納 入 仕 様 書

iAN261-L2GW
iAN261-L2GW-3.5ME
iAN261-L2GW-14.5ME

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改版履歴

版数	日付	承認者	改版者	改版内容
N1.0	2018 年 11 月 10 日	中嶋	正木	初版発行
N1.1	2018 年 11 月 12 日	中嶋	正木	測定周波数追加
N1.2	2018 年 11 月 26 日	中嶋	正木	アンテナ特性、外観図 差換え
N1.3a	2021 年 3 月 9 日	中嶋	正木	フォーマット更新、外観図・梱包仕様差替え、LTE2 チューブ色変更（白=>黄）、ラベル仕様、ケーブル仕様追加、延長ケーブル（iEC12M）データ差替え、延長ケーブル（iEC1M）仕様差替え
N1.4	2021 年 11 月 10 日	中嶋	正木	型番変更 iAN261-L2GW-3.5M => iAN261-L2GW-3.5ME iAN261-L2GW-14.5M => iAN261-L2GW-14.5ME （延長ケーブル付きアンテナは型番末尾に E を付加） 「■信頼性試験」修正 （中国語削除） 「■1m 延長ケーブル（iEC1M）仕様」差替 「■12m 延長ケーブル（iEC12M）仕様」差替
N1.5	2022 年 12 月 6 日	中嶋	正木	誤記訂正 「6.環境性能」 Waterproof IPx7 => IPx6
N1.6	2024 年 1 月 22 日	中嶋	正木	**Material of Plastic** に UL 難燃性グレート追記 （UL 94V0） 梱包仕様変更（本体、iEC1M） IDY 住所変更

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■ 適用

本仕様書は、株式会社IDY（以下、「IDY」という）が供給する 3G/LTE/WiMAX および WiMAX2+用、WIFI /Bluetooth 用 及び GNSS 用マルチアンテナ iAN261-L2GW、iAN261-L2GW-3.5ME 及び iAN261-L2GW-14.5ME の納入仕様書である。

■ 仕様

1. 型名

iAN261-L2GW : アンテナ本体（ケーブル長 2.5m）のみ
iAN261-L2GW-3.5ME : アンテナ本体（ケーブル長 2.5m）＋1m 延長ケーブル（iEC1M）4 本付属
iAN261-L2GW-14.5ME : アンテナ本体（ケーブル長 2.5m）＋12m 延長ケーブル（iEC12M）4 本付属

2. 用途 3G/LTE/WiMAX/WiMAX2+ WIFI/Bluetooth+ GNSS の通信モジュールに接続し使用される。

3. 外観写真



LTE2 のみ黄色熱収縮チューブ

他は白色熱収縮チューブ

4. 電気特性

	LTE1/LTE2
Frequency	**698 ~ 960 MHz** **1427 ~ 2700 MHz**
V.S.W.R.	**<= 3.0 @ 698 ~ 960 MHz / LTE1** **<= 2.5 @ 1427 ~ 2700 MHz / LTE1** **<= 3.0 @ 698 ~ 960 MHz / LTE2** **<= 2.5 @ 1427 ~ 2700 MHz / LTE2**
Peak Gain	**Typ. -1.84 dBi @ 698 ~ 960 MHz / LTE1 (≦+3dBi)** **Typ. -0.39 dBi @ 1427 ~ 2700 MHz / LTE1 (≦+3dBi)** **Typ. -2.61 dBi @ 698 ~ 960 MHz / LTE2 (≦+3dBi)** **Typ. -1.87 dBi @ 1427 ~ 2700 MHz / LTE2 (≦+3dBi)**
Antenna Type	**Dipole**
Impedance	**50 Ohm**

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GNSS

Sample Photo	
	
Frequency	1580MHz ±25MHz
V.S.W.R.	<= 2.0
Peak Gain (without LNA)	3.0 dBi
Antenna Type	Patch + LNA
Antenna with LNA Gain	28 dB
Noise Figure of LNA	<= 2.0
Operating Voltage Range	2.7-5 V
Current consumption	<= 10 mA@3.0V
Impedance	50 Ohm
Patch Antenna size	25mmx25mmx2mm

WIFI / BT

Frequency	2400 ~ 2500 MHz 5150 ~ 5850 MHz
V.S.W.R.	<= 2.0 @ 2400 ~ 2500 MHz <= 2.0 @ 5150 ~ 5850 MHz
Peak Gain	-2.34 dBi @ 2400 ~ 2500 MHz - 3.96 dBi @ 5150 ~ 5850 MHz
Antenna Type	PIFA
Impedance	50 Ohm

5. 使用部材	
Material of Radiator	PCB
Material of Plastic	PC-N4010 （UL 94V0）
Cable Type	LMR100 Cable Loss for 1 Meter 0.74 dB @900MHZ / 1.08 dB @1800MHZ 1.25 dB @2400MHZ / 1.48 dB @3000MHZ
Connecter Type	SMA Male (LTE1/LTE2/GNSS) , Reverse SMA Male (WIFI/BT)

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6. 環境性能	
Waterproof	IPx6
Operation Temperature	- 40 ˚C ~ + 70 ˚C
Storage Temperature	- 40 ˚C ~ + 80 ˚C

■ 信頼性試験

Test Items		Test Condition and Procedure	Requirements	Result
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
C3	Antenna Gain	Set DUT on Antenna Chamber; make individual calibration to test	Directive DUT specification	PASS
M1	Vibration	GB / T2423.48-2008 Amplitude: 0.03 inch (1.5mm); Freq: 20 to 80 to 20 Hz 3 directions; 2 hours for each direction	1. No Visual Damage 2. Frequency Tol.≤5%	PASS
M4	Pull Test	Holding with individual specification; force applied to axis of Connector .	1. Directive DUT specification 2. Frequency Tol.≤5%	PASS
M6	Sway test	Holding with individual specification;the swing joint and wire,wire and plastic body test.	1. Directive DUT specification 2. Frequency Tol.≤ 5%	PASS
M7	Dimension	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	PASS
E1	Waterproof	With Reference to IEC 60529 // IP Code Definition	Directive DUT specification	PASS
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	1. No Visual Damage 2. Frequency Tol.≤5%	PASS
E3	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%	PASS

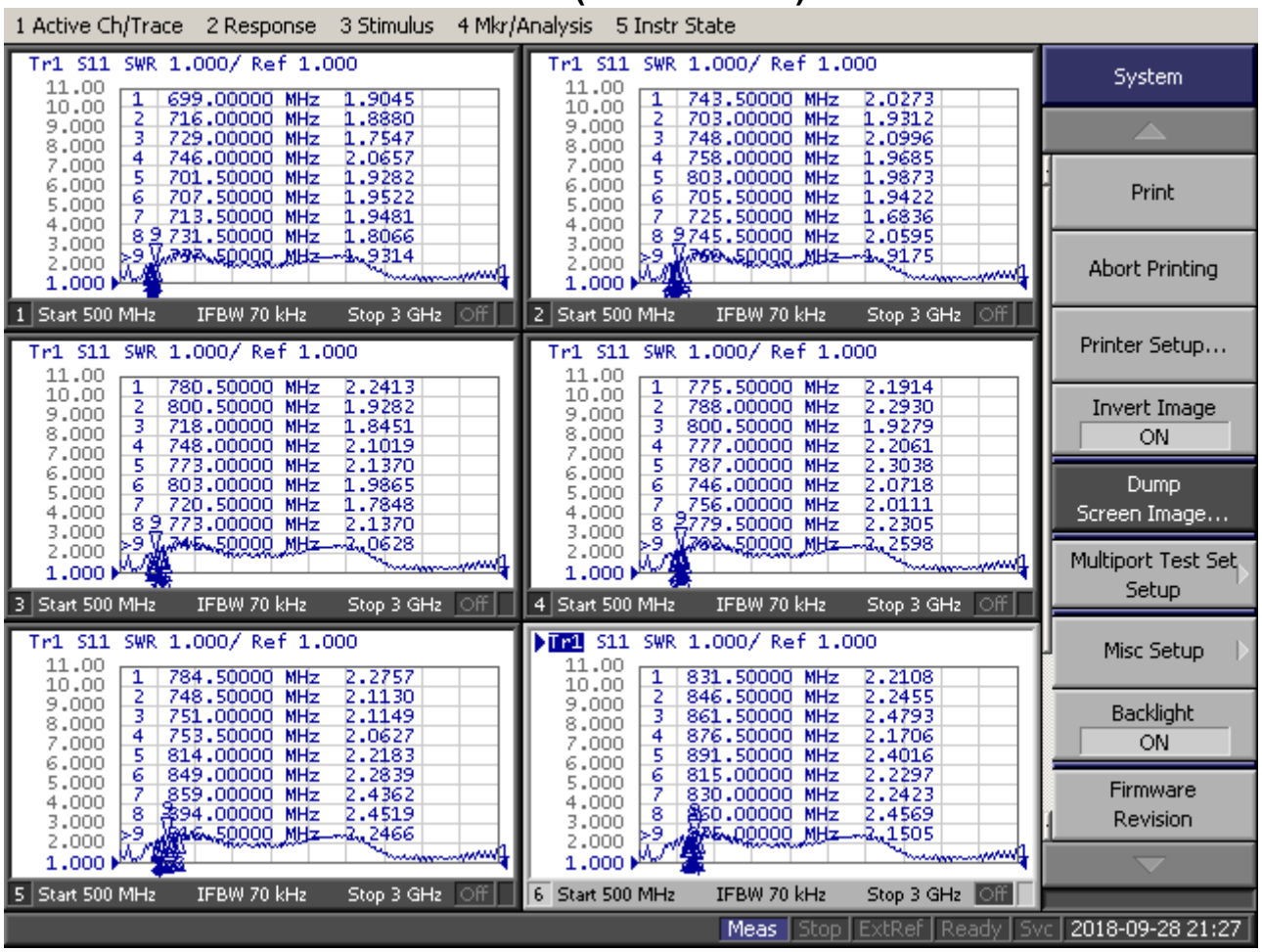
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E4	Thermal Shock	GB / T 2423.22 - 2008 - 40° C (30 minutes) to + 80° C (30 minutes); Cycles: 24	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%	PASS
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2011/65/EU	PASS

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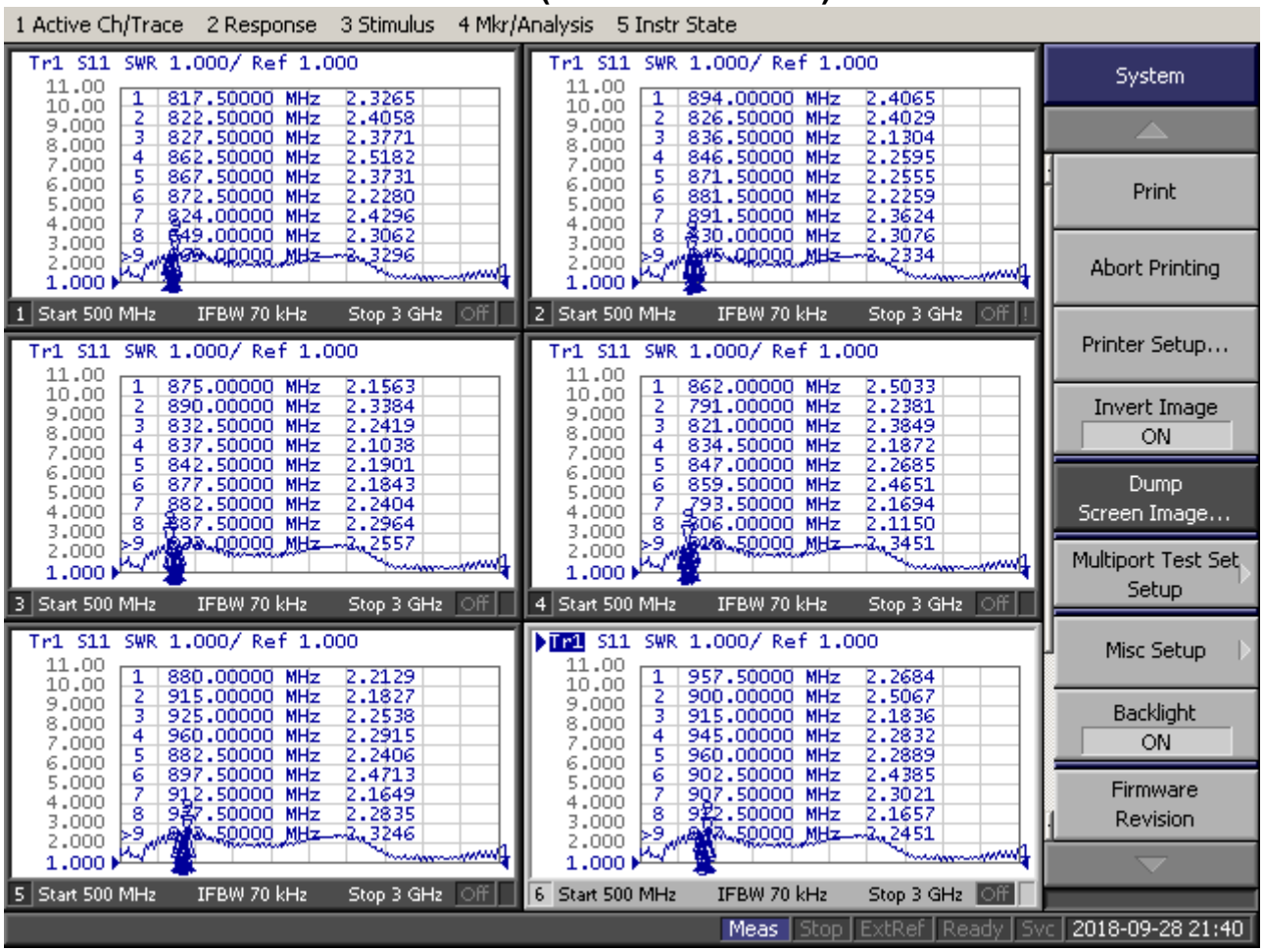
■ アンテナ特性 （S11 及び VSWR）

LTE 1 (699-875MHz)



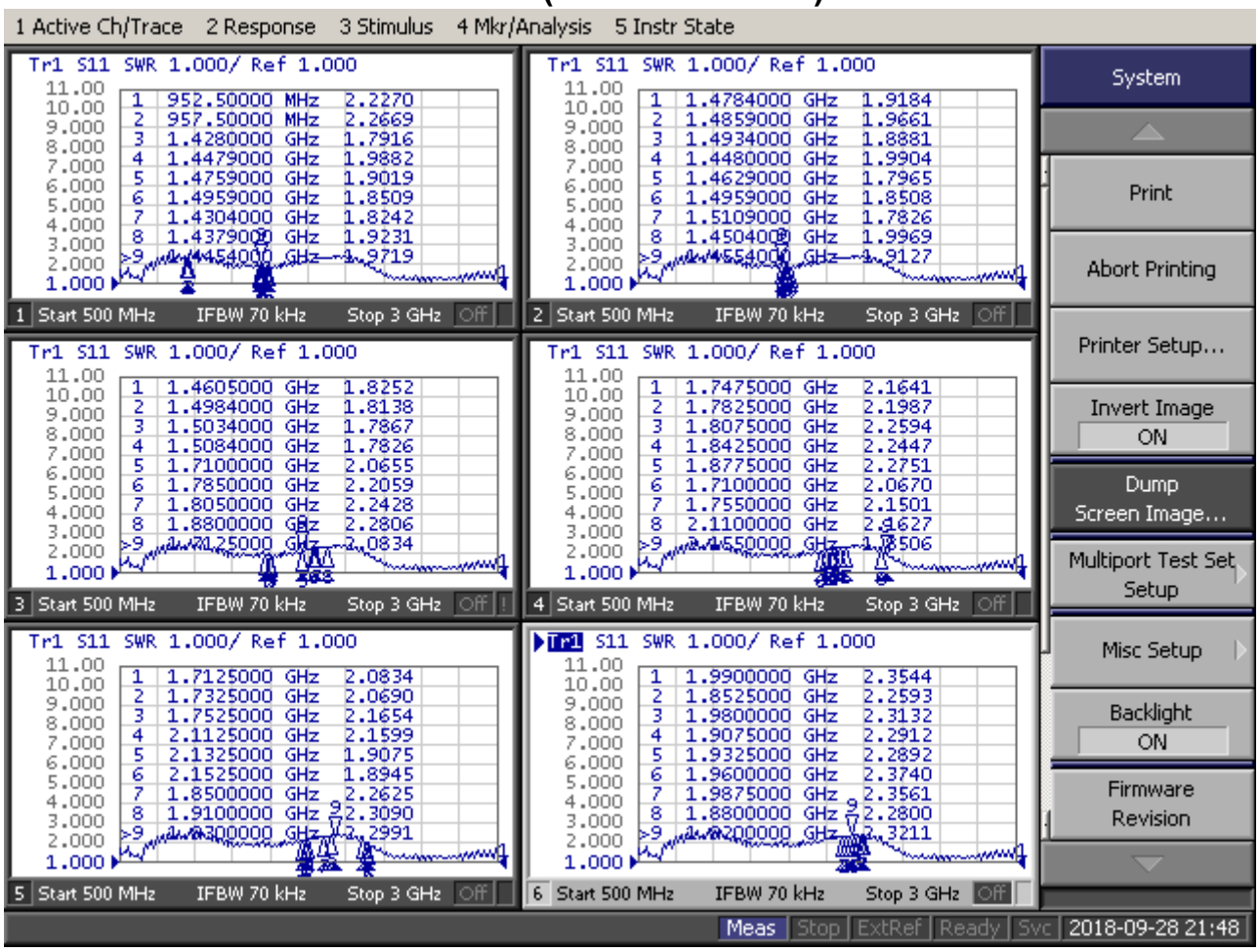
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LTE 1 (817.5-947.5MHz)



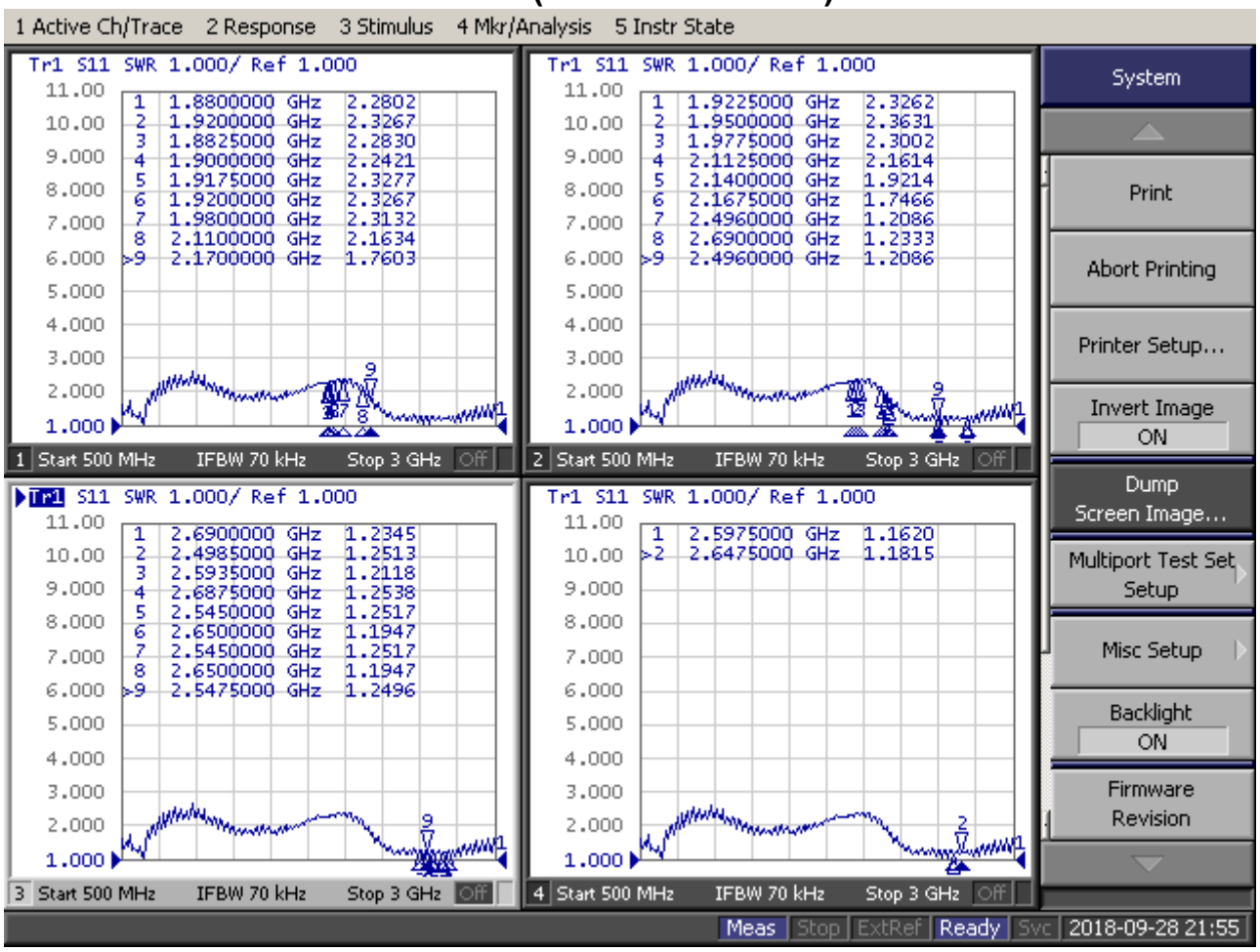
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LTE 1 (952.5-1920MHz)



