

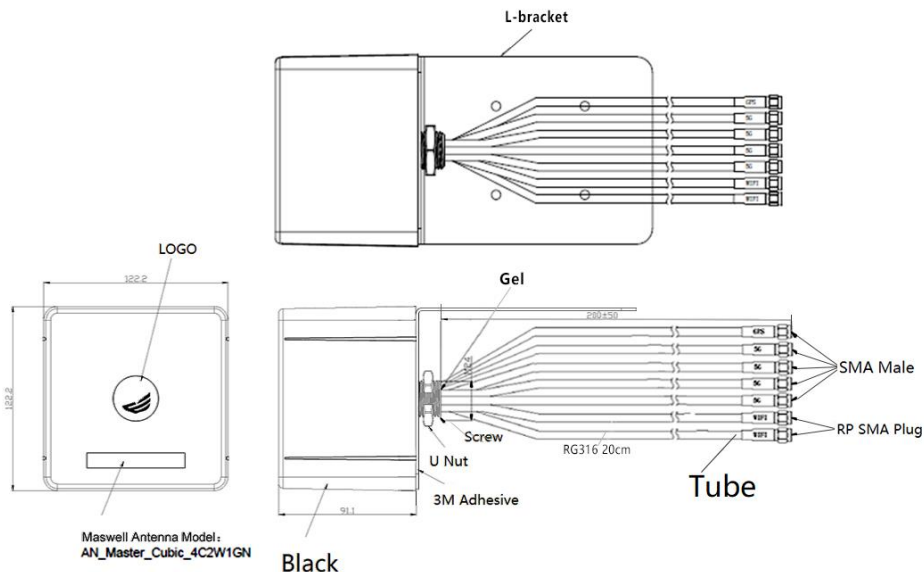


Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C2W1GN



Schematic Picture



Suzhou maswell communication technology co. Ltd

Add: Floor 3, Building 6, No. 88 Zhenbei Road, High-tech District, Suzhou 215153, Jiangsu, China

Http: www.maswelltech.com

E-mail: Sales@maswelltech.com

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Specifications

Item		Specifications	
GNSS Antenna (GPS/GLONASS/ Beidou/Gaileo)	Dielectric Antenna	Center Frequency	1561.098~1602MHz
		Polarization	RHCP
		Gain	5dBic@PCB (Zenith)
		V.S.W.R	< 1.5
		Impedance	50Ω
		Axial Ratio	3dB(max)
	LNA	Gain	28±2dB
		Noise Figure	≤1.5dB
		Filter Insertion Loss	< 3dB
		Supply Voltage	3~5V DC
		Current Consumption	< 20mA
Antenna 1: 5G/4G LTE/WiFi6E/UWB	V.S.W.R	< 2.0	
	Frequency Range	600MHz~8.0GHz	
	Polarization	Linear	
	Gain	Up to 6dBi (20cm Cable Length)	
	Radiation Pattern	Omni-directional	
	V.S.W.R	average 3.0	
Antenna 2: 5G/4G LTE/WiFi6E/UWB	Efficiency	>50%	
	Frequency Range	600MHz~8.0GHz	
	Polarization	Linear	
	Gain	Up to 6dBi (20cm Cable Length)	
	Radiation Pattern	Omni-directoinal	
	V.S.W.R	average 3.0	
	Efficiency	>50%	

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Specifications

Item	Specifications	
Antenna 3: 5G/4G LTE/WiFi6E/UWB	Frequency Range	600MHz~8.0GHz
	Polarization	Linear
	Gain	Up to 6dBi (20cm Cable Length)
	Radiation Pattern	Omni-directional
	V.S.W.R	average 3.0
	Efficiency	>50%
Antenna 4: 5G/4G LTE/WiFi6E/UWB	Frequency Range	600MHz~8.0GHz
	Polarization	Linear
	Gain	Up to 6dBi (20cm Cable Length)
	Radiation Pattern	Omni-directional
	V.S.W.R	average 3.0
	Efficiency	>50%
Antenna 5: WiFi WiFi 7/WiFi 6E/Bluetooth/Zigbee/Wimax	Frequency Range	2100MHz-7200MHz
	Polarization	Linear
	Gain	4dBi
	Radiation Pattern	Omni-directional
	V.S.W.R	<1.5
	Impedance	50Ω
Antenna 6: WiFi WiFi 7/WiFi 6E/Bluetooth/Zigbee/Wimax	Frequency Range	2100MHz-7200MHz
	Polarization	Linear
	Gain	4dBi
	Radiation Pattern	Omni-directional
	V.S.W.R	<1.5
	Impedance	50Ω

