GHz	≤5. 17
最大工作频率(GHz) Max.operating frequency(GHz)	6		6GHz	≤5. 70
可靠性 Dependability				
项目 Item		单位 Unit	标准值 Standard value	
最小弯曲半径(一次) Min.bending radius static		mm	4	
最小弯曲半径(重复) Min.bending radius repeated		mm	—	
工作温度范围 Operating temperature		℃	-55~+150	
使用提示 Use tips				
存储环境 Storage environment		温度：30℃以下；湿度：20%~65%		
加工温度 Processing temperature		260℃的极限情况下，可短时间承受；300℃以上分子通常带有的等端基会分解；400℃以上发生显著的		