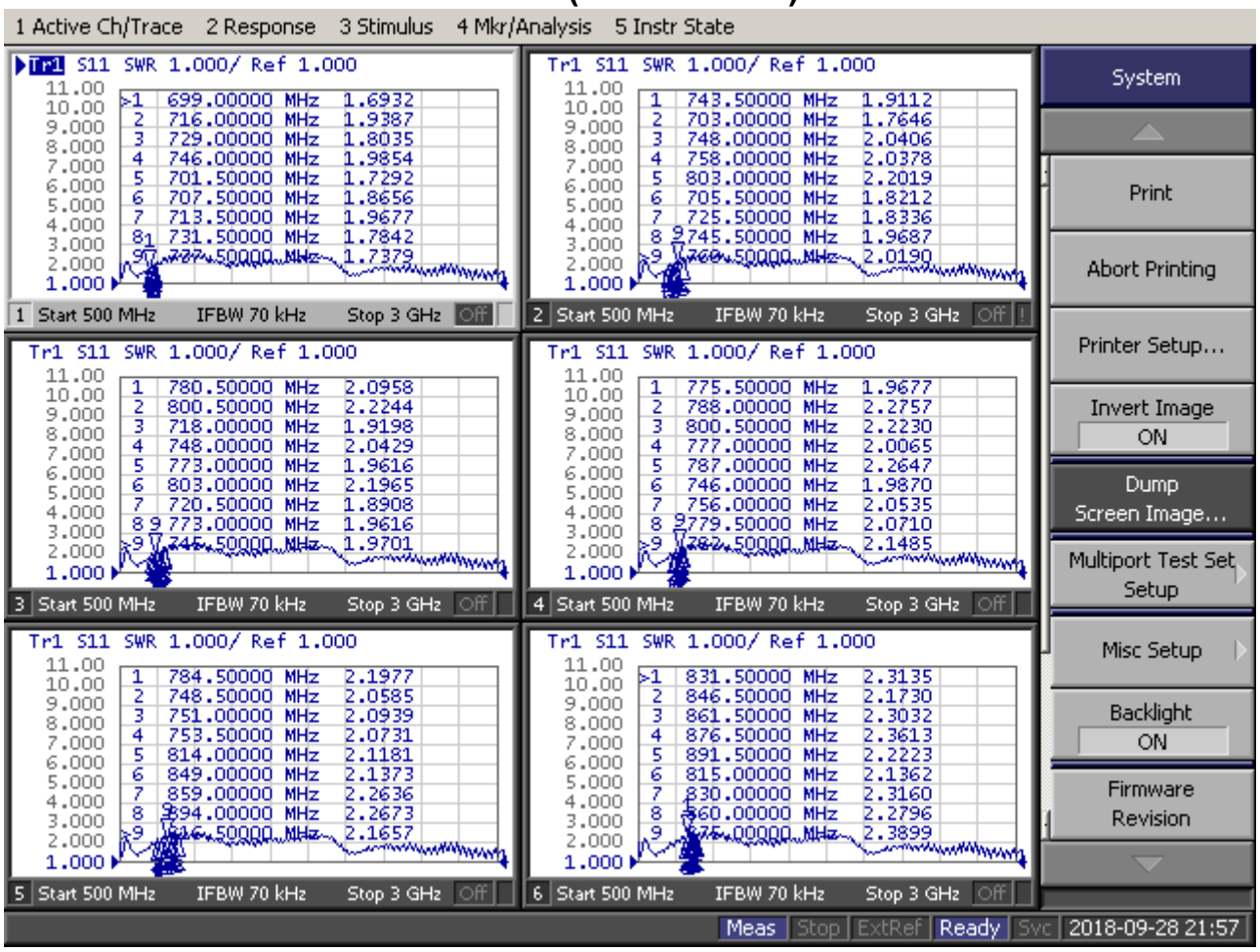
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LTE 1 (1880-2647.5MHz)



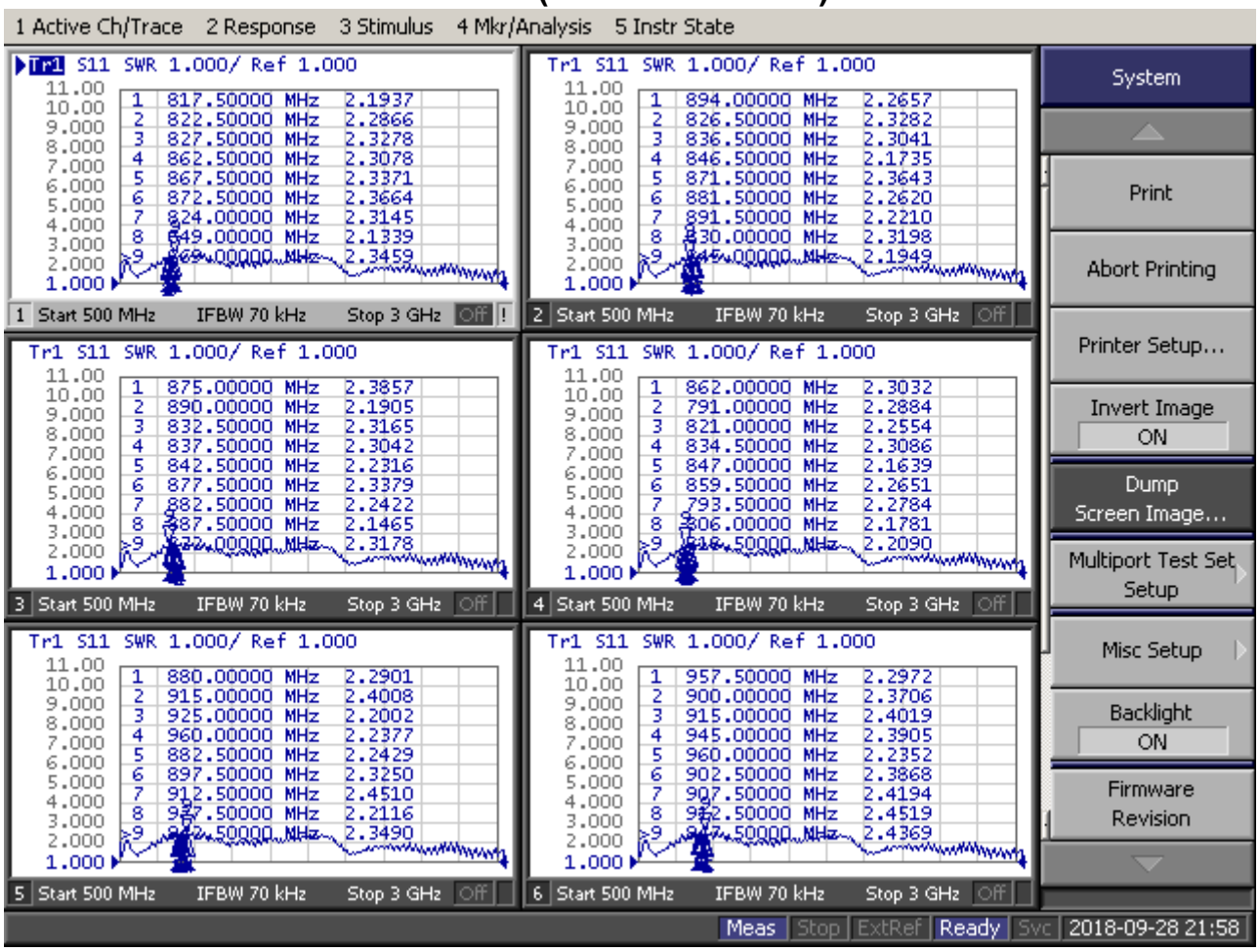
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LTE 2 (699-875MHz)



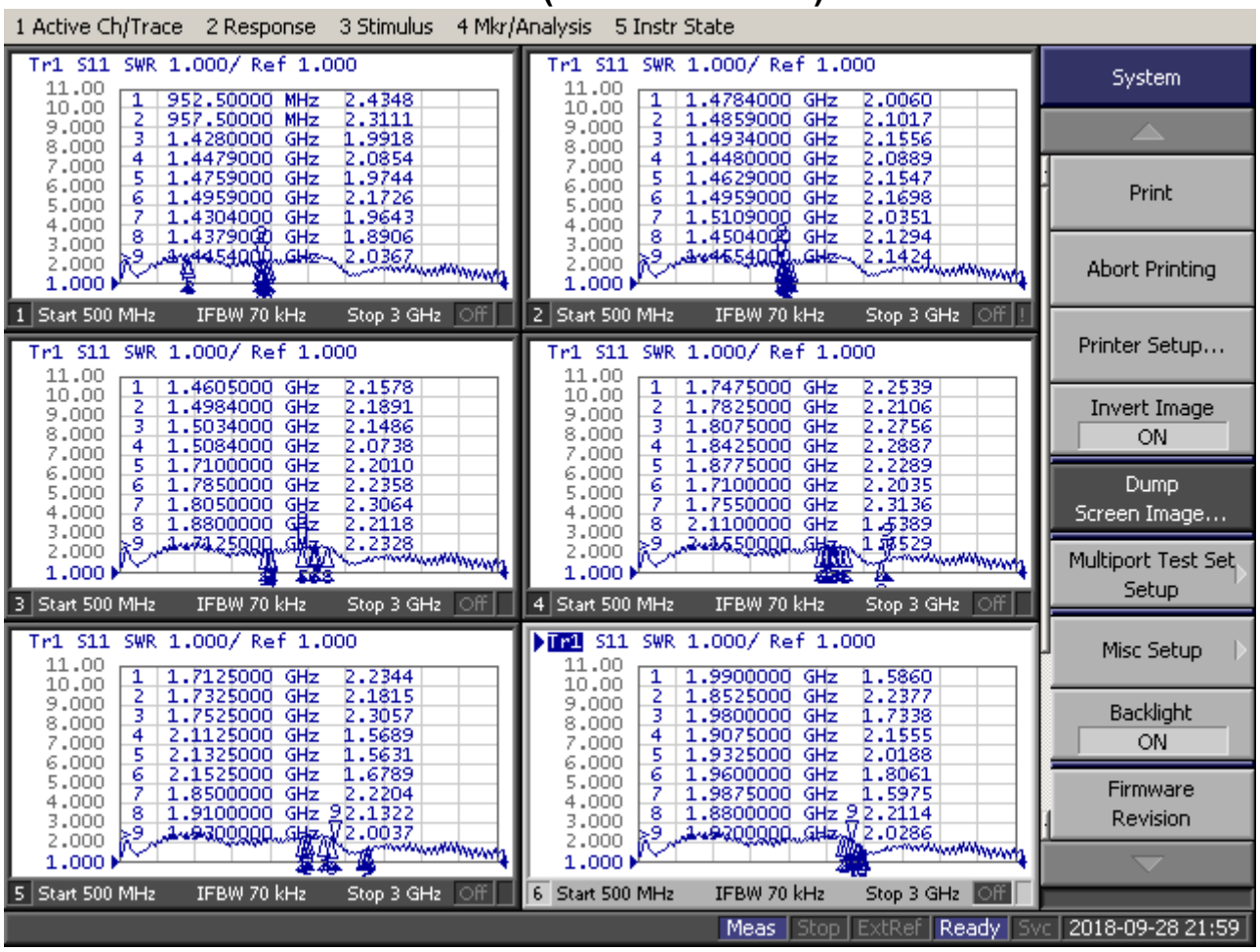
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LTE 2 (817.5-947.5MHz)



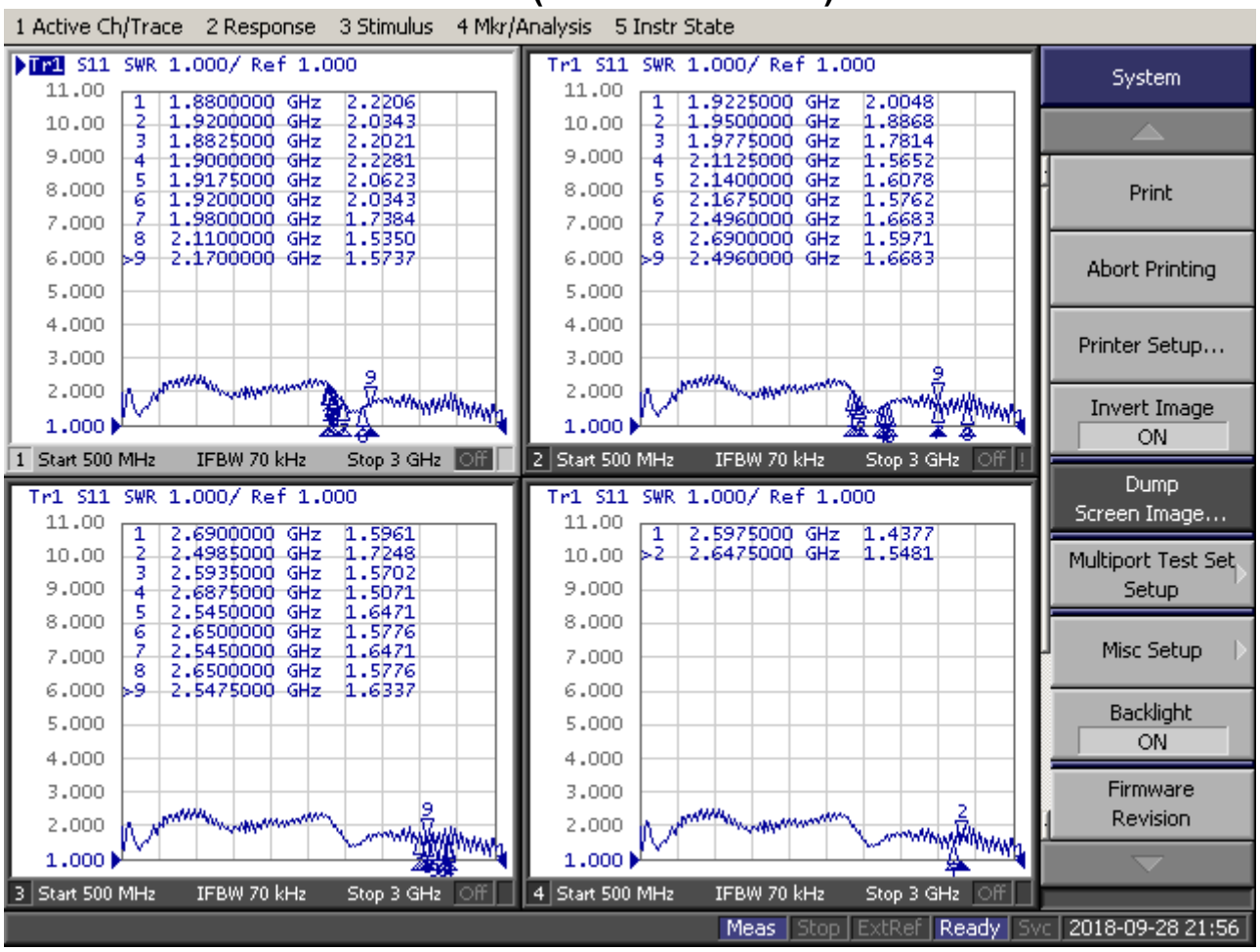
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LTE 2 (952.5-1920MHz)



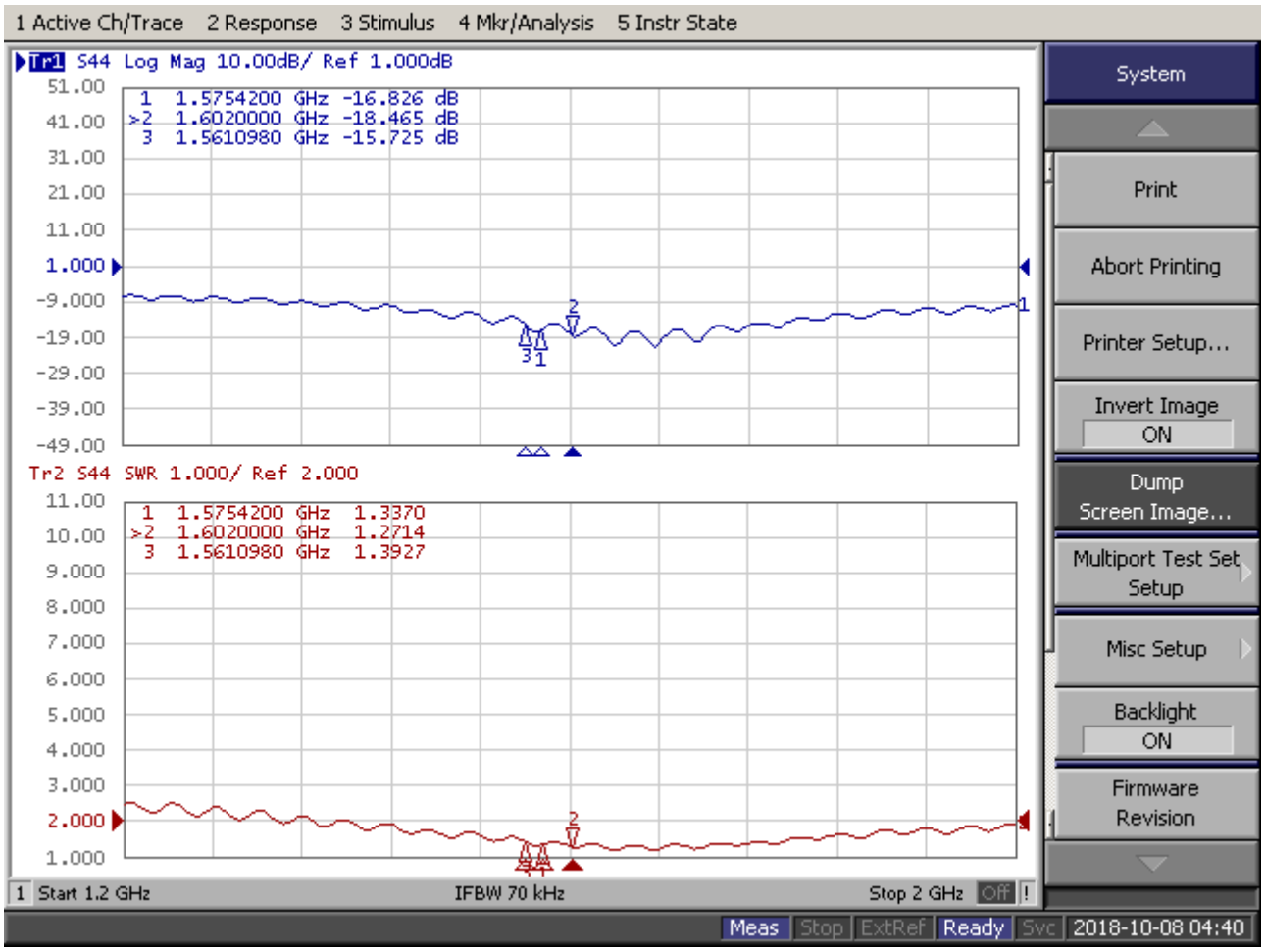
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LTE 2 (1880-2647.5MHz)