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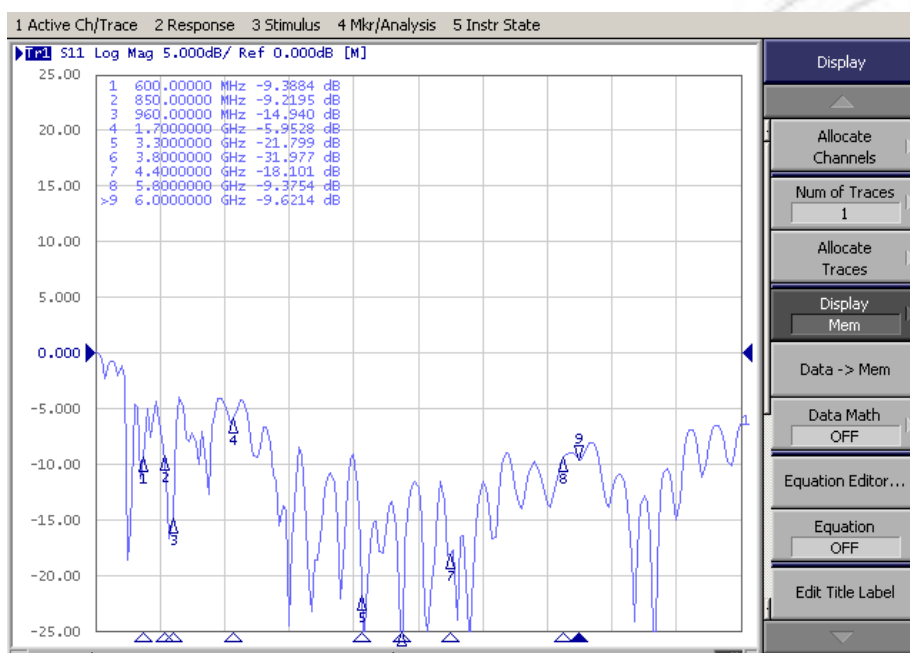
AN_Master_Cubic_4C2W1GN

Item	Specifications	
Mechanical	Dimension	122mm *122mm*91mm
	Antenna Mount	Screw+L plate U bolt
	Connector	SMA Male for 5G MIMO SMA male for GNSS RP SMA Plug for WIFI MIMO
	Cable	RG316 20cm+LMR 240 equivalent 2 meters
Environmental	Operating Temperature	-40°C~+85°C
	Relative Humidity	Up to 95%
	Waterproof Grade	IP 67 (EURO: EN 60529:1991+A1:2000+A2:2013 +AC:2019 CHINA: GB/T4208-2017)
	Radome Material	ASA/(UL Yellow Card)
	UV Exposure & Water Immersion	F1 (UL746C) UV stabilized
	Vibration	10 to 55Hz with 1.5mm amplitude 2hours
	Environmentally Friendly	ROHS Compliant

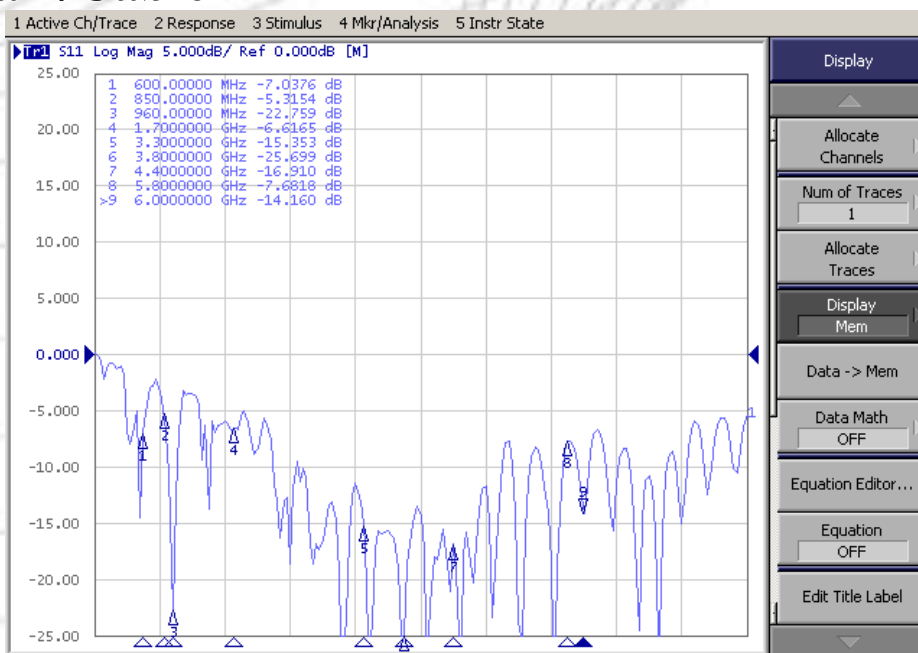
Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C2W1GN

5G S11 Reflection Coefficient Antenna 1/Cable 1



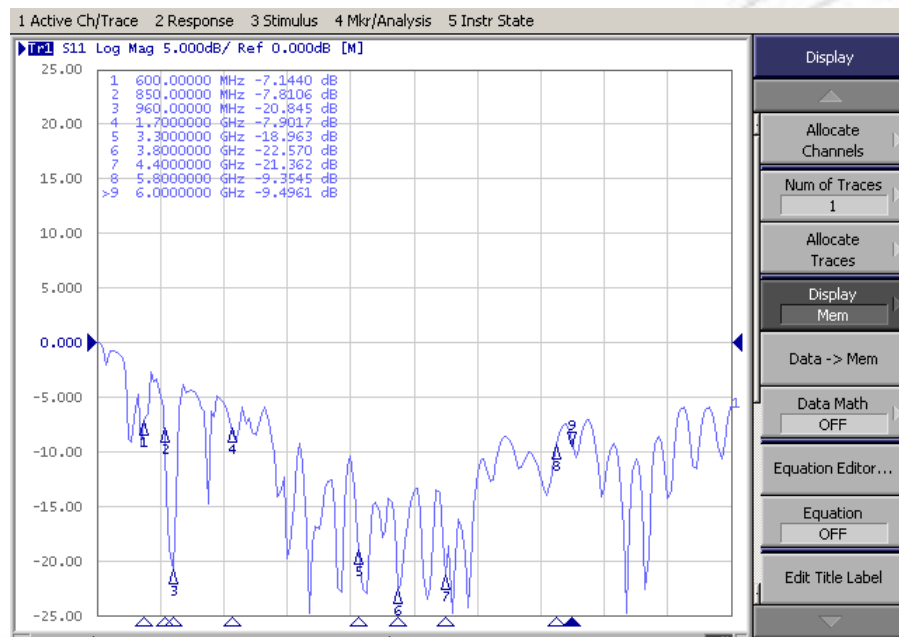
Antenna 2/Cable 2



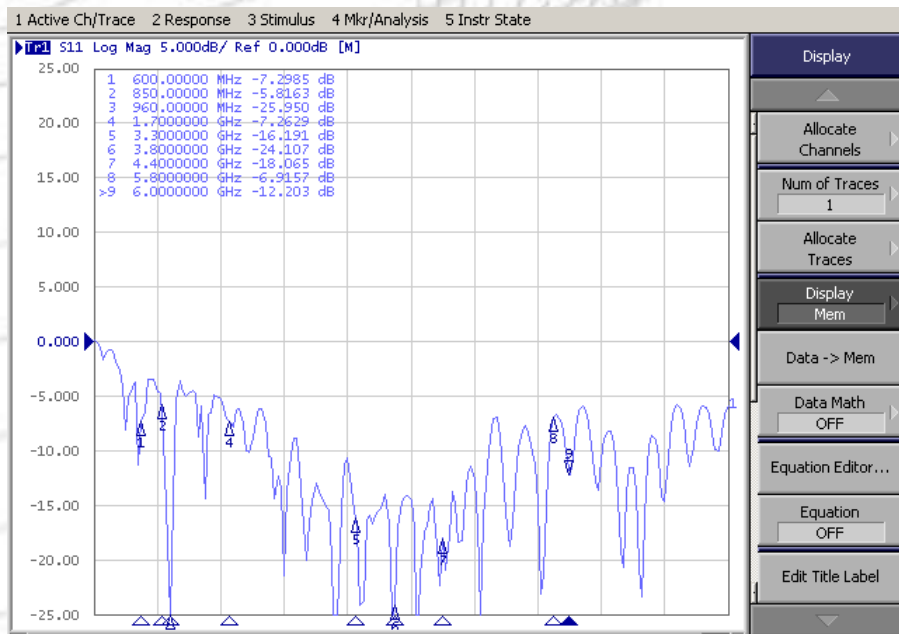
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AN_Master_Cubic_4C2W1GN