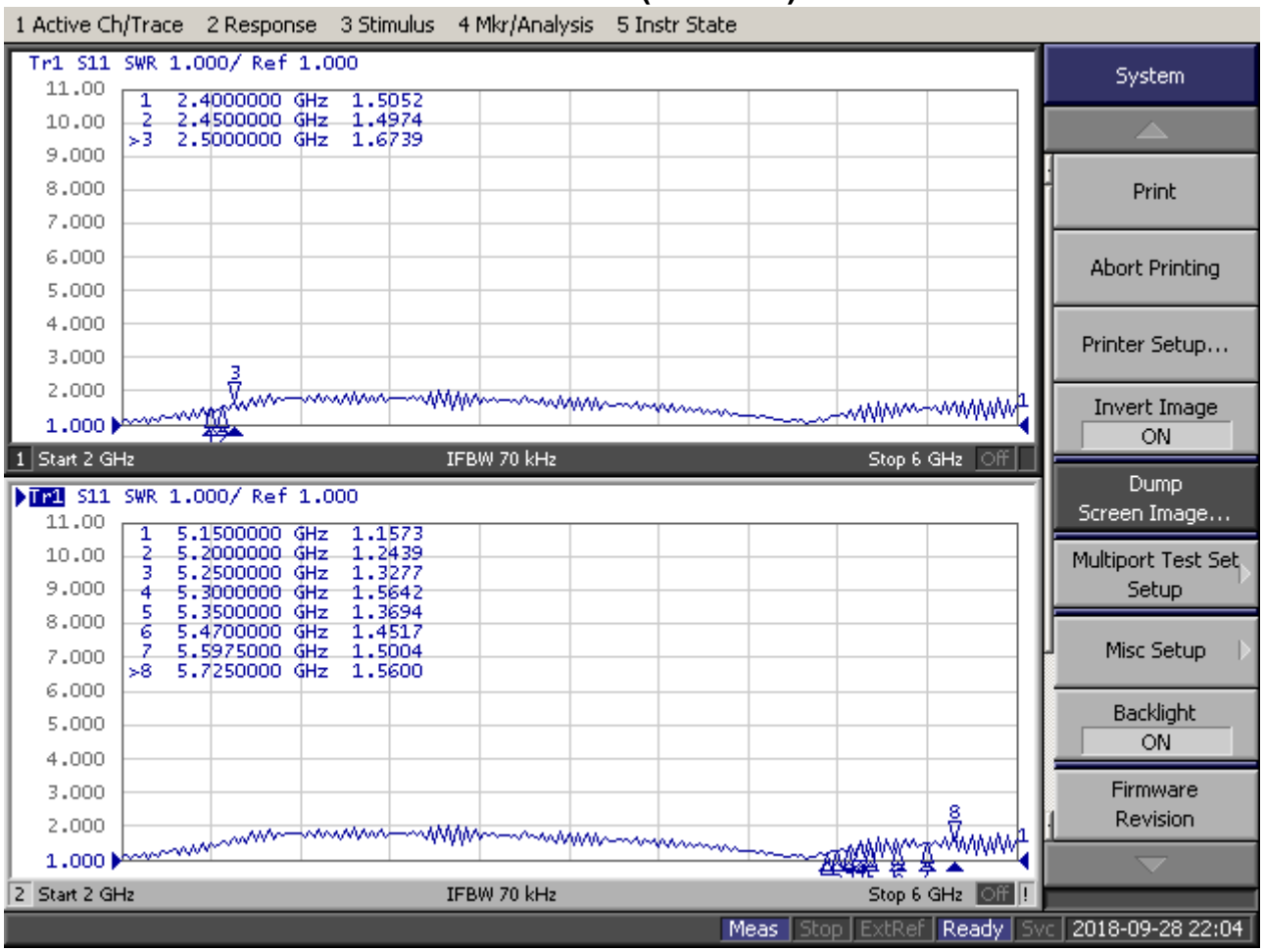
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GNSS



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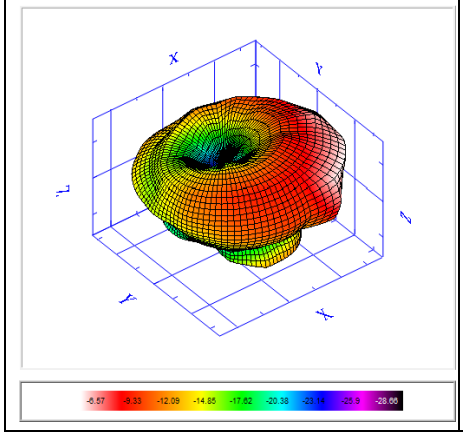
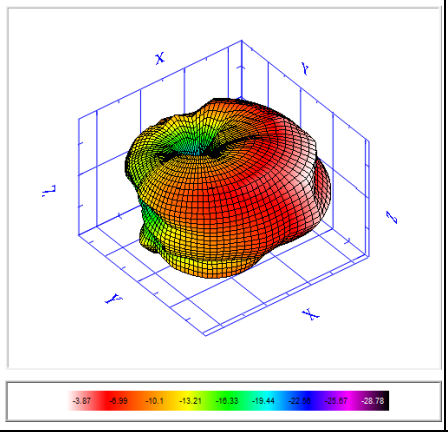
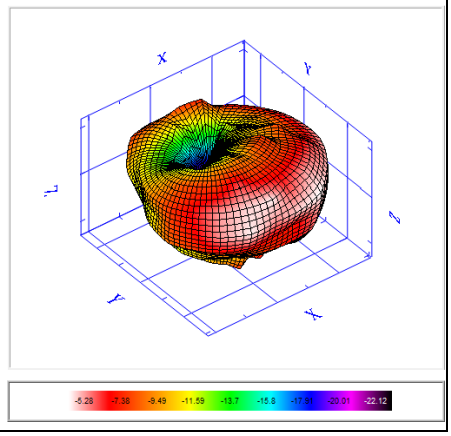
2.4/5GHz (WIFI/BT)



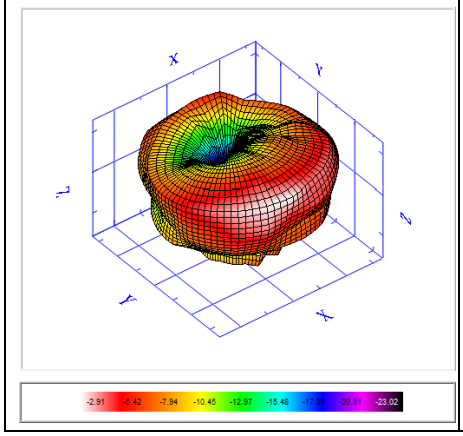
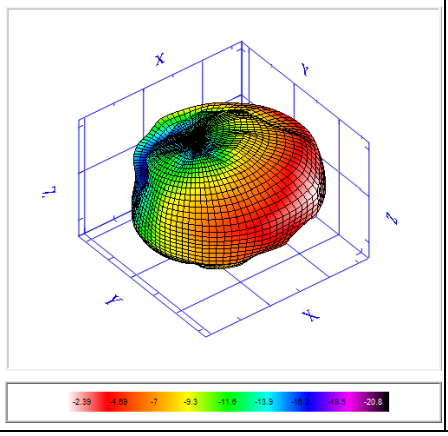
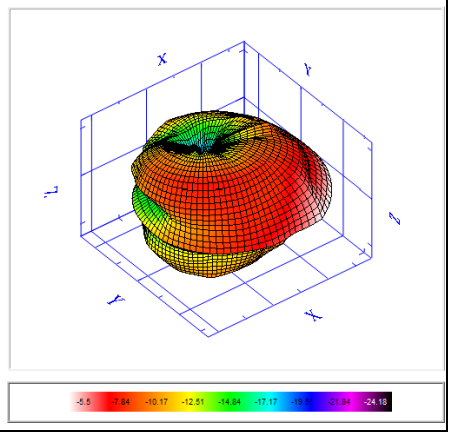
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■ アンテナ放射特性

LTE 1

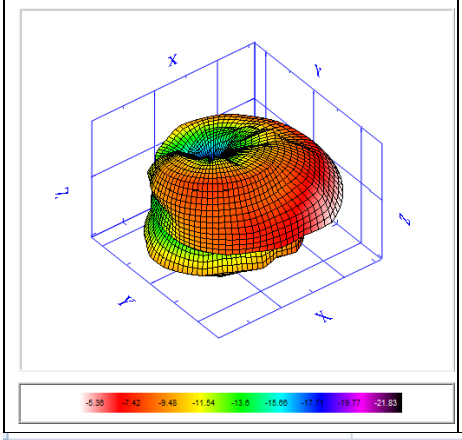
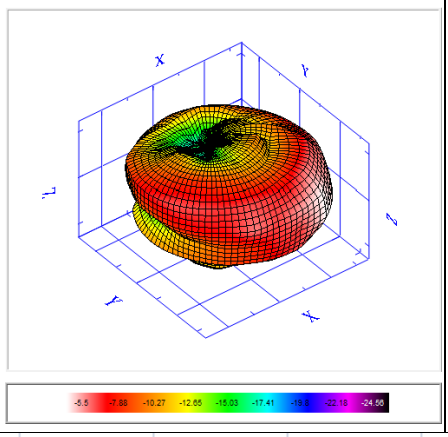
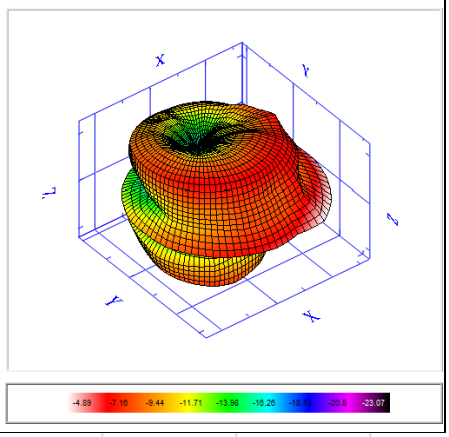
701.5 MHZ	748.5 MHZ	793.5 MHZ
		

Frequency	701.5	705.5	707.5	713.5	720.5	725.5	731.5	733	737.5	743.5	745.5	748.5	751	753.5	760.5	775.5	779.5	780.5	782	784.5	788	793.5
E-Total Peak Gain (dBi)	-6.57	-6.28	-6.13	-5.69	-4.84	-4.03	-4.14	-4.17	-4.25	-4.12	-4.02	-3.87	-3.92	-4.45	-4.47	-4.48	-4.81	-4.93	-5.13	-5.45	-5.44	-5.28
Efficiency (%)	4.61	4.8	4.95	5.64	7.02	8.1	8.1	8.13	8.3	8.76	8.98	9.41	9.66	9.29	8.63	8.54	8.75	8.81	8.9	9.1	9.53	10.97
Average Gain (dB)	-13.36	-13.18	-13.05	-12.49	-11.54	-10.91	-10.92	-10.9	-10.81	-10.58	-10.47	-10.26	-10.15	-10.32	-10.64	-10.69	-10.58	-10.55	-10.51	-10.41	-10.21	-9.6

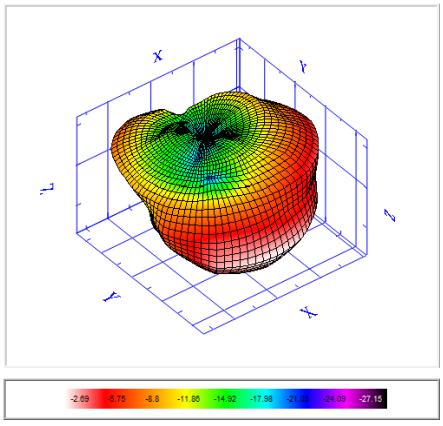
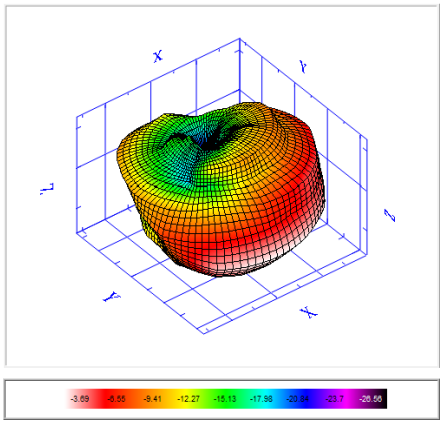
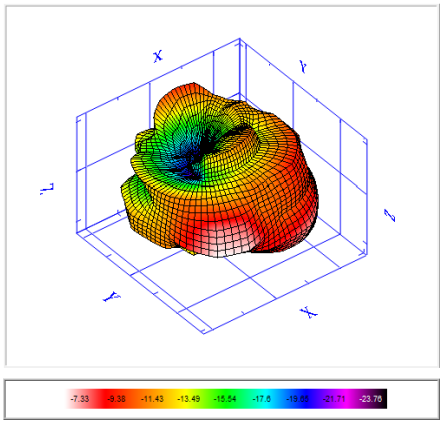
800.5 MHZ	846.5 MHZ	897.5 MHZ
		

Frequency	800.5	806	816.5	817.5	818.5	822.5	826.5	827.5	831.5	832.5	834.5	836.5	837.5	842.5	846.5	846.5	847	859.5	861.5	862.5	867.5	871.5	872.5	876.5	877.5	881.5	882.5	882.5	887.5	891.5	891.5	897.5
E-Total Peak Gain (dBi)	-2.91	-2.48	-3.61	-3.61	-3.6	-2.45	-1.84	-1.87	-2.2	-2.28	-2.43	-2.47	-2.49	-2.46	-2.39	-2.39	-2.39	-2.89	-3.19	-3.34	-3.85	-4.12	-4.21	-4.56	-4.65	-4.99	-5.11	-5.11	-5.4	-5.49	-5.49	-5.5
Efficiency (%)	14.31	15.3	14.54	14.52	14.51	18.86	21.94	21.91	20.45	19.92	18.97	18.12	17.73	16.48	15.9	15.9	15.84	13.59	12.96	12.69	11.59	10.69	10.47	9.72	9.57	9.09	8.77	8.77	7.94	7.67	7.67	7.6
Average Gain (dB)	-8.44	-8.15	-8.38	-8.38	-8.38	-7.24	-6.59	-6.59	-6.89	-7.01	-7.22	-7.42	-7.51	-7.83	-7.99	-7.99	-8	-8.67	-8.87	-8.97	-9.36	-9.71	-9.8	-10.12	-10.19	-10.41	-10.57	-10.57	-11	-11.15	-11.15	-11.19

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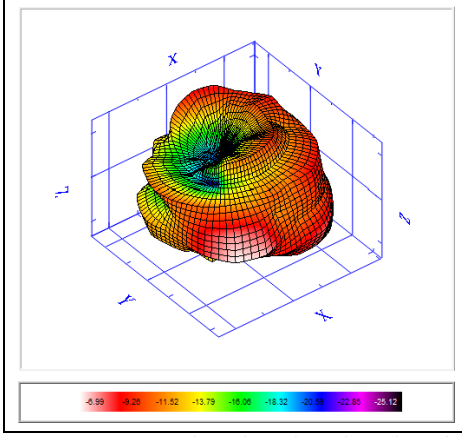
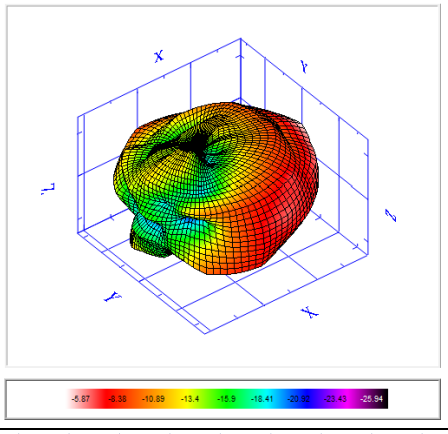
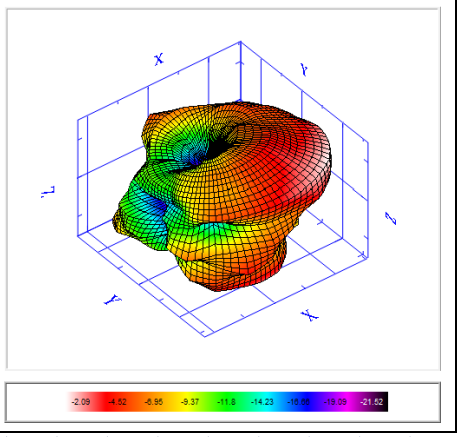
902.5 MHZ	927.5 MHZ	957.5 MHZ
		

Frequency	902.5	907.5	912.5	927.5	942.5	947.5	952.5	957.5
E-Total Peak Gain (dBi)	-5.36	-5.09	-5.27	-5.5	-5.33	-5.21	-5.05	-4.89
Efficiency (%)	8.06	9.03	8.79	8.87	8.38	8.27	8.48	8.98
Average Gain (dB)	-10.94	-10.44	-10.56	-10.52	-10.77	-10.83	-10.72	-10.47

1430.4 MHZ	1503.4 MHZ	1882.5 MHZ
		

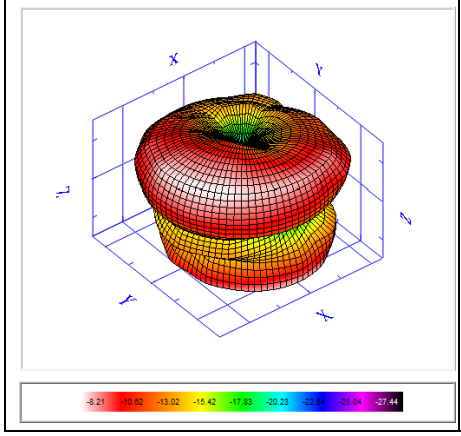
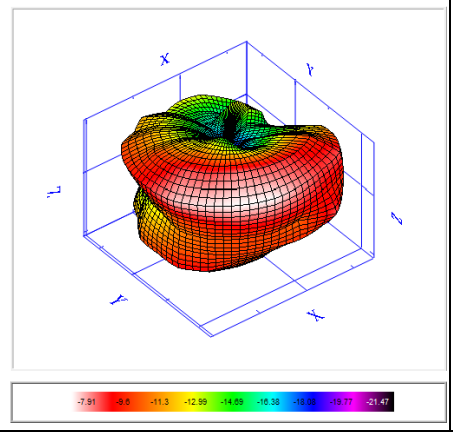
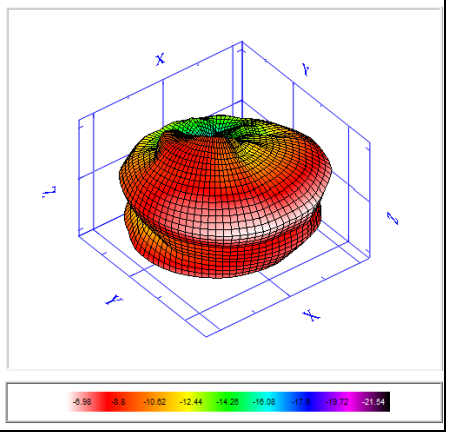
Frequency	1430.4	1437.5	1445.4	1450.4	1455.4	1460.4	1478.4	1485.9	1493.4	1498.4	1503.4	1508.4	1712.5	1732.5	1747.5	1752.5	1782.5	1807.5	1842.5	1852.5	1877.5	1882.5
E-Total Peak Gain (dBi)	-2.69	-2.79	-2.91	-2.98	-3.05	-3.12	-3.38	-3.48	-3.59	-3.66	-3.69	-3.7	-5	-5.46	-5.81	-5.92	-6.61	-7.21	-7.6	-7.51	-7.42	-7.33
Efficiency (%)	11.07	10.91	10.76	10.67	10.59	10.52	10.3	10.23	10.18	10.15	10.22	10.33	7.04	6.46	6.1	5.99	5.36	4.99	5.07	5.18	5.46	5.53
Average Gain (dB)	-9.56	-9.62	-9.68	-9.72	-9.75	-9.78	-9.87	-9.9	-9.92	-9.94	-9.91	-9.86	-11.53	-11.9	-12.15	-12.22	-12.7	-13.02	-12.95	-12.86	-12.63	-12.57

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1900 MHZ	2112.5 MHZ	2700 MHZ
		