5G S11 Reflection Coefficient Antenna 3/Cable 3



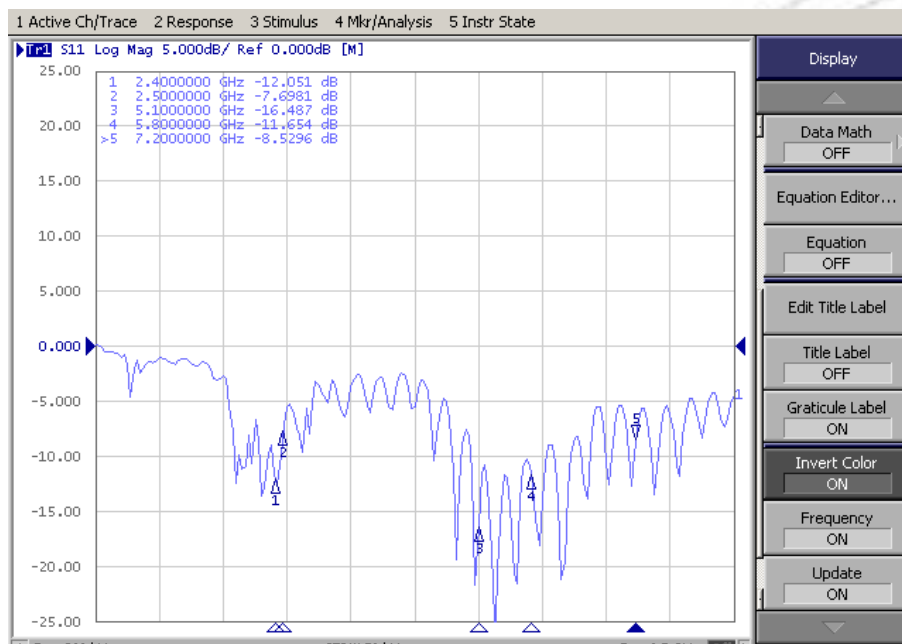
Antenna 4/Cable 4



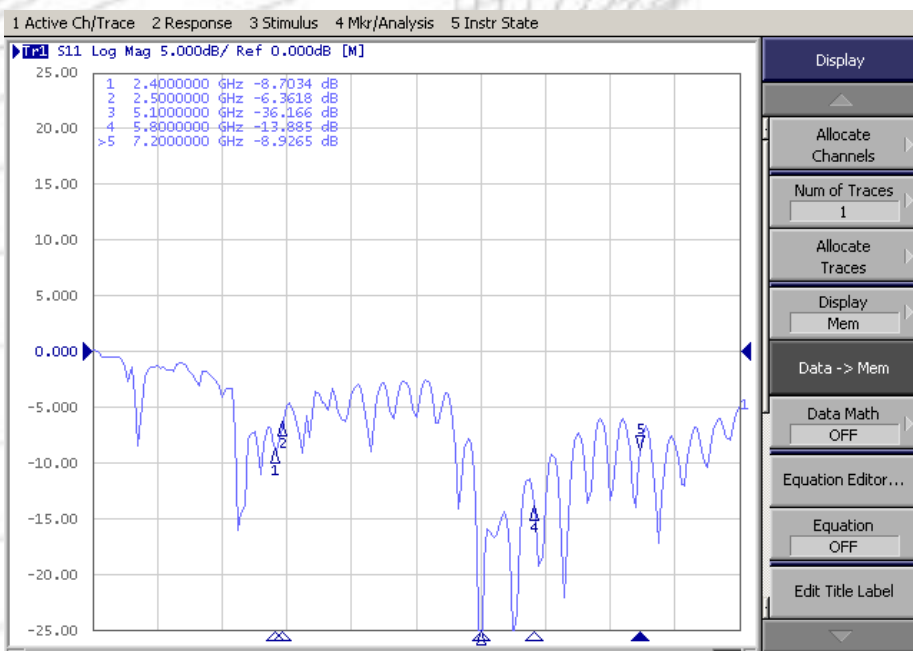
Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C2W1GN

WiFi S11 Reflection Coefficient Antenna 5/Cable 5



Antenna 6/Cable 6

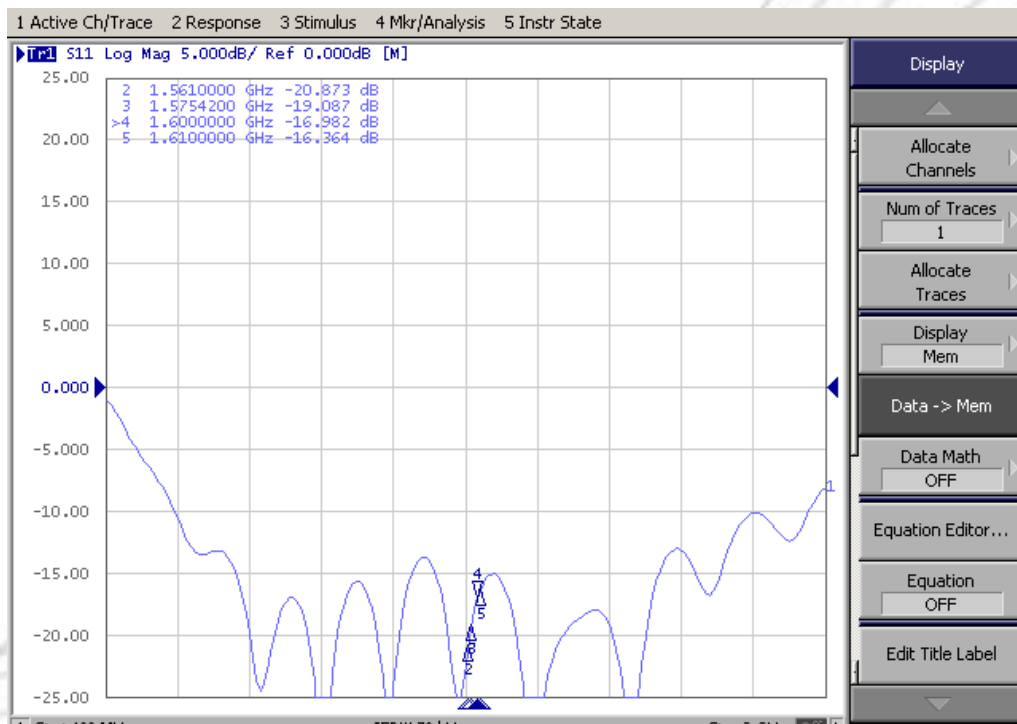


Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

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GNSS/GPS S11 Reflection Coefficient

Antenna 7/Cable 7



Antenna 1/Cable1 -Antenna 4/Cable 4:5G/4G Radiators

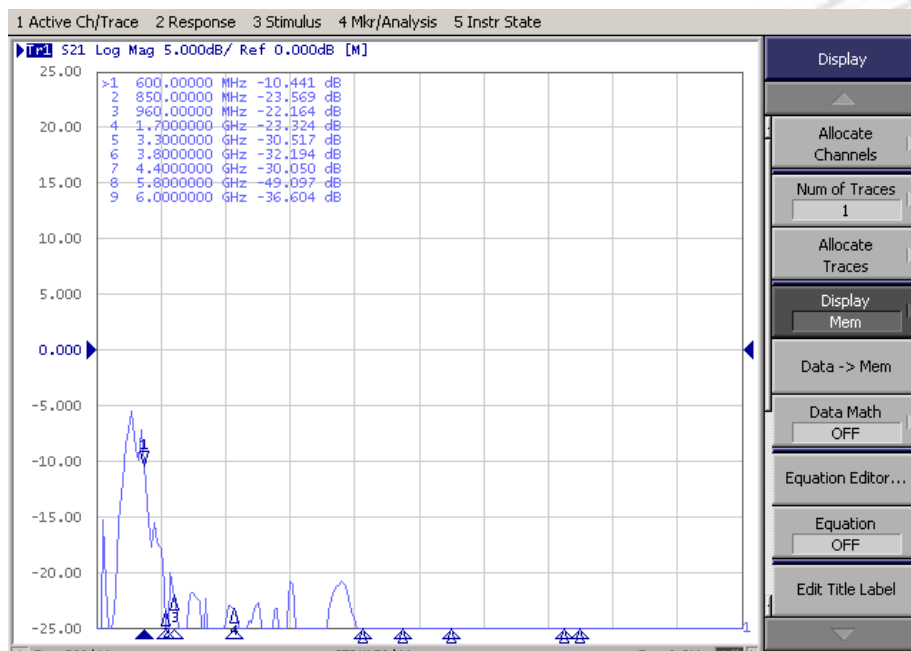
Antenna 5/Cable 5-Antenna 6/Cable 6: WiFi/Bluetooth/Zigbee Radiators

Antenna 7/Cable 7: GPS/GNSS Radiator

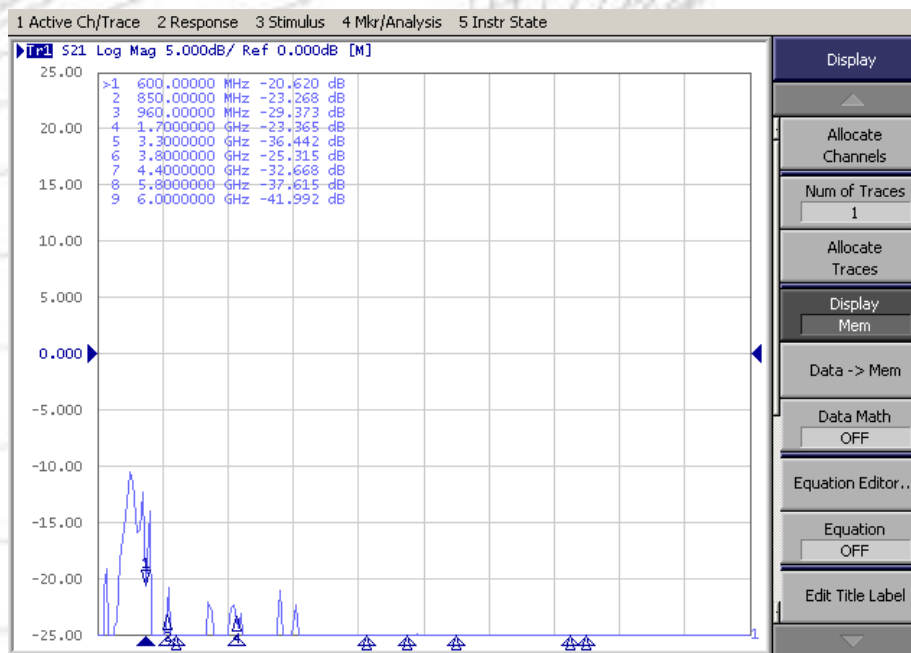
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Isolation (5G Leads) Antenna 1 to Antenna 2