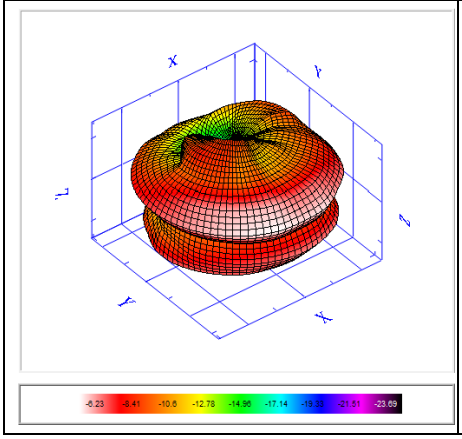
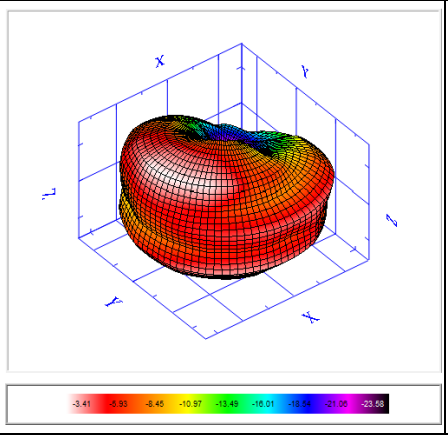
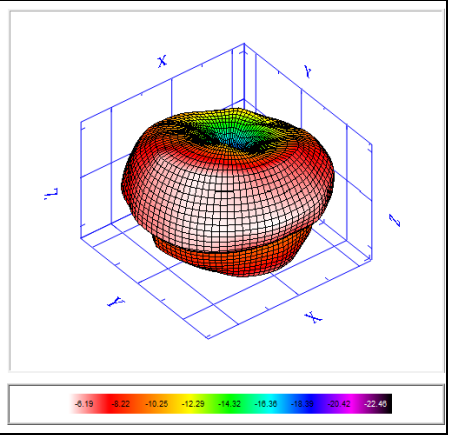
Frequency	1900	1907.5	1917.5	1922.5	1932.5	1950	1960	1977.5	1980	1987.5	2112.5	2112.5	2132.5	2140	2152.5	2167.5	2498.5	2547.5	2593	2597.5	2647.5	2687.5	2695.5	2700
E-Total Peak Gain (dBi)	-6.99	-6.85	-6.61	-6.5	-6.68	-6.99	-7.17	-7.6	-7.66	-7.84	-5.87	-5.87	-5.18	-4.92	-4.08	-2.83	-1.22	-0.39	-0.71	-0.85	-1.3	-2.02	-2.06	-2.09
Efficiency (%)	5.91	6.14	6.59	6.63	6.3	5.89	5.74	5.43	5.4	5.32	7.04	7.04	8.48	9.16	10.49	12.55	21.66	21.9	19.32	18.81	18.24	16.96	17.15	17.27
Average Gain (dB)	-12.28	-12.12	-11.81	-11.78	-12.01	-12.3	-12.41	-12.65	-12.68	-12.74	-11.53	-11.53	-10.72	-10.38	-9.79	-9.01	-6.64	-6.6	-7.14	-7.26	-7.39	-7.71	-7.66	-7.63

LTE 2

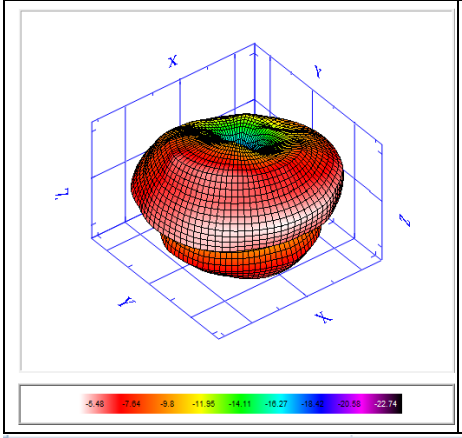
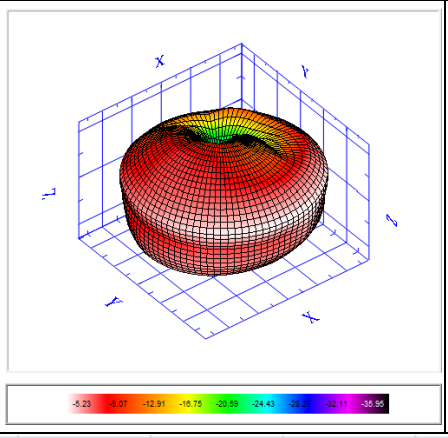
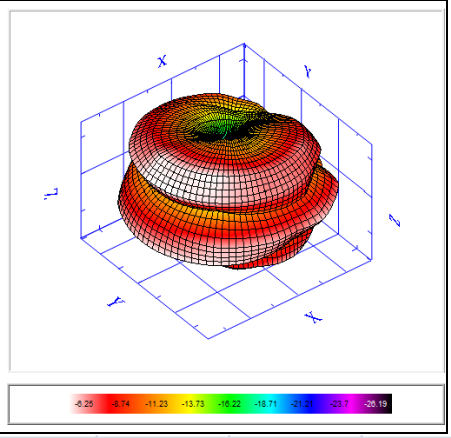
701.5 MHZ	748.5 MHZ	793.5 MHZ
		

Frequency	701.5	705.5	707.5	713.5	720.5	725.5	731.5	733	737.5	743.5	745.5	748.5	751	753.5	760.5	775.5	779.5	780.5	782	784.5	788	793.5
E-Total Peak Gain (dBi)	-8.21	-8.72	-8.96	-9.35	-9.21	-8.47	-8.66	-8.71	-8.85	-8.52	-8.28	-7.91	-7.72	-7.98	-8.04	-6.28	-6.53	-6.66	-6.88	-7.24	-7.42	-6.98
Efficiency (%)	4.67	4.28	4.16	4	4.26	4.61	4.54	4.55	4.64	4.92	5.06	5.34	5.59	5.71	6.24	8.55	8.54	8.44	8.3	8.11	7.93	8.13
Average Gain (dB)	-13.31	-13.68	-13.81	-13.98	-13.71	-13.36	-13.43	-13.42	-13.33	-13.08	-12.96	-12.72	-12.52	-12.43	-12.05	-10.68	-10.69	-10.73	-10.81	-10.91	-11.01	-10.9

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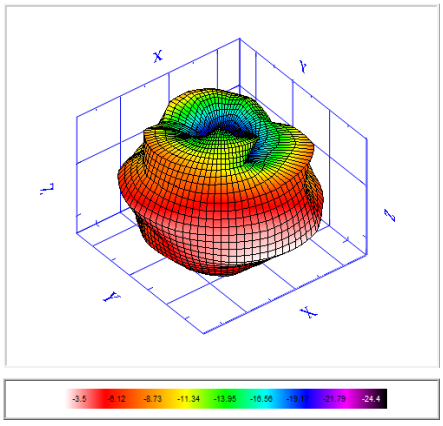
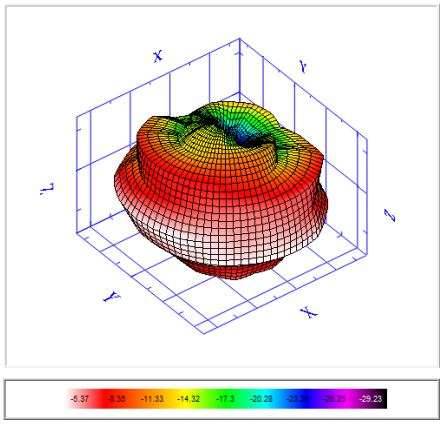
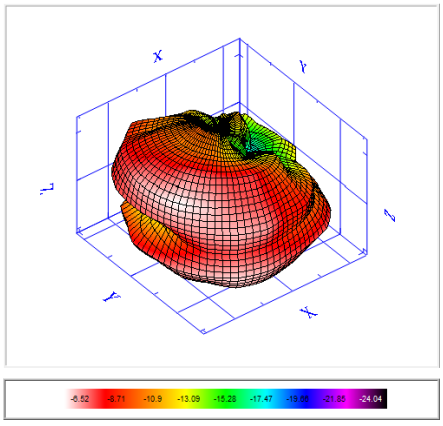
800.5 MHZ	846.5 MHZ	897.5 MHZ
		

Frequency	800.5	806	816.5	817.5	818.5	822.5	826.5	827.5	831.5	832.5	834.5	836.5	837.5	842.5	846.5	846.5	847	859.5	861.5	862.5	867.5	871.5	872.5	876.5	877.5	881.5	882.5	882.5	887.5	891.5	891.5	897.5
E-Total Peak Gain (dBi)	-6.23	-5.79	-5.1	-5.04	-4.98	-3.61	-2.69	-2.61	-2.62	-2.7	-2.85	-3	-3.07	-3.34	-3.41	-3.41	-3.41	-3.58	-3.74	-3.81	-4.21	-4.64	-4.74	-4.97	-4.94	-4.83	-4.98	-4.98	-5.52	-5.86	-5.86	-6.19
Efficiency (%)	9.02	9.42	10.45	10.63	10.81	15.13	19.04	19.39	18.98	18.63	17.98	17.42	17.16	16.57	16.51	16.51	16.52	15.6	14.97	14.7	13.61	12.68	12.43	11.62	11.45	10.91	10.62	10.62	9.98	9.91	9.91	10.18
Average Gain (dB)	-10.5	-10.3	-9.81	-9.74	-9.66	-8.2	-7.2	-7.12	-7.22	-7.3	-7.45	-7.59	-7.65	-7.81	-7.82	-7.82	-7.82	-8.07	-8.25	-8.33	-8.66	-8.97	-9.06	-9.35	-9.41	-9.62	-9.74	-9.74	-10	-10	-10	-9.92

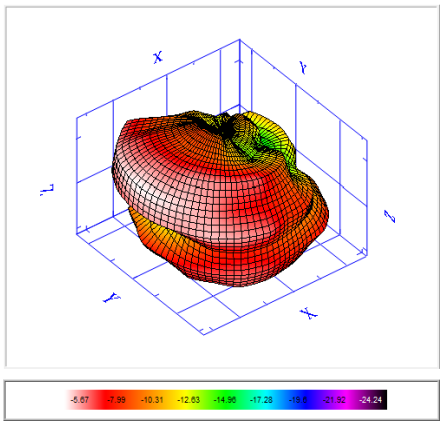
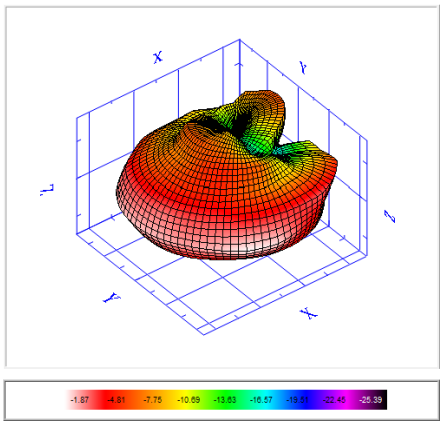
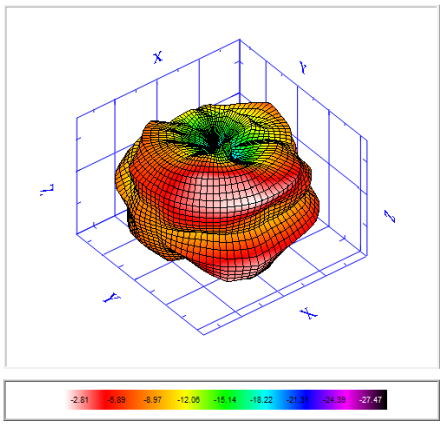
902.5 MHZ	927.5 MHZ	957.5 MHZ
		

Frequency	902.5	907.5	912.5	927.5	942.5	947.5	952.5	957.5
E-Total Peak Gain (dBi)	-5.48	-4.73	-4.82	-5.23	-5.92	-6.12	-6.28	-6.25
Efficiency (%)	11.04	12.52	11.84	10.8	9.28	8.99	9.09	9.52
Average Gain (dB)	-9.57	-9.02	-9.27	-9.67	-10.33	-10.46	-10.41	-10.21

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1430.4 MHZ	1503.4 MHZ	1882.5 MHZ
		

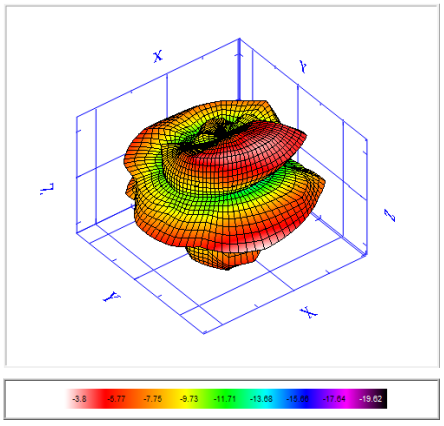
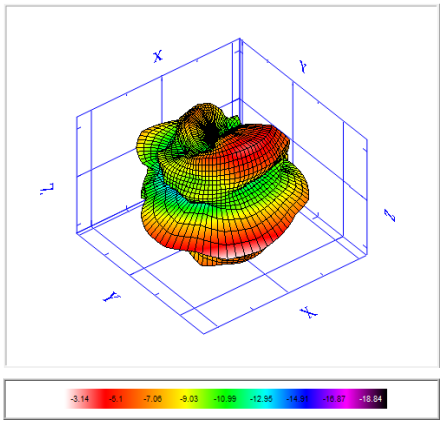
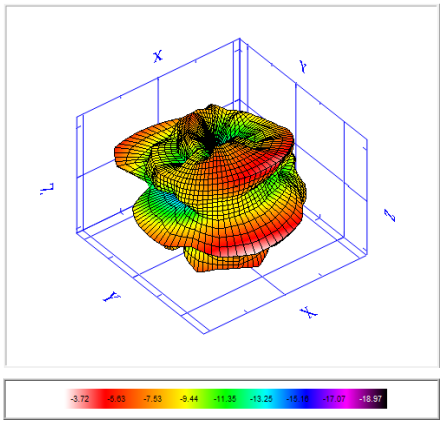
Frequency	1430.4	1437.5	1445.4	1450.4	1455.4	1460.4	1478.4	1485.9	1493.4	1498.4	1503.4	1508.4	1712.5	1732.5	1747.5	1752.5	1782.5	1807.5	1842.5	1852.5	1877.5	1882.5
E-Total Peak Gain (dBi)	-3.5	-3.7	-3.91	-4.04	-4.18	-4.31	-4.79	-4.98	-5.17	-5.3	-5.37	-5.36	-5.22	-5.2	-5.17	-5.16	-5.19	-5.9	-6.33	-6.43	-6.63	-6.52
Efficiency (%)	10.05	9.77	9.47	9.3	9.14	8.98	8.5	8.34	8.18	8.09	8.08	8.11	7	6.79	6.68	6.66	6.44	6.07	6.33	6.58	7.36	7.58
Average Gain (dB)	-9.98	-10.1	-10.24	-10.32	-10.39	-10.47	-10.7	-10.79	-10.87	-10.92	-10.93	-10.91	-11.55	-11.68	-11.75	-11.77	-11.91	-12.17	-11.98	-11.82	-11.33	-11.2

1900 MHZ	2112.5 MHZ	2700 MHZ
		

Frequency	1900	1907.5	1917.5	1922.5	1932.5	1950	1960	1977.5	1980	1987.5	2112.5	2112.5	2132.5	2140	2152.5	2167.5	2498.5	2547.5	2593	2597.5	2647.5	2687.5	2695.5	2700
E-Total Peak Gain (dBi)	-5.67	-4.98	-3.72	-3.45	-3.67	-4.05	-3.92	-3.55	-3.5	-3.34	-1.87	-1.87	-1.91	-1.93	-1.96	-1.95	-2.4	-1.91	-2.61	-2.75	-2.89	-2.95	-2.86	-2.81
Efficiency (%)	8.6	9.2	10.3	10.68	10.93	11.54	11.98	12.58	12.69	13.04	15.38	15.38	15.27	15.26	15.26	15.31	14.22	14.91	13.16	12.75	12.1	11.51	11.76	11.92
Average Gain (dB)	-10.65	-10.36	-9.87	-9.72	-9.61	-9.38	-9.21	-9	-8.97	-8.85	-8.13	-8.13	-8.16	-8.17	-8.17	-8.15	-8.47	-8.26	-8.81	-8.94	-9.17	-9.39	-9.3	-9.24

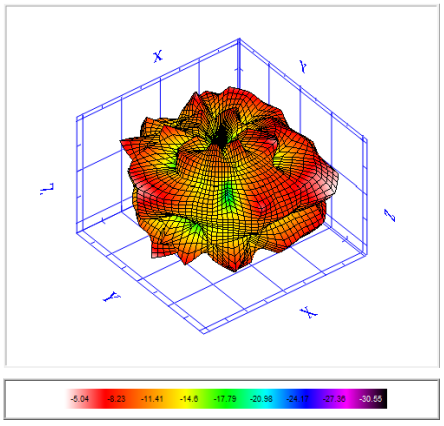
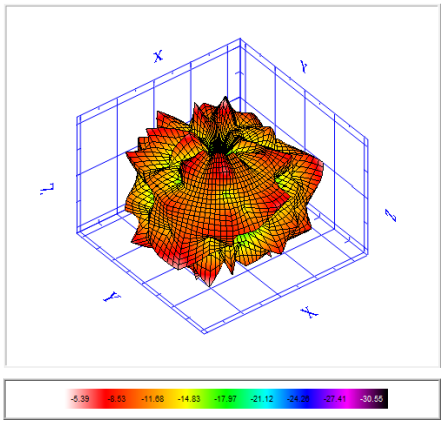
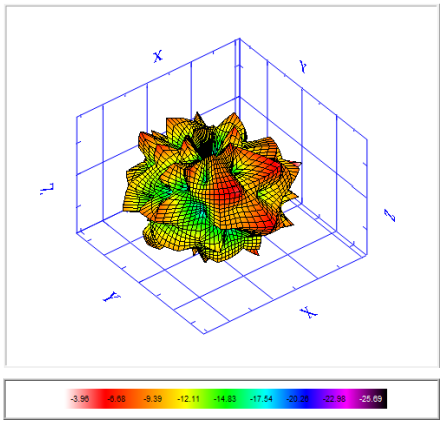
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2.4 GHz (WIFI & BT)

2400 MHZ	2450 MHZ	2500 MHZ
		

Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
E-Total Peak Gain (dBi)	-3.8	-2.87	-2.34	-2.97	-3.01	-3.14	-4.37	-4.4	-2.99	-3.1	-3.72
Efficiency (%)	12.21	12.59	13.11	12.38	12.04	10.59	10.06	11.47	12.77	11.54	11.03
Average Gain (dB)	-9.13	-9	-8.82	-9.07	-9.19	-9.75	-9.97	-9.4	-8.94	-9.38	-9.57