Antenna 1 to Antenna 3

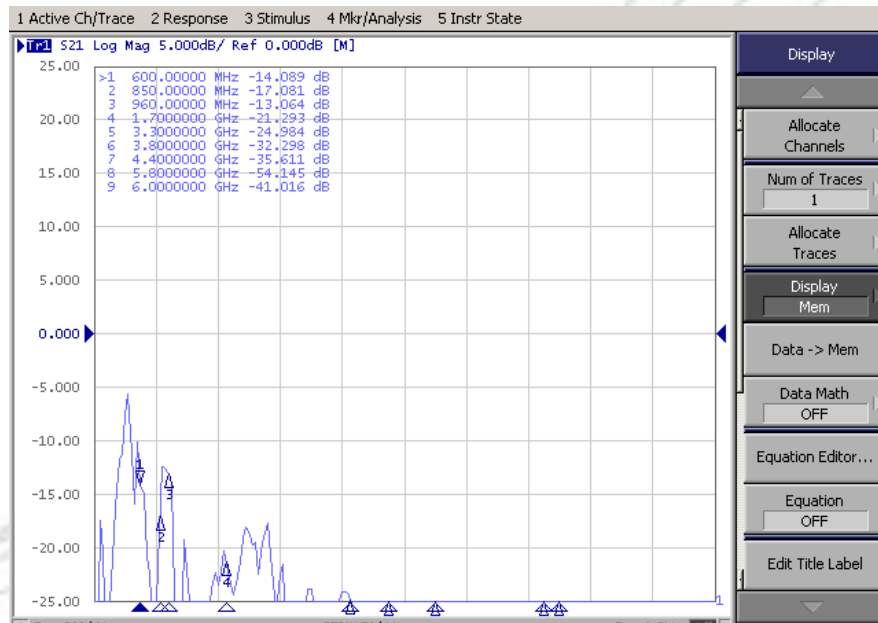


Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C4W1GN

Isolation (5G Leads)

Antenna 1 to Antenna 4

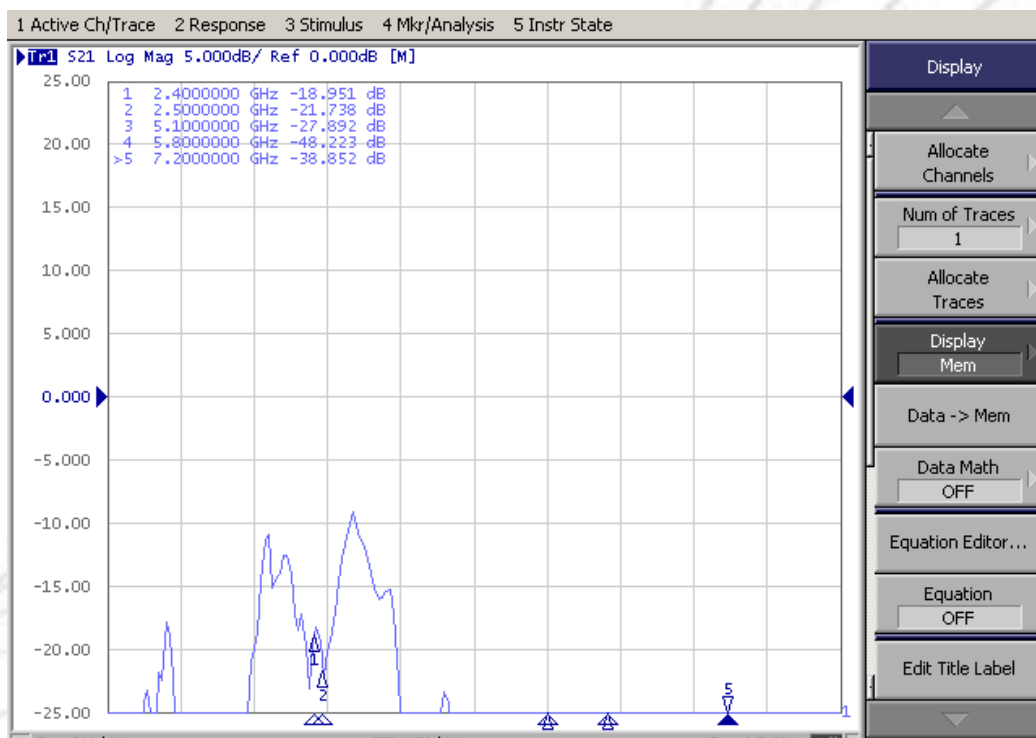


Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C4W1GN

Isolation (WiFi Leads)

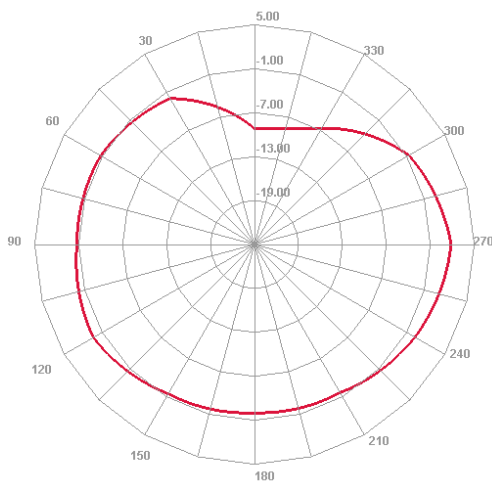
Antenna 5 to Antenna 6



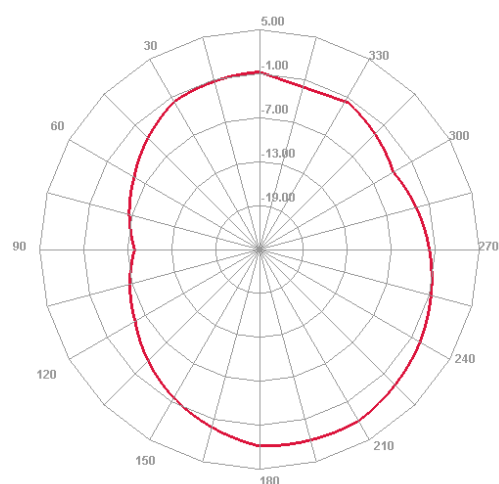
Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C4W1GN

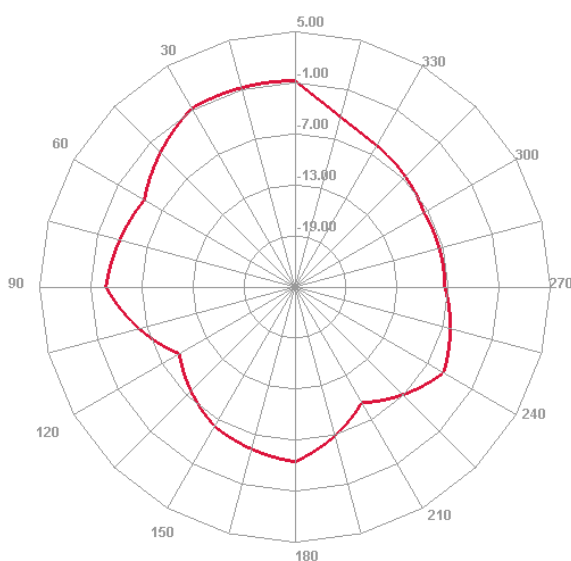
Radiation Pattern (5G)



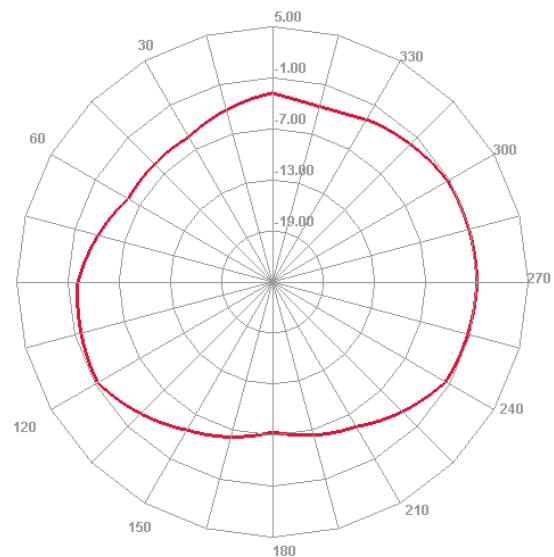
900 MHz E plane



900MHz H plane



1800MHz E plane

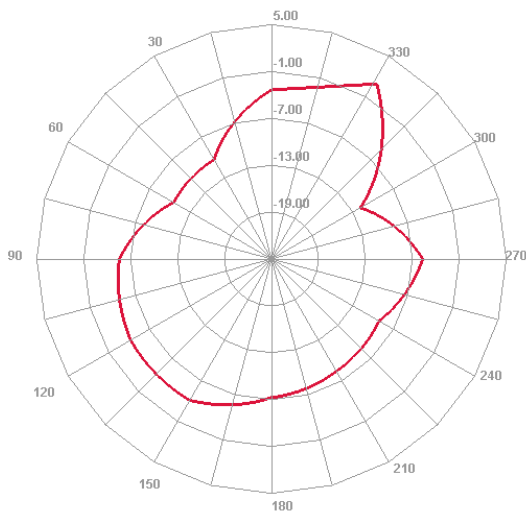


1800MHz H plane

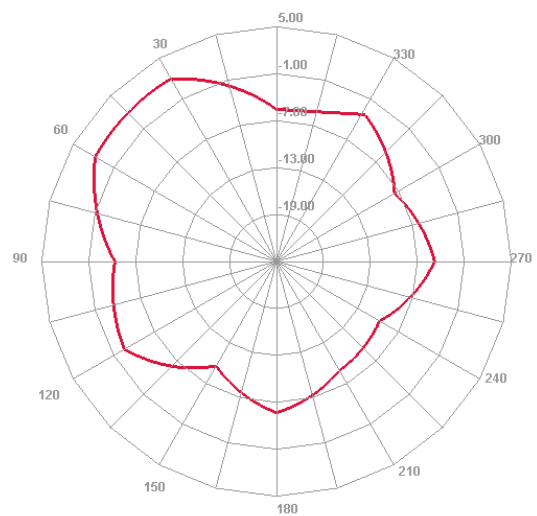
Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C4W1GN