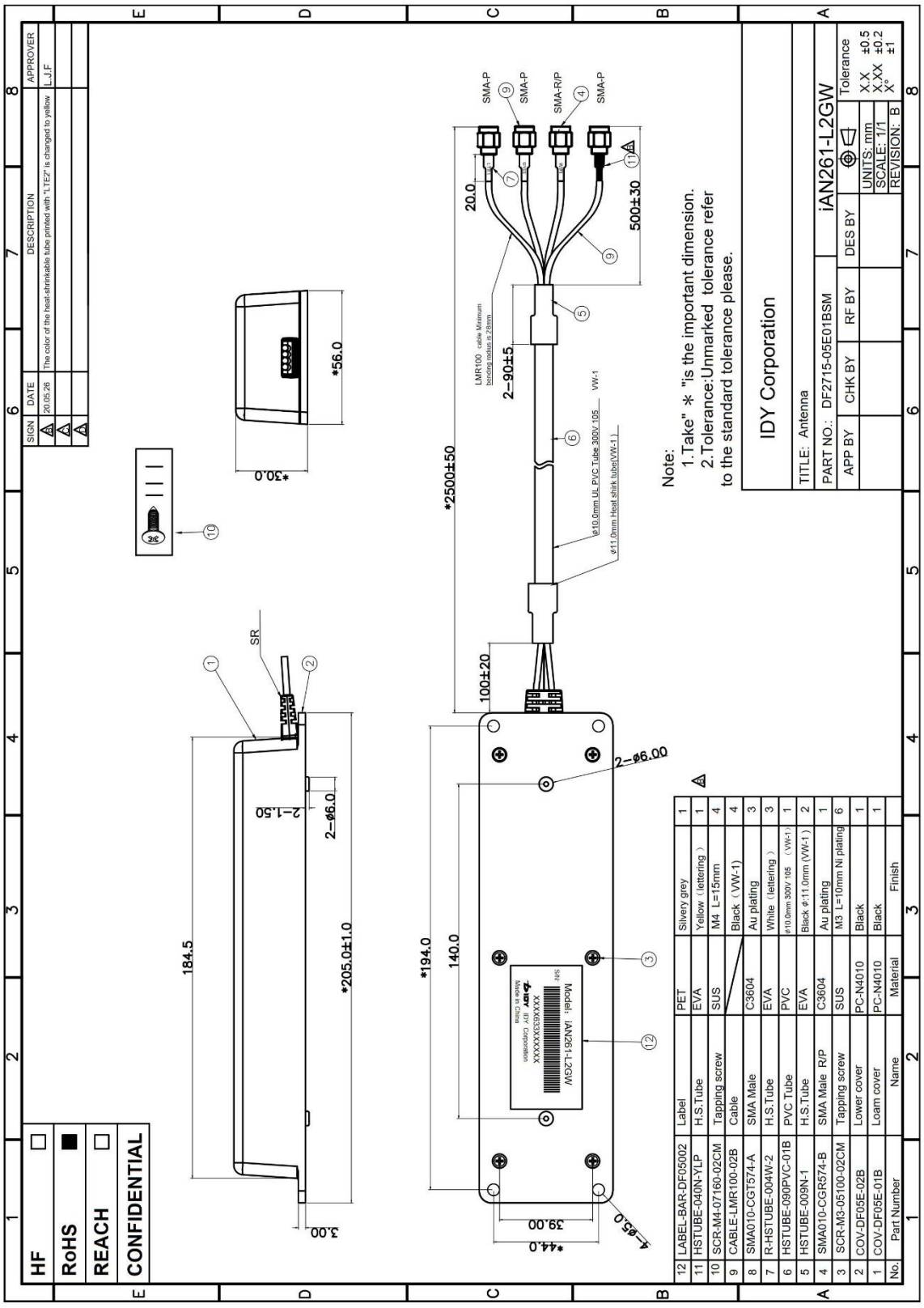
5 GHz (WIFI)

5150 MHZ	5600 MHZ	5850 MHZ
		

Frequency	5150	5250	5350	5470	5600	5700	5725	5785	5800	5850
E-Total Peak Gain (dBi)	-5.04	-5.04	-5.63	-6.4	-5.39	-4.85	-5.76	-5.36	-5.73	-3.96
Efficiency (%)	8.09	7.14	7.32	5.87	7.35	7.41	7.35	7.33	6.62	7.34
Average Gain (dB)	-10.92	-11.46	-11.35	-12.32	-11.33	-11.3	-11.33	-11.35	-11.79	-11.34

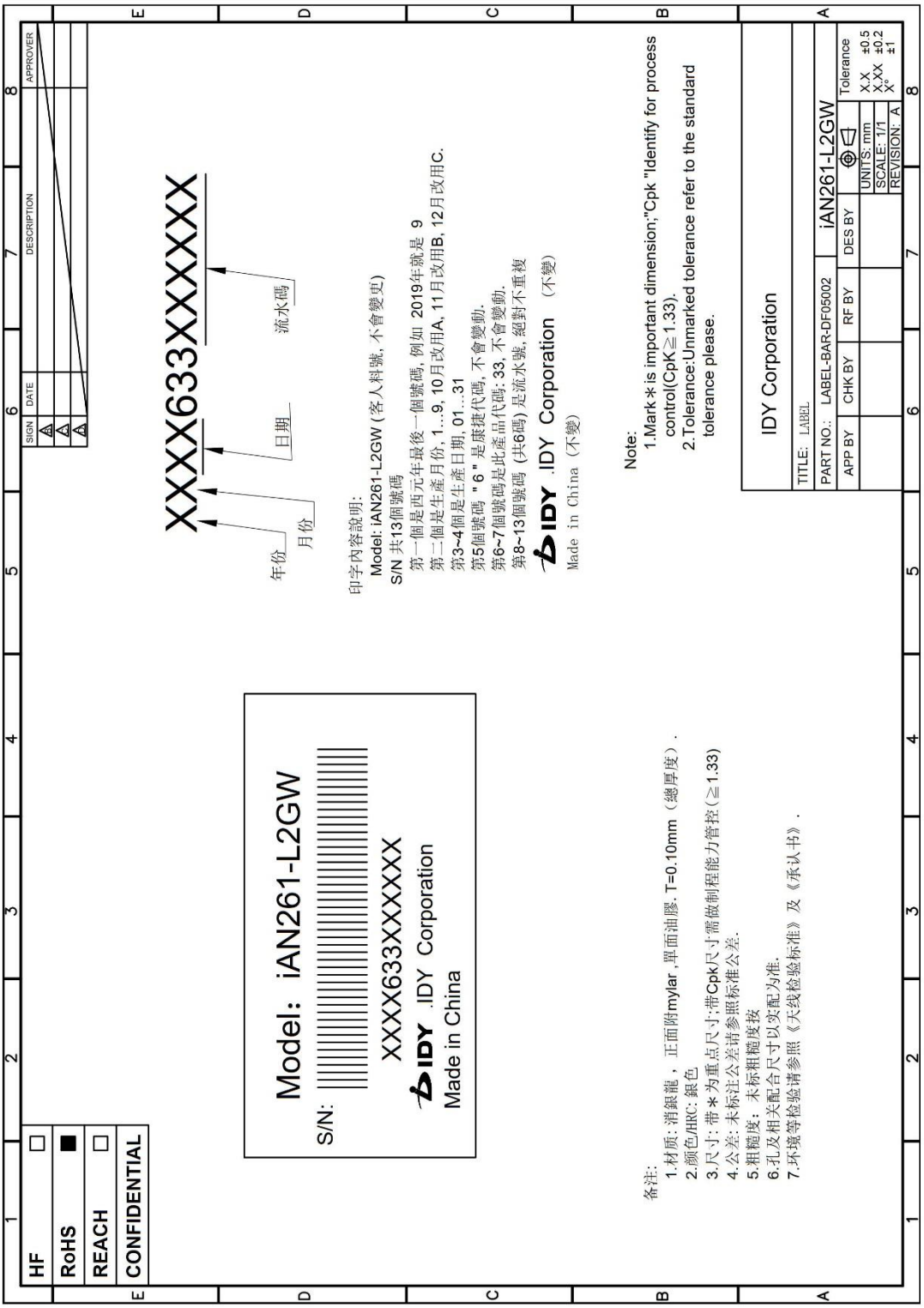
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■ 外観仕様



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■ ラベル仕様



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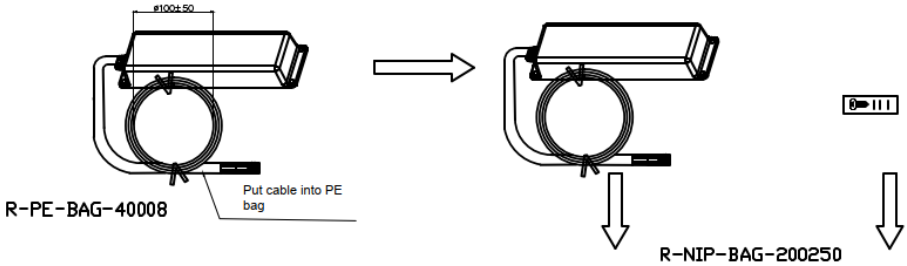
■ 梱包仕様

PACKING CRITERION

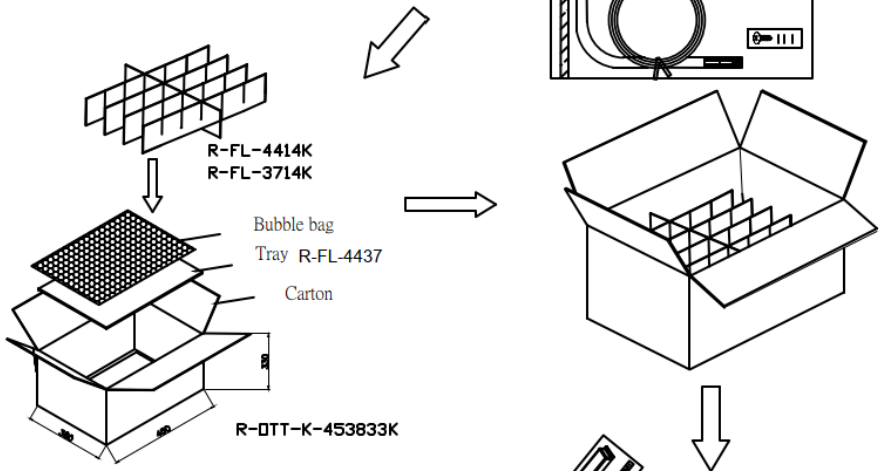
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Part Number : DF2715-05E01BSM Model: iAN261-L2GW	Revision : E
Name: Antenna	Customer : ALL

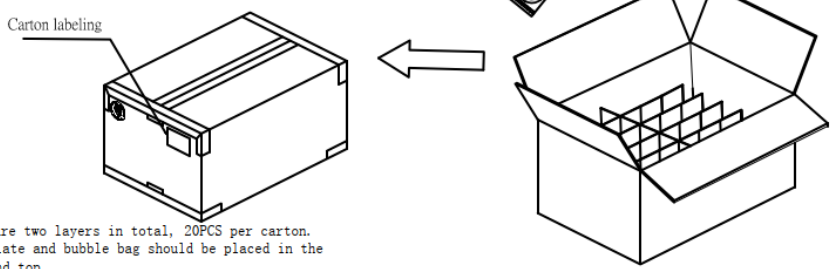
1.1PCS/per Bag



2. 10PCS products on each layer



3. Each box contains 20PCS of products.



1, There are two layers in total, 20PCS per carton. Baffle plate and bubble bag should be placed in the middle and top.
2,The side of the master carton is pasted with environmental protection label and outer box label.

Each honeycomb contains 1pcs of product.

APPROVED BY CHECKED BY： DESIGNED BY：

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■ ケーブル仕様

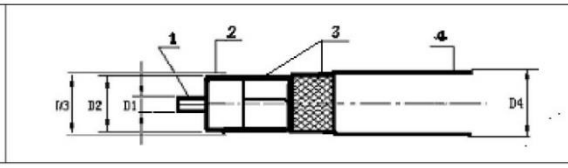
穗榕 WWW.SUIRONGCABLE.COM 深圳市穗榕同轴电缆科技有限公司

S.R Code:SR18070201

LMR-100 Coaxial Cable Specification

（**LMR-100** 同轴电缆规格书）

Reference standard:MIL-C-17G Black

Type of coaxial cable: LMR-100, RoHS compliance					
Legend:					
LMR-100 1.Inner conductor 内导体 2. Dielectric: 绝 缘 3.Outer conductor 外导体 4. Jacket White 护套					
Main Electrical properties:					
Characteristic impedance	阻抗	50±2Ohm			
Rated capacitance	电容	100±2 pf/m			
Velocity	速比	66%			
Delay	延时	4.90ns/m			
Operating frequency	工作频率	1~6000MHz			
Attenuation at typical frequencies:（dB/ m）					
100MHz	400MHz	900MHz	1800MHz	2400MHz	3000MHz
0.19	0.48	0.74	1.08	1.25	1.48
VSWR 1~3000MHz	电压驻波比	1.30 Max.			
Mechanical Construction:					
Inner conductor: BC	裸铜线	0.46±0.01mm			
Dielectric:PE	绝缘 PE	1.52±0.03mm			
Outer conductor: AP+TC（※）	铝箔+镀锡铜线	2.04±0.05mm （16*5/0.10mm）			
Jacket :PVC	护套阻燃黑色 PVC （防火等级：VW-1）	2.80±0.10mm			
※ TC-- tinned copper					
Engineering data:					
Maximum Pull Tension Minimum bending radius Operating temperature Reel Length jacket-Marking	最大拉拔力 最小弯曲半径 工作温度 装盘长度 产品标识	38 Ibs 27mm -40~+105°C LOW LOSS 100 VW-1 PVC COAXIAL CABLE HYT MICROWAVE SYSTEM/NFC			

SuiRong COAXIAL CABLE Co.,Ltd

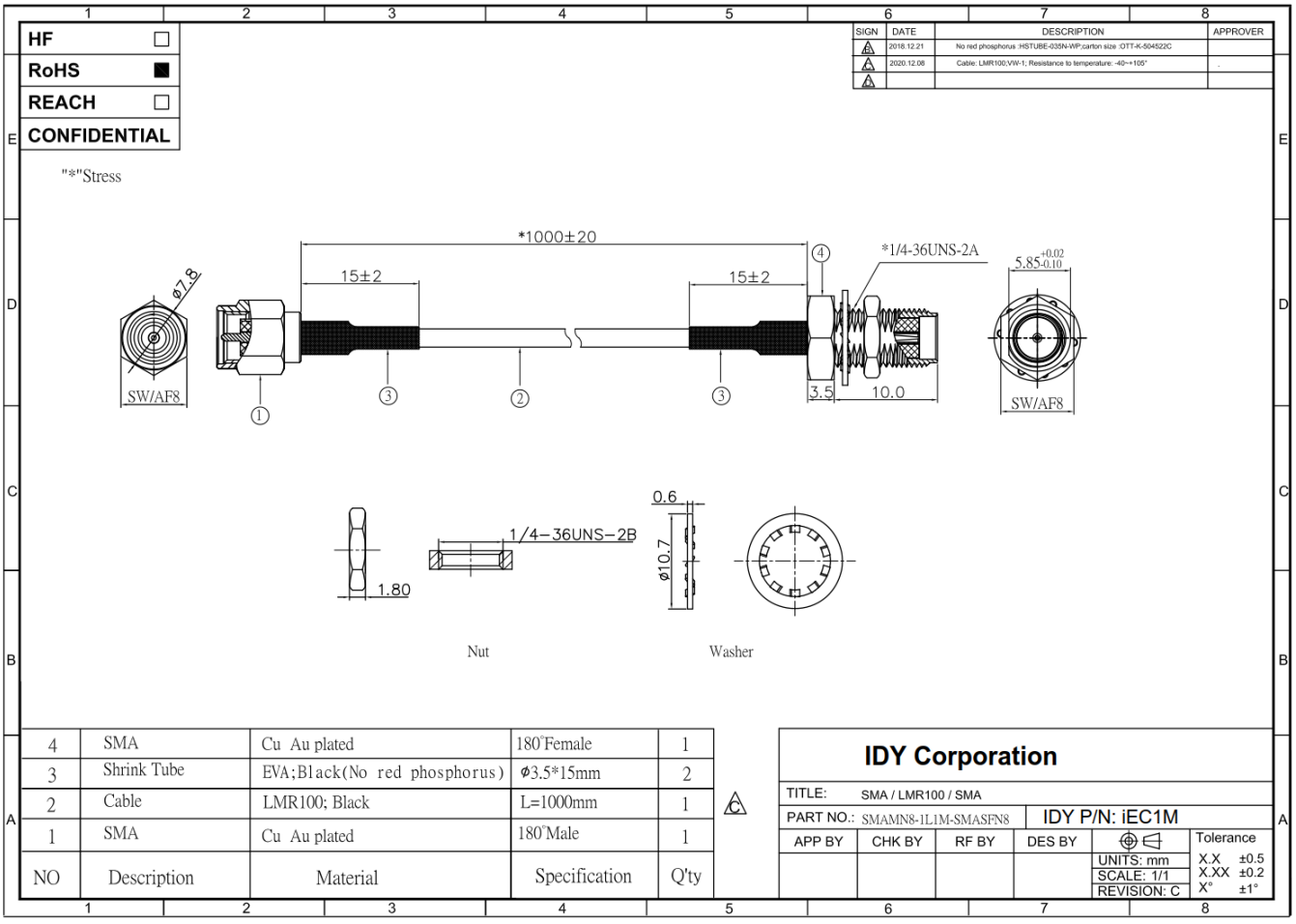
制造商:深圳市穗榕同轴电缆科技有限公司
生产地:深圳市龙岗区务地铺清水路清水巷

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Tel：+86-755-28217358 Fax+86-755-28217359
2018-07-02

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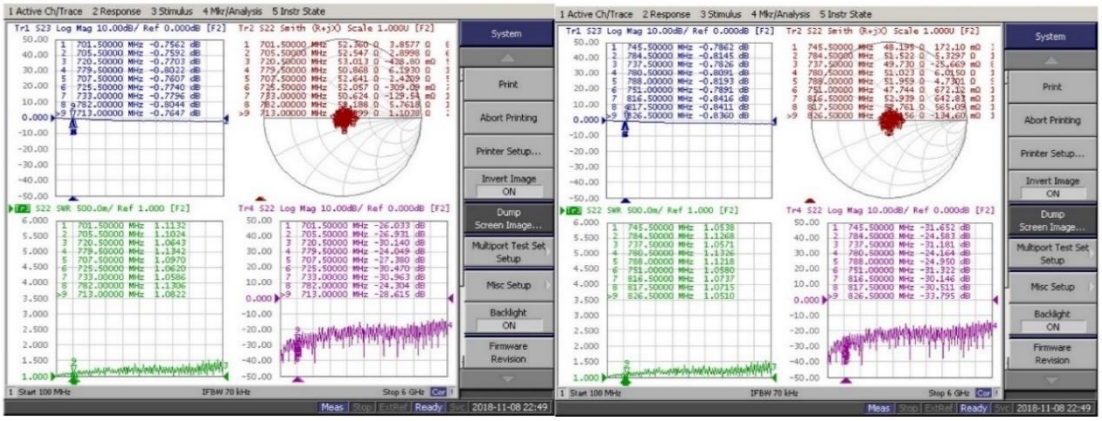
■ 1m 延長ケーブル iEC1M 仕様

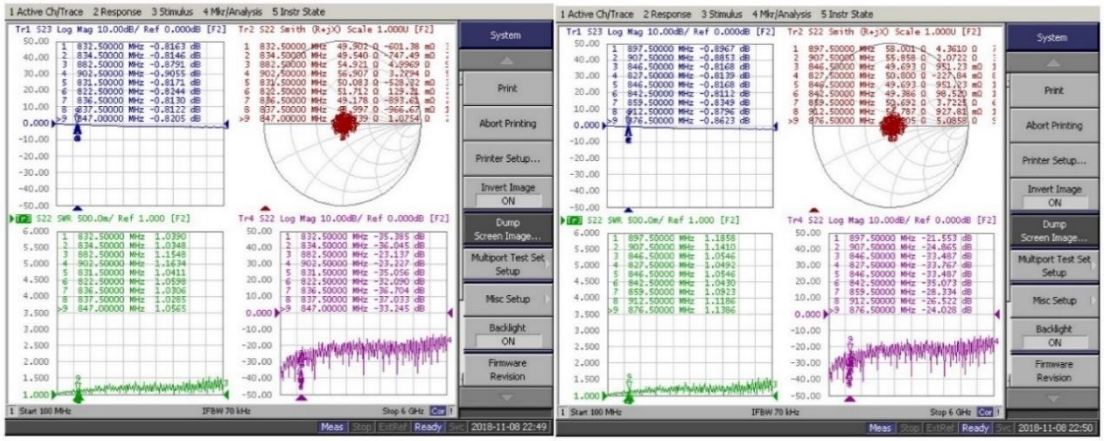
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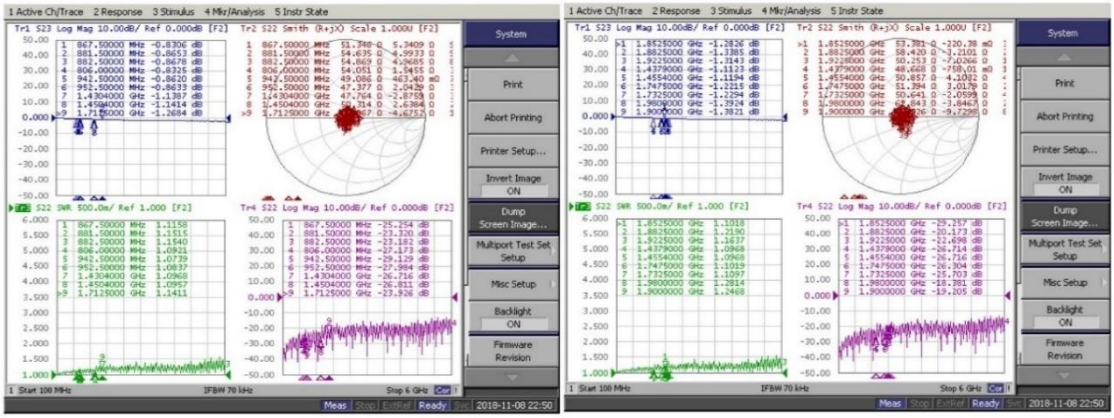


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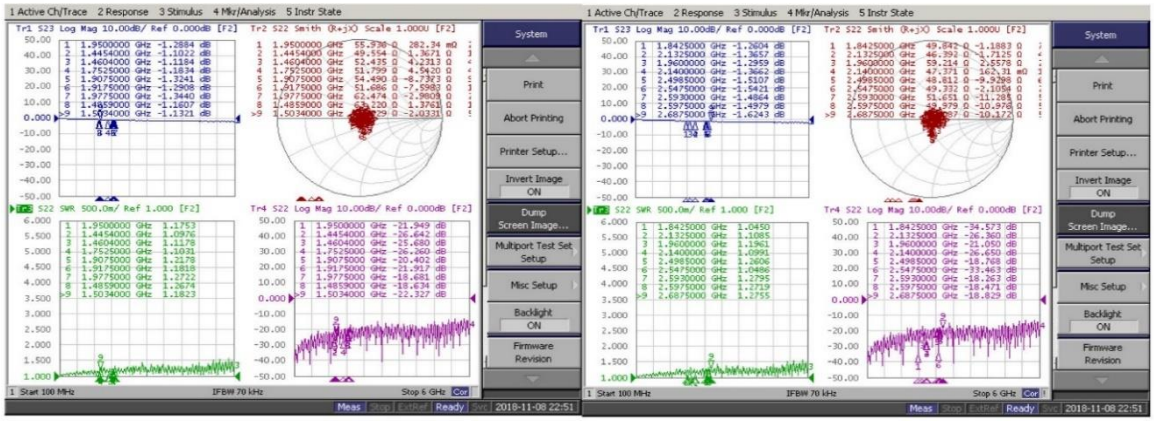
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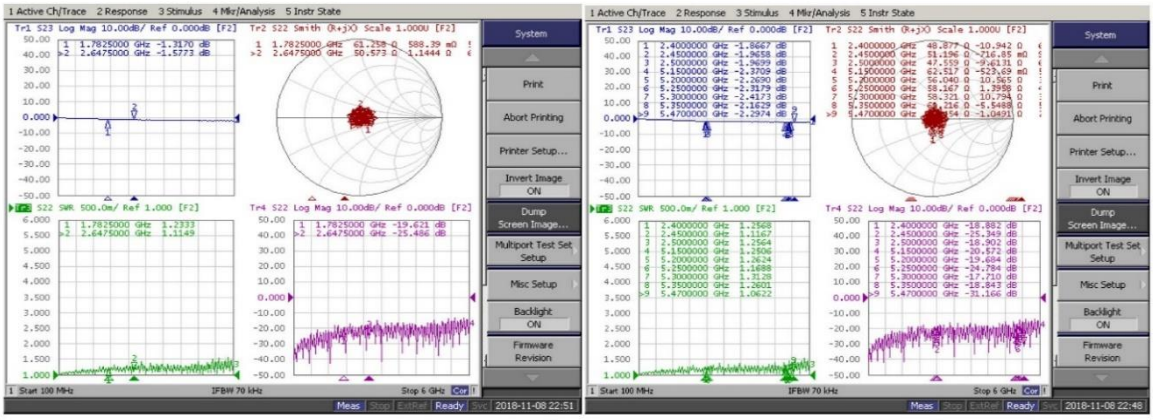


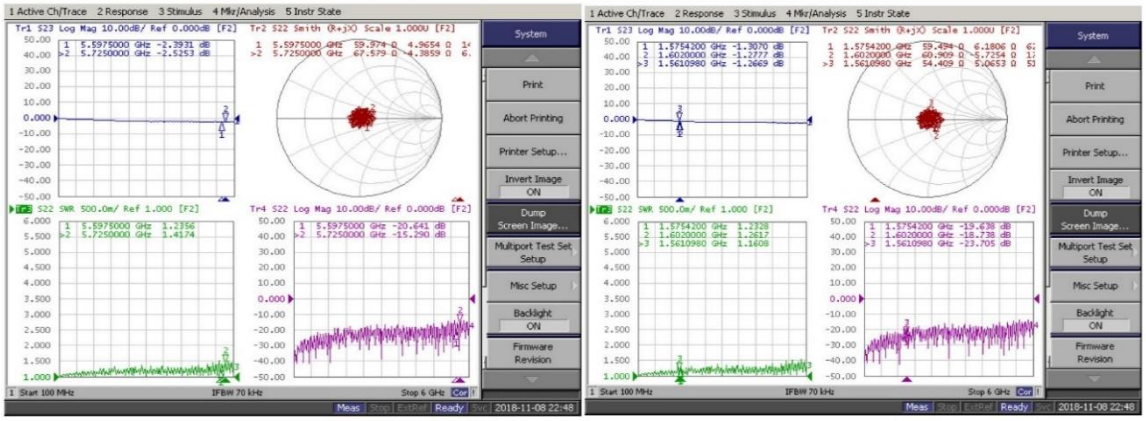




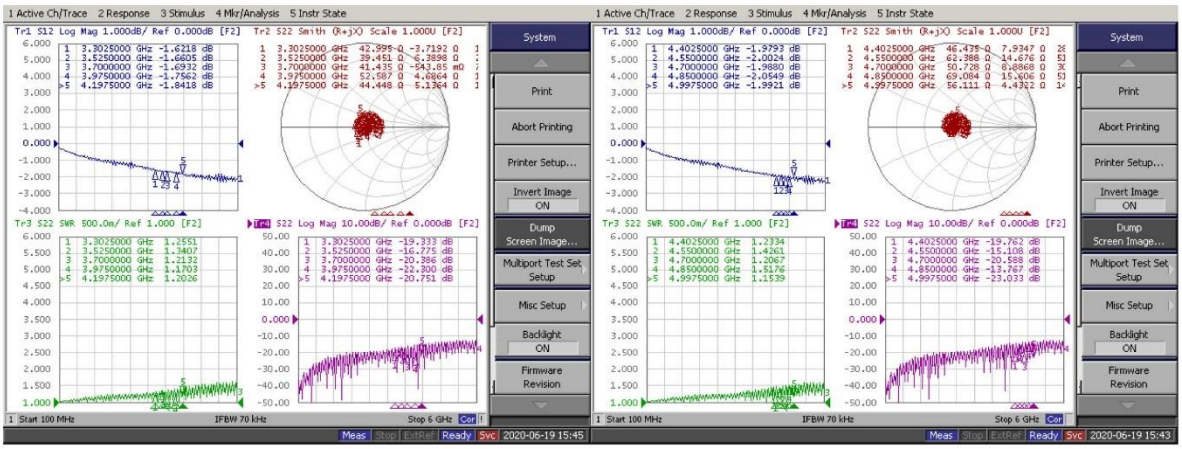
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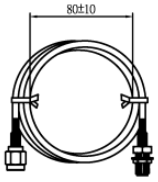
＜iEC1M Packaging Specification＞

Product packaging specification

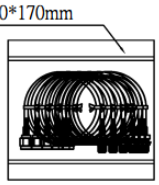
Date：2023.07.07 page: 1 of 1

P/N : SMAMN8-1L1M-SMASFN8 Model : iEC1M	Edition ：D
Product Name :Coaxial Cable	Customer： ALL

一



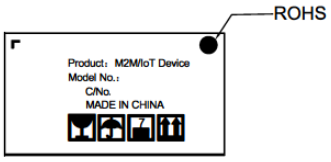
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5PCS / BAG

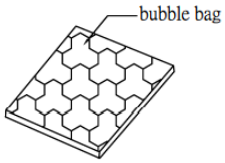
三

SIDE



Put a ROHS label on the side of master carton,
fill in the product part number, quantity, net weight and gross weight.

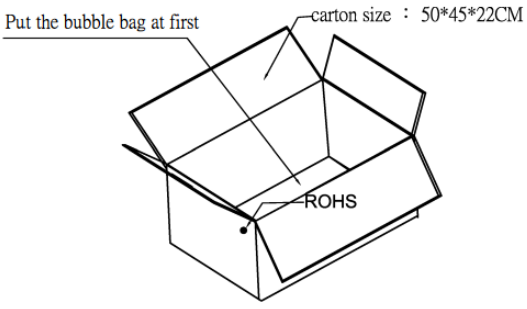
四



五

FRONT





500PCS / CARTON

APPROVED BY : _____ CHECKED BY : _____ DESIDNED BY ： _____

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＜iEC1M Cable Specification＞

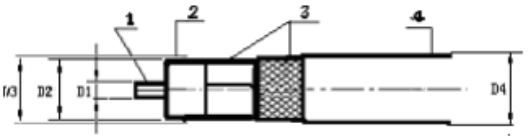
穗格 WWW.SUIRONGCABLE.COM 深圳市穗榕同轴电缆科技有限公司

S.R Code:SR18070201

LMR-100 Coaxial Cable Specification

（**LMR-100** 同轴电缆规格书）

Reference standard:MIL-C-17G Black

Type of coaxial cable: LMR-100, RoHS compliance		
Legend:		
LMR-100 1.Inner conductor 内导体 2. Dielectric: 绝 缘 3.Outer conductor 外导体 4. Jacket White 护套		
Main Electrical properties:		
Characteristic impedance	阻抗	50±2Ohm
Rated capacitance	电容	100±2 pf/m
Velocity	速比	66%
Delay	延时	4.90ns/m
Operating frequency	工作频率	1~6000MHz
Attenuation at typical frequencies:（dB/ m）		

100MHz	400MHz	900MHz	1800MHz	2400MHz	3000MHz
0.19	0.48	0.74	1.08	1.25	1.48

VSWR 1~3000MHz	电压驻波比	1.30 Max.
Mechanical Construction:		
Inner conductor: BC	裸铜线	0.46±0. 01㎜
Dielectric:PE	绝缘 PE	1.52±0. 03mm
Outer conductor: AP+TC（※）	铝箔+镀锡铜线	2.04±0. 05mm （16*5/0.10mm）
Jacket :PVC	护套阻燃黑色 PVC （防火等级：VW-1）	2.80±0.10mm
※ TC-- tinned copper		
Engineering data:		
Maximum Pull Tension Minimum bending radius Operating temperature Reel Length jacket-Marking	最大拉拔力 最小弯曲半径 工作温度 装盘长度 产品标识	38 lbs 27mm -40~+105°C LOW LOSS 100 VW-1 PVC COAXIAL CABLE HYT MICROWAVE SYSTEM/NFC

SuiRong COAXIAL CABLE Co.,Ltd

制造商:深圳市穗榕同轴电缆科技有限公司
生产地:深圳市龙岗区务地铺清水路清水巷

WWW.SUIRONGCABLE.COM
Tel：+86-755-28217358 Fax+86-755-28217359
2018-07-02

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＜iEC1M RoHS Test＞

SGS TaiBei Network---http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp

SGS Mainland Network---http://rsts.cn.sgs.com/zh-cn/cheres_cn.asp

SGS Korea S. Network---http://rohs.kr.sgs.com/sgsrsts/en/cheres_en.asp

PLS fill out the correct data for search

1.Report Number

2.Report Date(YYYY/MM/DD)
3.Product Name(Input the first 10 figures. Do not include the blank
4.The graphic presentation checking yard

HSF Datasheet

Part Number：SMAMN8-1L1M-SMASFN8 IDY P/N: iEC1M

Number	Detali Part Number	Detail Name	Material	RoHS Test Results										Report Number	Test Date	Test Name	Test Locale
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DIBP	DEHP				
1	SMA	180°Male 180°Female	CU	N.D.	29790	N.D.	Negative	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	AZT032106150008C-011	2021.07.05	C3604	AZT
			Au Plated	N.D.	31	N.D.	N.D.							SZXEC2101871802	2021.06.28	銅車件電鍍金.	SGS
			PTFE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	A2200357261101001	2020.10.17	PTFE plastics	CTI
2	LMR100	Cable	PVC	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2020811102	2020.11.27	PVC Black	SGS
			PE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2022021108	2020.12.18	HDPE	SGS
			AL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	YCCT332020060601RZ2	2020.06.06	铝箔聚酯膜麦拉带	YCCT
			BCU	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	TSNEC2002256101	2020.11.30	ELECTRICIAN	SGS
			TCU	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	C210301069002-0	2021.03.05	镀锡线0.15	CPST
3	HSTUBE-035N-WP	Shrink Tub	EVA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2022443601	2020.12.22	HEAT SHRINKABLE TUBING	SGS

PLS refer the SGS report, fill out the content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs
The content of Pb, Cd, Hg, Cr6+, PBBs, PBDEs is less than 100 ppm in the package. The content of Cd is less than 5 ppm.
According to the EU ROHS directive exemption clause 2015/863/EU Lead as an alloying element in steel containing up to 0,35 % aluminium containing up to 0,4% copper alloy containing up to 4%

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■ 12m 延長ケーブル iEC12M 仕様

Product Number: iEC12M
Product Name: Coaxial Cable

Specification For Approval

Date: 2021 / 09 / 13

File No.: 210802001

Version: 1.2

IDY P/N : iEC12M

R/N : SMAMN8-2L12M-SMASFN8

Description : Coaxial Cable

Checked By:
Approved By:

Page 1

IDY Copyright © IDY Corporation, All Rights Reserved

Product Number: iEC12M
Product Name: Coaxial Cable

Index:

1. **Revision History / Page 3**
2. **Specification / Page 4**
3. **Characteristics and Reliability Test / Page 5**
4. **S Parameter Test Data / Page 6 ~ 13**
5. **Mechanical and Packing Drawing / Page 14 ~ 15**
6. **Material Description and RoHS Test Report / Page 16 ~ end**

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Product Number: iEC12M
Product Name: Coaxial Cable

1. Revision History

Revision	Date	Change Notification	Description
1.0	2020.09.25	Issued	
1.1	2021.08.02	Added Data	Increased the measurement frequency.
1.2	2021.09.13	Changed Packaging Specifications	The packaging specifications have been changed to the English version.

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Product Number: iEC12M
Product Name: Coaxial Cable

2. Specification

Sample Photo	
	
A. Electrical Characteristics	
Frequency	701~713MHz / 745~826 MHz 832~847MHz / 876~897MHz 867~1712MHz / 1852~1900MHz 1445~1977MHz / 1842~2687MHz 1782~2647MHz / 2400~5470MHz 3302~4197 MHz / 4402~4997 MHz 5597~5725 MHz / 1575~1561MHz
Impedance	50 Ohm
Insertion Loss	>= -4.0 dB @ 701~713MHz >= -4.0 dB @745~826 MHz >= -4.2 dB @832~847MHz >= -4.2 dB @876~897MHz >= -4.2 dB @867~952 MHz >= -5.6 dB @1430~1712MHz >= -5.5 dB @1575~1561MHz >= -6.3 dB @1852~1900MHz >= -6.3 dB @1445~1977MHz >= -8.0 dB @1842~2687MHz >= -7.0 dB @1782~2647MHz >= -12 dB @2400~5470MHz >= -10 dB @3302~4197 MHz >= -12 dB @4402~4997 MHz >= -12 dB @5597~5725 MHz
Voltage (breakdown)	> 500V
Insulation Resistance	>= 500 M ohm
B. Mechanical Characteristics	
Pull Test of Connector	>= 5Kg
Mating Cycles	> 500

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Product Number: iEC12M
Product Name: Coaxial Cable

C. Environmental	
Operation Temperature	- 25 ˚C ~ + 70 ˚C
Storage Temperature	- 30 ˚C ~ + 80 ˚C

3. Characteristics and Reliability Test

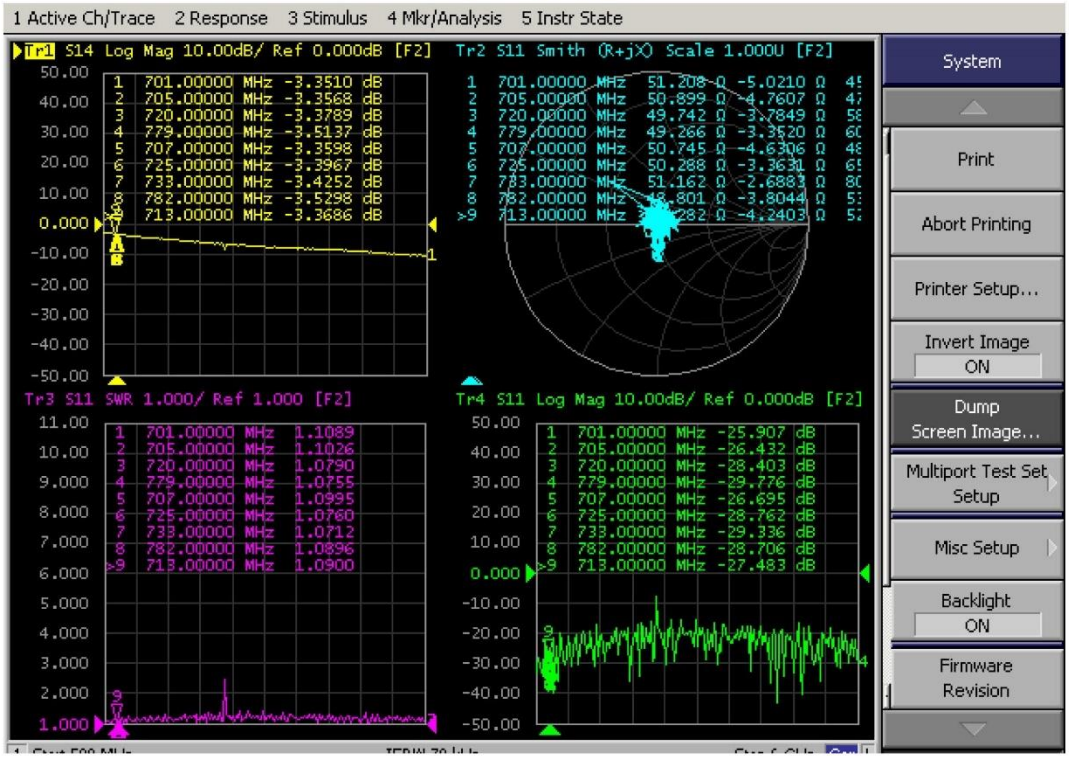
Test Items		Test Condition and Procedure	Requirements	Result
C1	V.S.W.R.	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
C2	Insertion Loss	Set DUT on Network Analyzer; make individual calibration to test	Directive DUT specification	PASS
M4	Pull Test	Holding with individual specification; force applied to axis of terminal.	1. Directive DUT specification 2. Frequency Tol.≤5%	PASS
M6	Dimension	Inspection of dimension, color, material, package, surface process.	Directive DUT specification	PASS
E2	Salt Spray	GB / T 2423.17-2008 Temp: 35°C; RH: ≥ 95%; NaCl solution: ≥ 5%;Time: 24H	1. No Visual Damage 2. Frequency Tol.≤5%	PASS
E3	Temperature and Humidity Chamber	GB / T 2423.3-2006 Temp: 80°C / 12 H; -40°C / 12H RH: ≥ 90%; Time: 24H	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%	PASS
E5	Aging test	GB /T 2423.2 - 2008 Temp: 80°C; Time: 24 hours	After 2 Hours Recovery 1. No Visual Damage 2. Frequency Tol.≤5%	PASS
R1	RoHS	With Reference to IEC 62321:2008 with flow chart	Directive RoHS 2015/863/EU	PASS

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Product Number: iEC12M
Product Name: Coaxial Cable

4. S Parameter Test Data

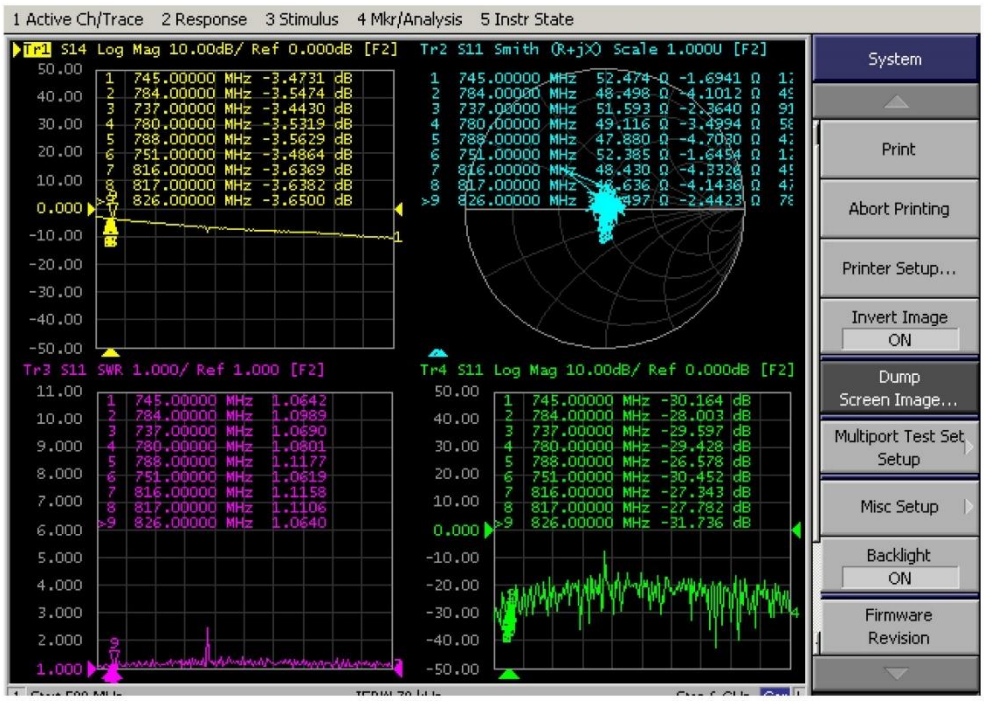
701~713MHz



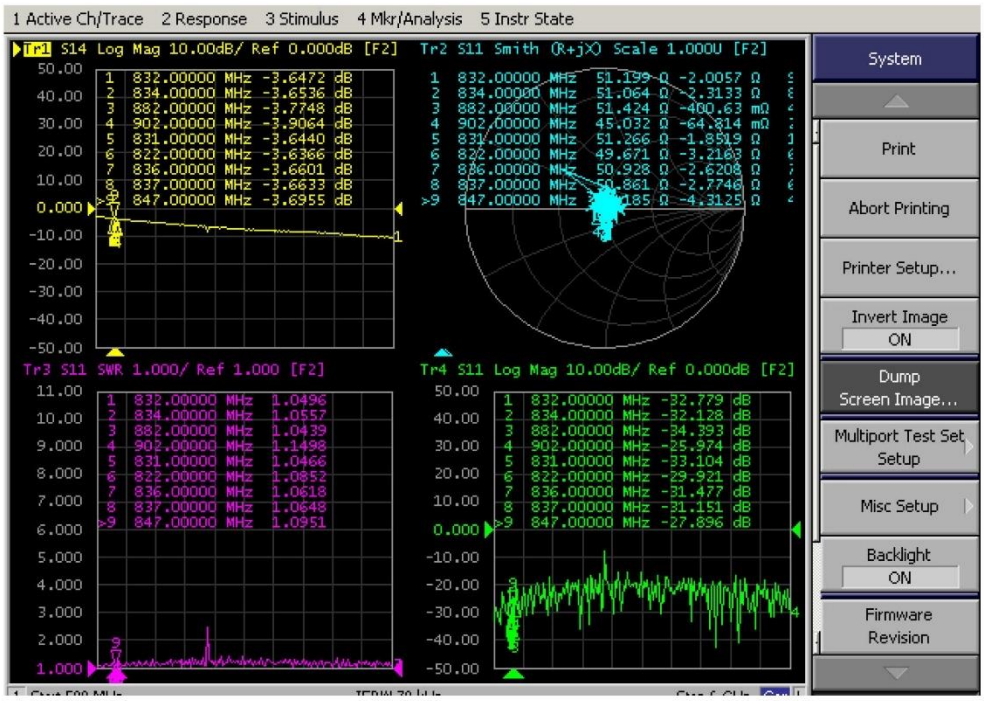
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Product Number: iEC12M
Product Name: Coaxial Cable

745~826MHz



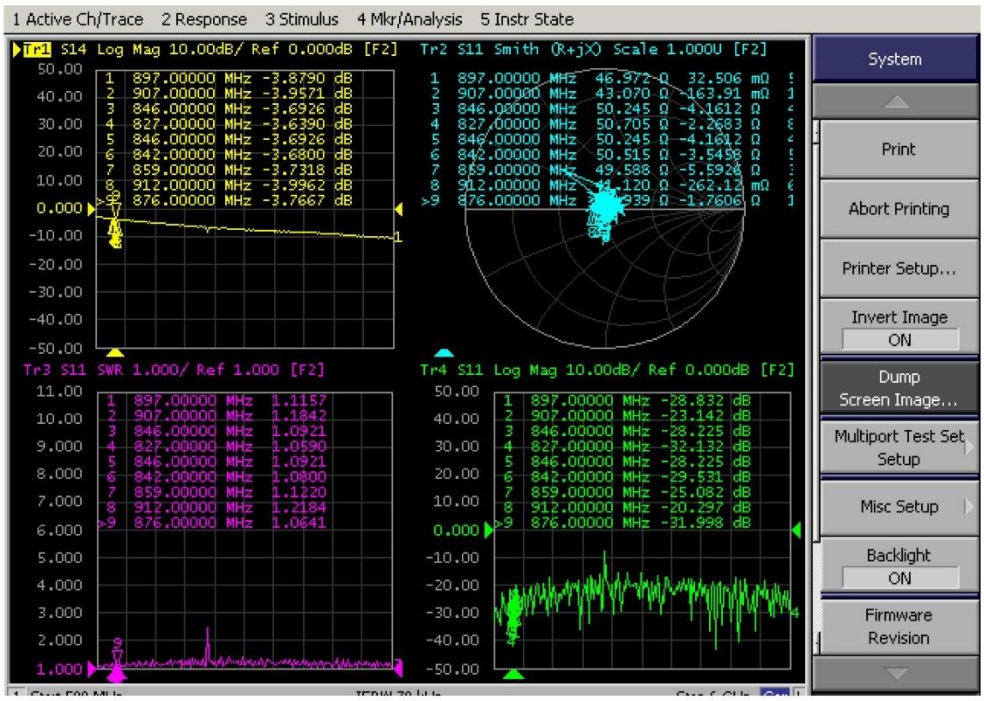
832~847MHz



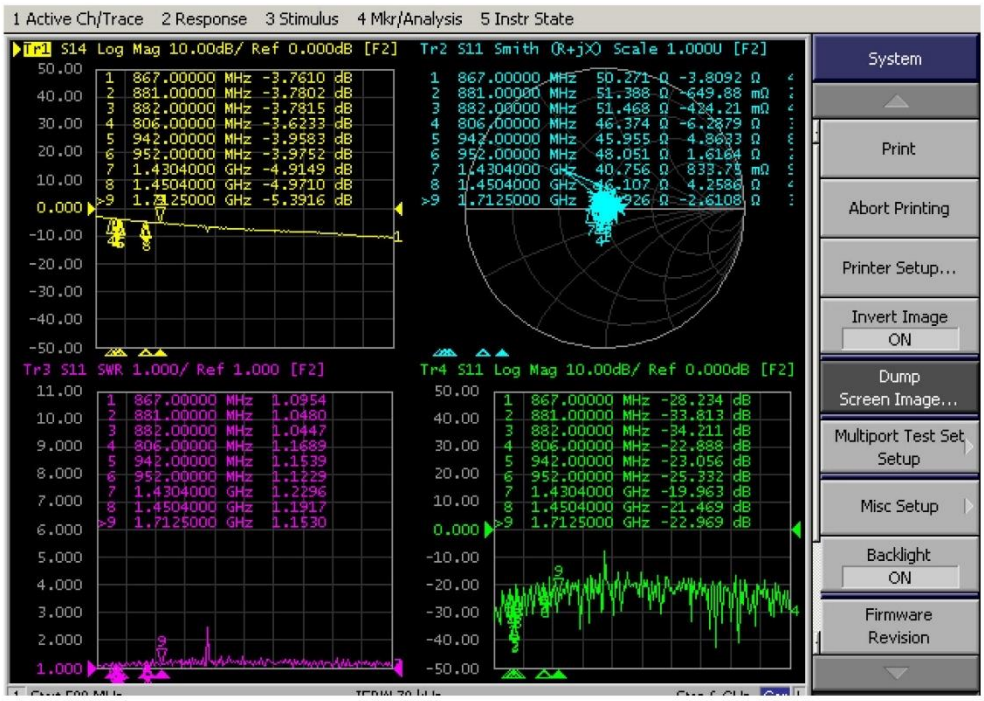
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Product Number: iEC12M
Product Name: Coaxial Cable

876~897MHz



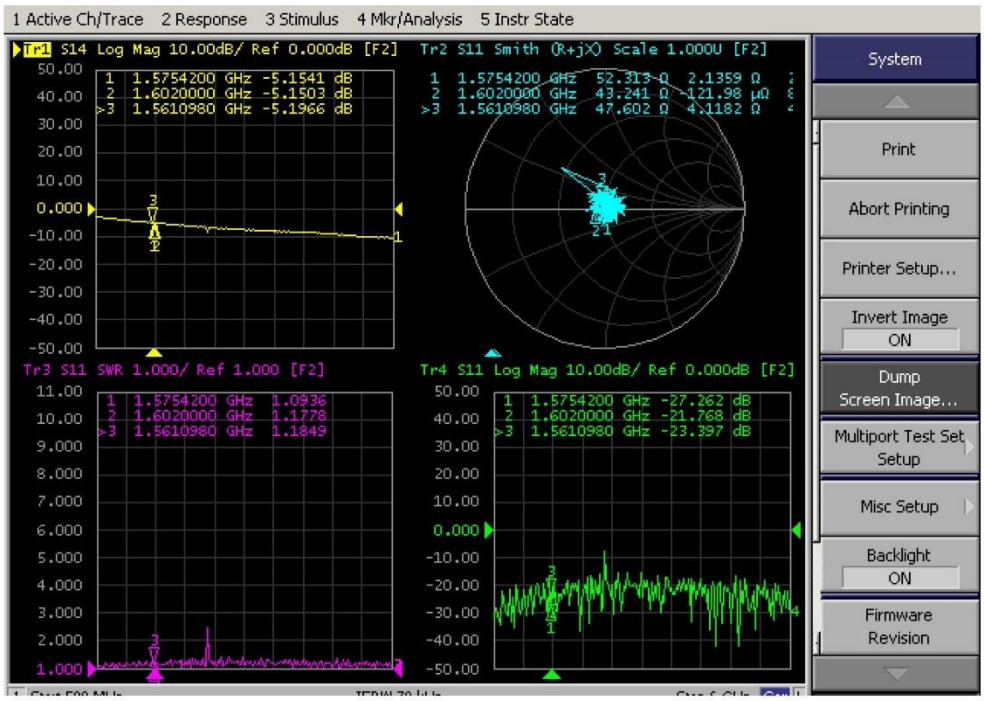
867~1712MHz



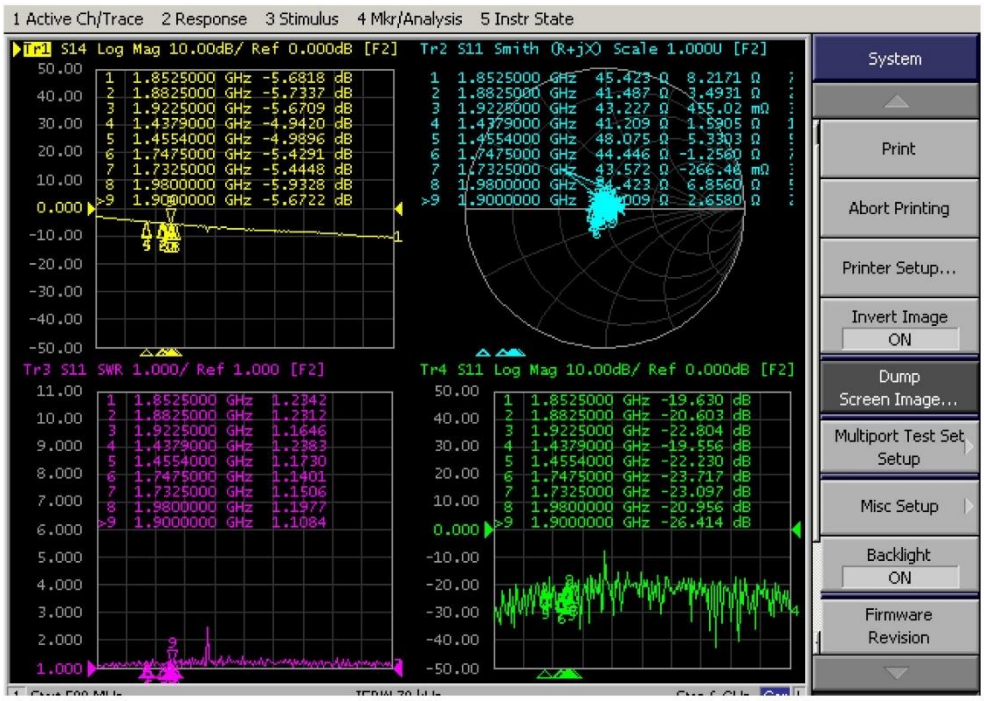
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Product Number: iEC12M
Product Name: Coaxial Cable

1575~1561MHz



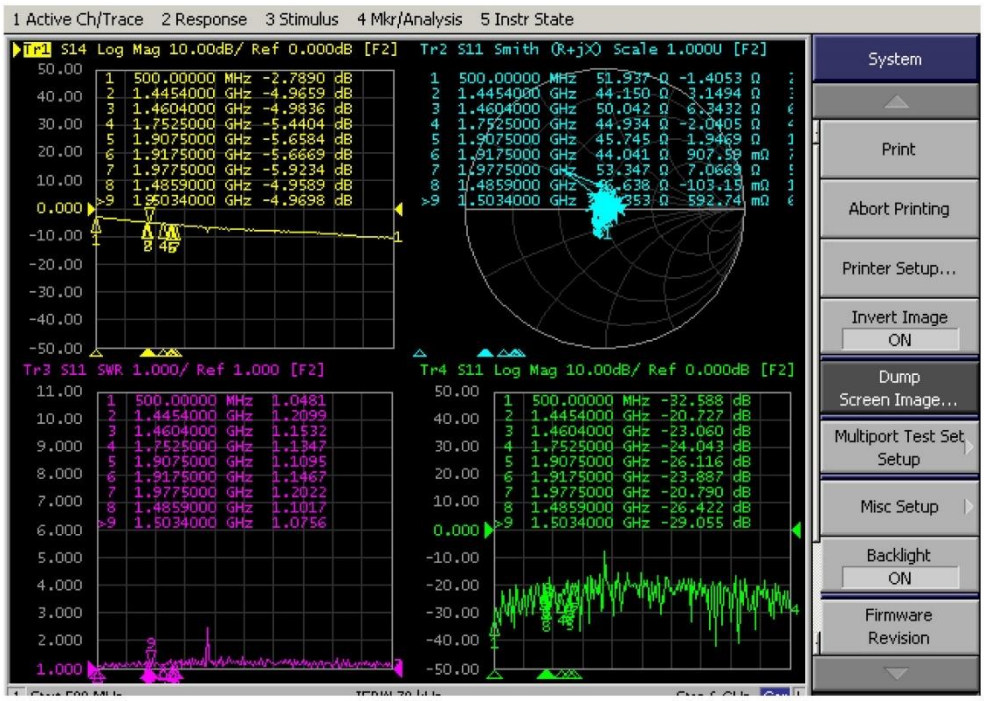
1852~1900MHz



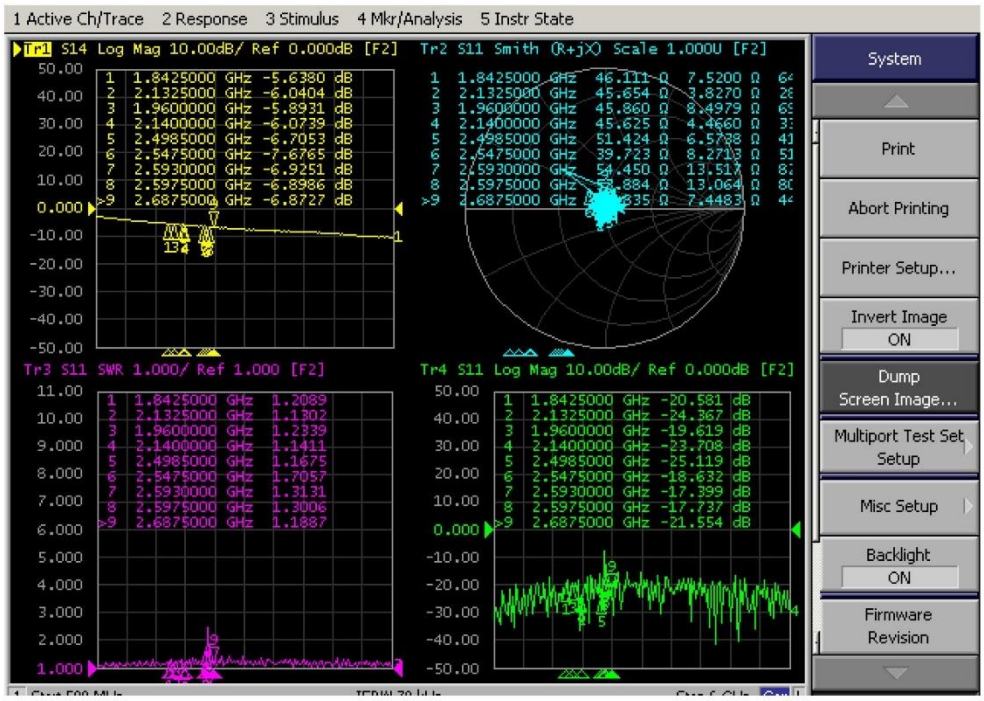
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Product Number: iEC12M
Product Name: Coaxial Cable

1445~1977MHz



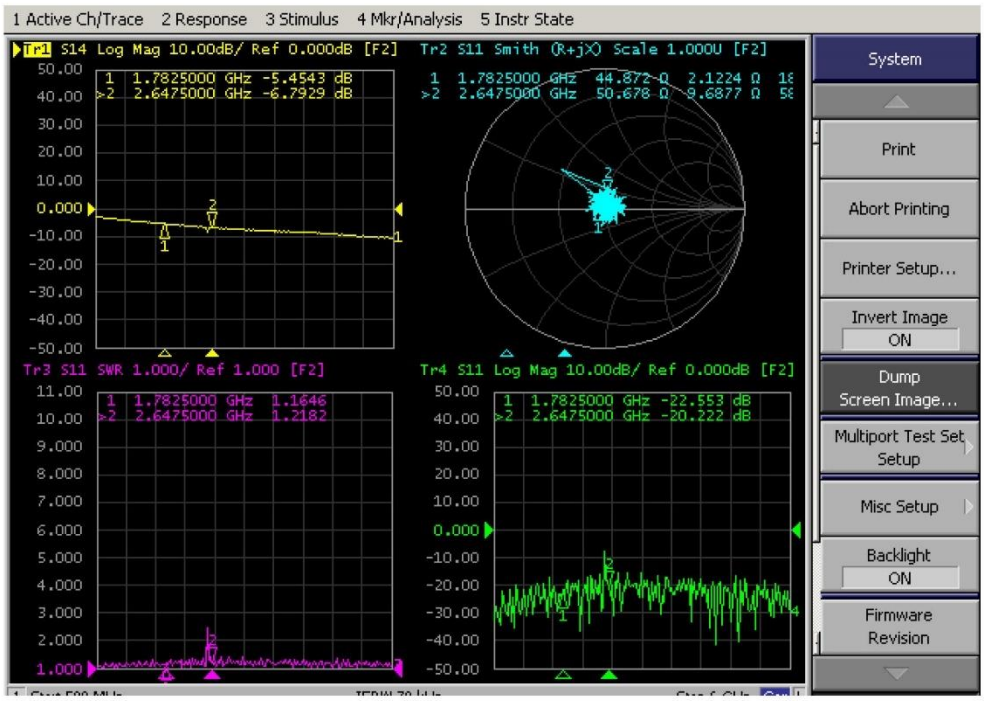
1842~2687MHz



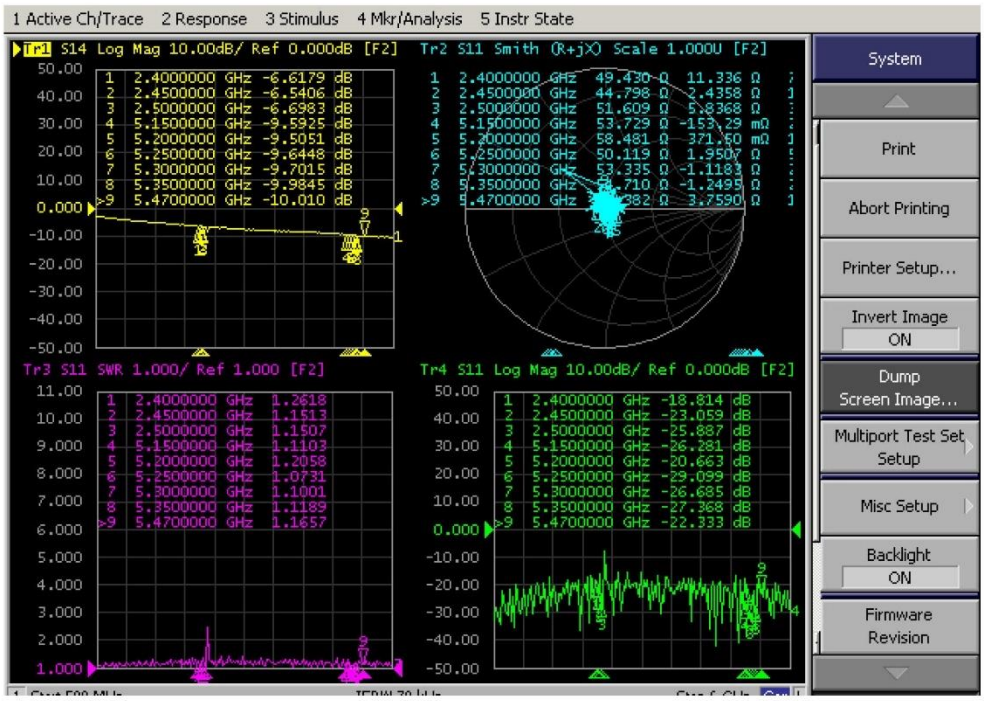
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Product Number: iEC12M
Product Name: Coaxial Cable

1782~2647MHz



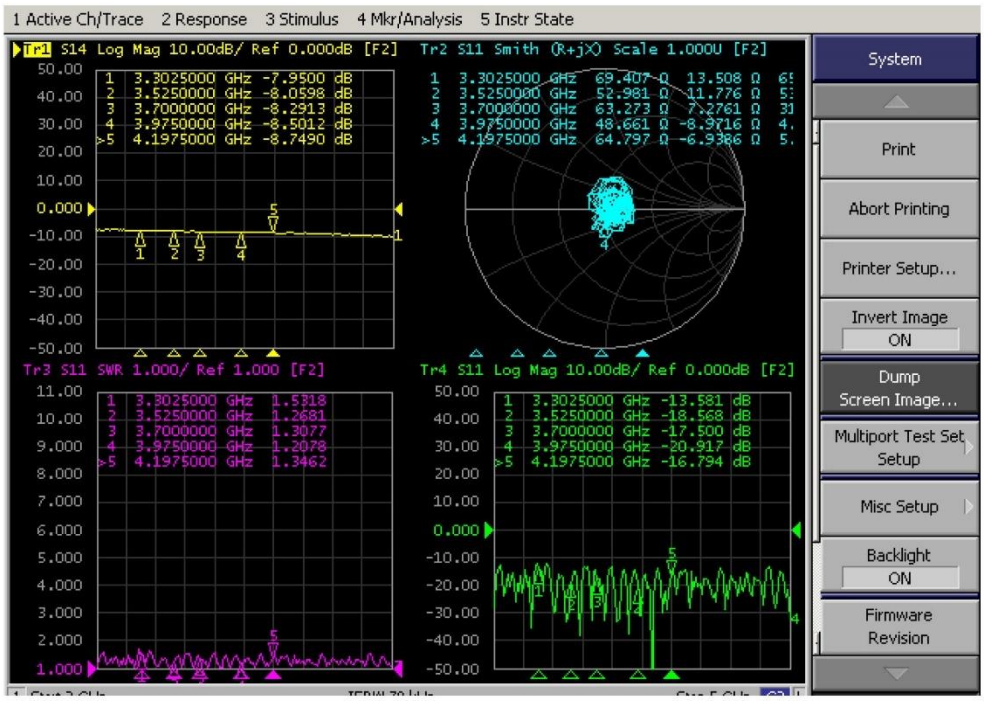
2400~5470MHz



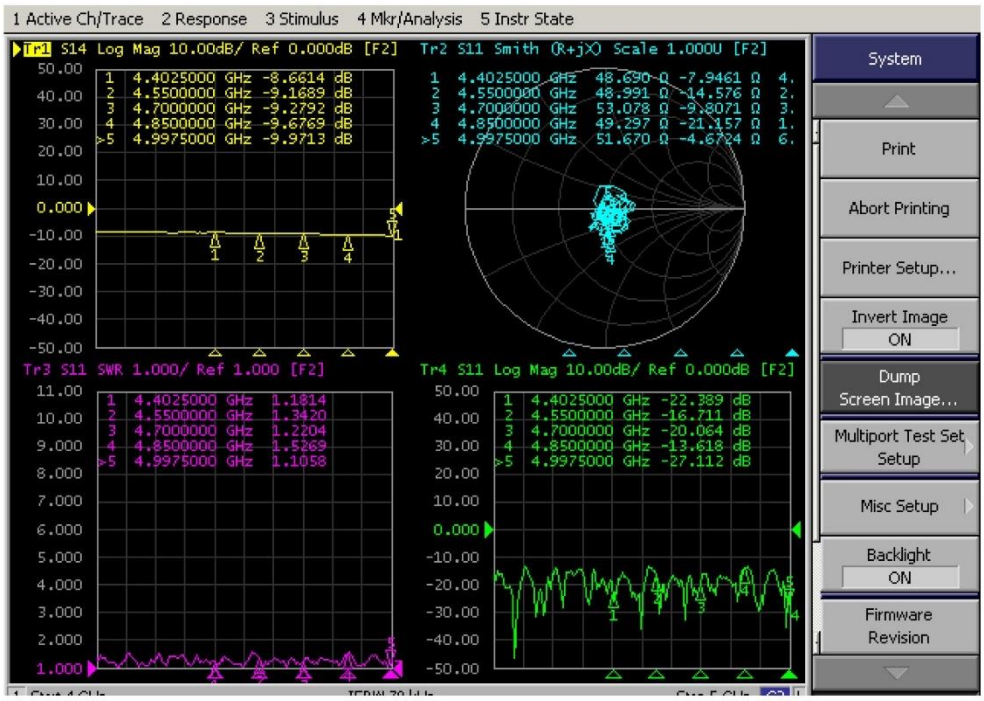
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Product Number: iEC12M
Product Name: Coaxial Cable

3302~4197 MHz



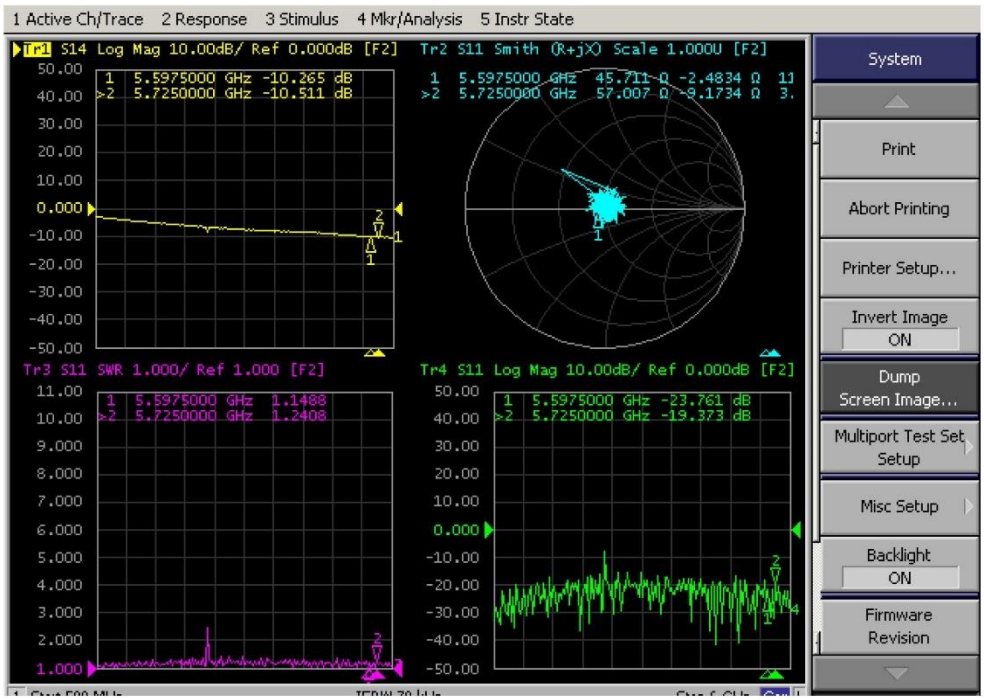
4402~4997 MHz



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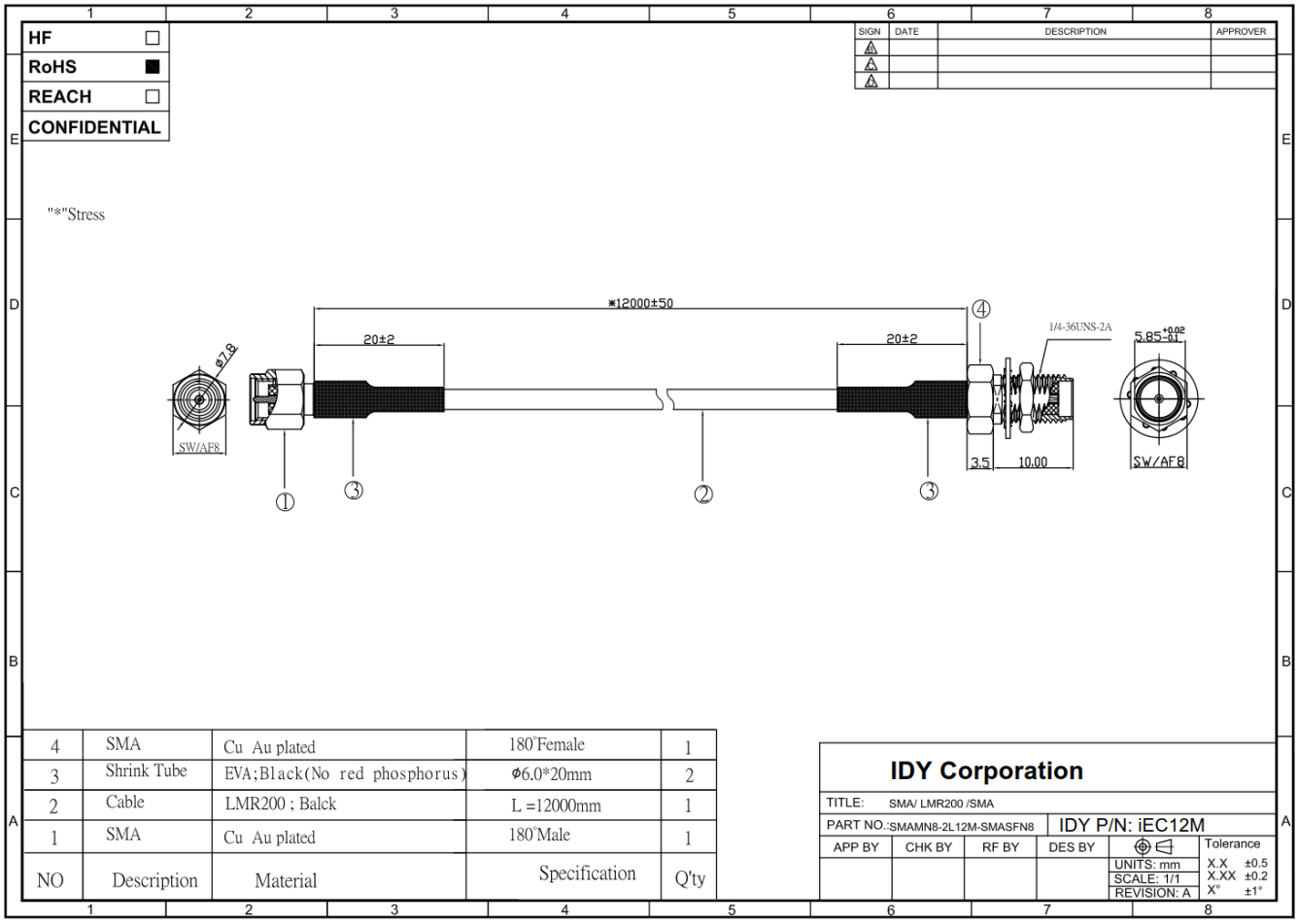
Product Number: iEC12M
Product Name: Coaxial Cable

5597~5725MHz



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＜iEC12M Mechanical Drawings＞



NO	Description	Material	Specification	Q'ty
4	SMA	Cu Au plated	180°Female	1
3	Shrink Tube	EVA;Black(No red phosphorus)	Φ6.0*20mm	2
2	Cable	LMR200 ; Balck	L =12000mm	1
1	SMA	Cu Au plated	180°Male	1

IDY Corporation

TITLE: SMA/ LMR200 /SMA

PART NO.:SMAMN8-2L12M-SMASFN8 IDY P/N: iEC12M

APP BY	CHK BY	RF BY	DES BY	Tolerance
				UNITS: mm X.X ±0.5
				SCALE: 1/1 X.XX ±0.2
				REVISION: A X° ±1°

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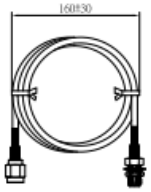
＜iEC12M Packaging Specification＞

Product packaging specification

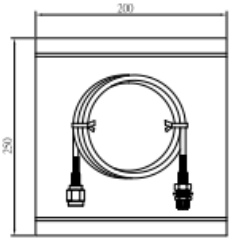
Date：2021.08.05 IDY P/N: iEC12M page: 1 of 1

Product NO : SMAMN8-2L12M-SMASFN8	Edition：A
Product Name :Coaxial Cable	Customer： ALL

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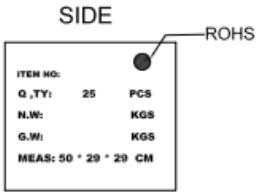


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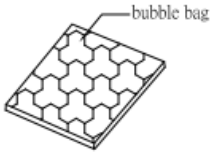


1 PCS / BAG

3.

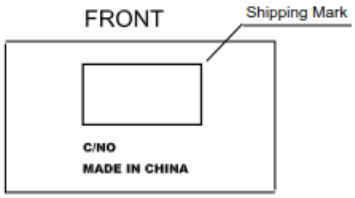


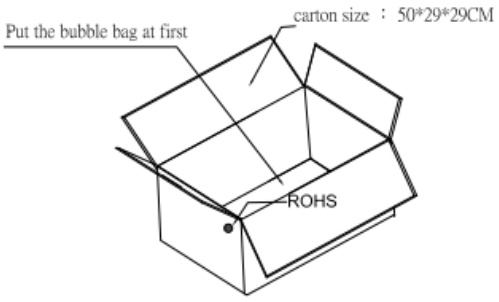
4.



Put a ROHS label on the side of master carton,
fill in the product part number, quantity, net weight and gross weight.

5.





25PCS / CARTON

APPROVED BY : _____ CHECKED BY : _____ DESIDNED BY：_____

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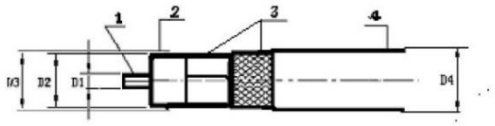
＜iEC12M Cable Specification＞

穗榕 WWW.SUIRONGCABLE.COM 深圳市穗榕同轴电缆科技有限公司

S.R Code: 18040705

R-CB-LMR-200 Coaxial Cable Specification

（ **LMR-200** 同轴电缆规格书）

Type of coaxial cable: LMR-200				
Legend:				
LMR-200: 1.Inner conductor 内导体 2. Insulation 电缆芯线 3.Outer conductor 外导体 4. Jacket 护套				
Main Electrical properties:				
Characteristic impedance	阻抗	50±2Ohm		
Rated capacitance	电容	78±2 pf/m		
Velocity	速比	81%		
Operating frequency	工作频率	10~3000MHz		
Attenuation at typical frequencies:（dB/m） Remarks: We confirmed that typical frequencies can be up to 6000MHz				
400MHz	900 MHz	1500 MHz	2100MHz	3000MHz
0.220	0.341	0.450	0.551	0.639
VSWR 10~3000MHz	电压驻波比	1.30Max.		
Mechanical Construction:				
Inner conductor: BC	裸铜线	1.12±0. 005mm		
Dielectric:foam PE	绝缘 FPE	2.95±0. 10mm		
Outer conductor: APA+TC	铝塑覆合箔＋镀锡铜线	3.70±0. 12mm（16*6/0.12mm）		
Jacket : PVC Black	护套黑色 PVC	5.0±0.10mm		
Engineering data:				
Maximum Pull Tension	最大拉拔力	42 lbs		
Minimum bending radius	最小弯曲半径	50mm		
Operating temperature	工作温度	-25~+70°C		
Reel Length	装盘长度	/		
jacket-Marking	产品标识	LOW LOSS 200 PVC HYT CABLE MICROWAVE SYSTEM/NFC		

SuiRong COAXIAL CABLE Co.,Ltd

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＜iEC12M RoHS Test＞

SGS 台灣網站 → http://twap.sgs.com/sgsrsts/chn/cheres_tw.asp
SGS 大陸網站 → http://rsts.cn.sgs.com/chn/cheres_cn.asp
SGS 韓國網站 → http://rohs.kr.sgs.com/sgsrsts/en/cheres_en.asp

請輸入以下報告正確資料及檢查碼以便查核
1. 報告編號
2. 報告日期 (YYYY/MM/DD)
3. 產品名稱 (輸入前 10 個字不含空白)
4. 圖示檢查碼 (依指示畫面)

填表：	
部門：	
職務：	

物料中HSF對象物質含量調查表

物料名稱：SMAMN8-2L12M-SMASFN8 (iEC12M)

序號	物料型號	物料各構成名稱	各構成物料的材質	測試報告裡RoHS2.0對應物質測試結果										檢測報告編號	測試日期	測試名稱	測試機構名稱
				Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	DBP	BBP	DIBP	DEHP				
1	SMA	180° Female 180°Male	銅	39	32915	N.D.	N.D.							CANML2109847002	2021.06.11	黃銅棒（C3604）	SGS
			鍍金	N.D.	31	N.D.	N.D.							SZXEC2101871802	2021.06.28	銅車件電鍍金.	SGS
2	LMR200	Cable	PVC	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2020811102	2020.11.27	PVC Black	SGS
			PE	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2022021108	2020.12.18	HDPE	SGS
			AL	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	YCCT332020060601RZ2	2020.06.06	铝箔聚酯膜麦拉带	YCCT
			裸銅	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	TSNEC2002256101	2020.11.30	ELECTRICIAN	SGS
			镀锡铜	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	C210301069002-0	2021.03.05	镀锡线0.15	CPST
3	Shrink Tub	EVA	EVA	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	CANEC2022443601	2020.12.22	HEAT SHRINKABLE TUBING	SGS

根據測試報告如實填寫鉛、鎘、汞、六價鉻、PBBs和PBDEs六項禁用物質的含量
包裝材料中鉛、鎘、汞、六價鉻總含量不超過100ppm，鎘的允許濃度為5ppm
歐盟ROHS指令豁免條款2015/863/EU、鋼中合金元素中的鉛含量达0.35%、铝含量达0.4%、铜合金中的铅含量达4%

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◯ お問い合わせ

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