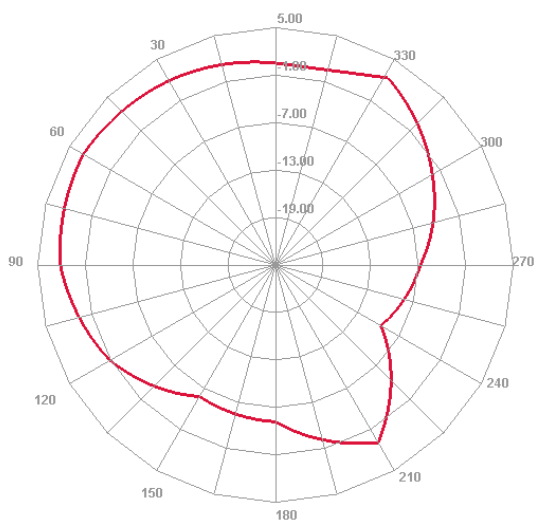
Radiation Pattern (5G)



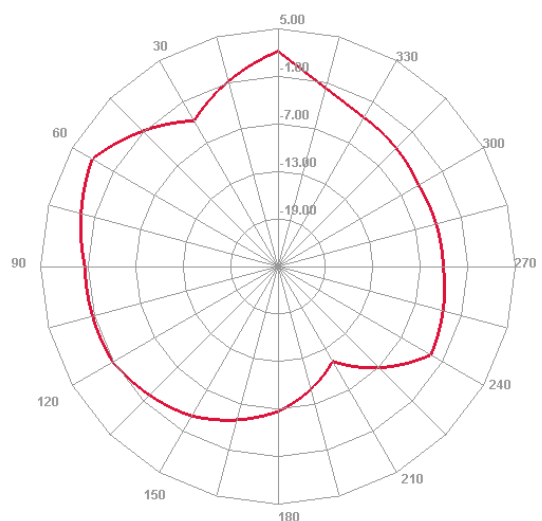
2600 MHz E plane



2600MHz H plane



3500MHz E plane

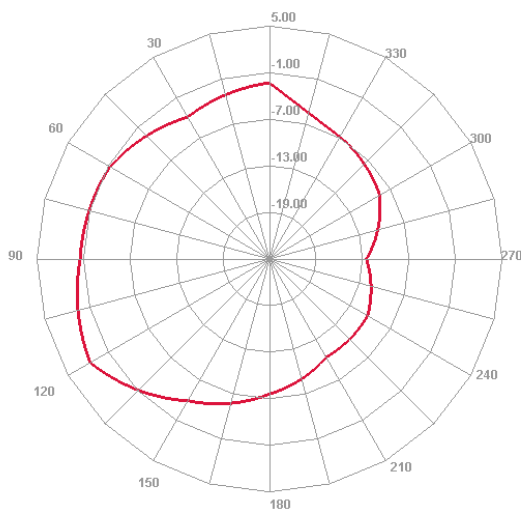


3500MHz H plane

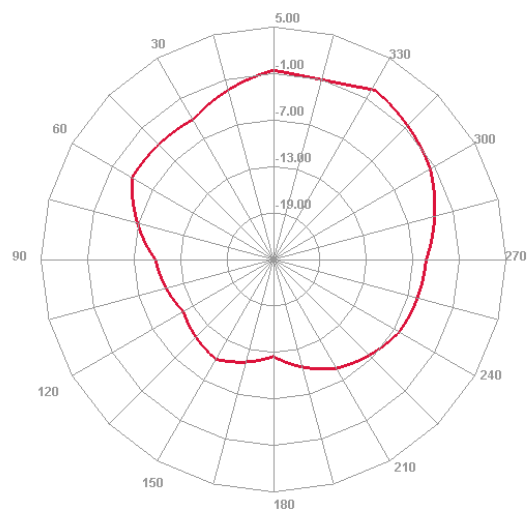
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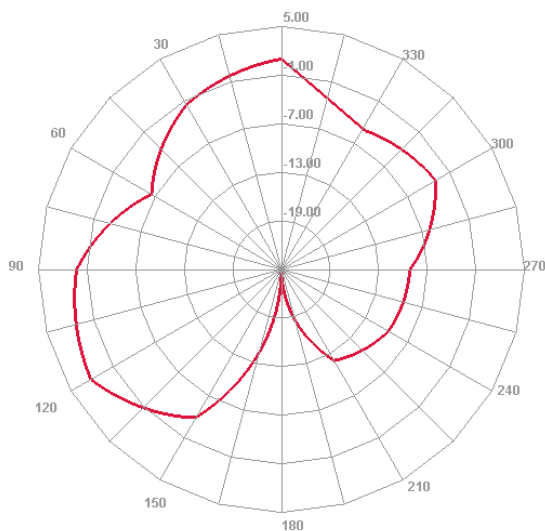
Radiation Pattern (5G)



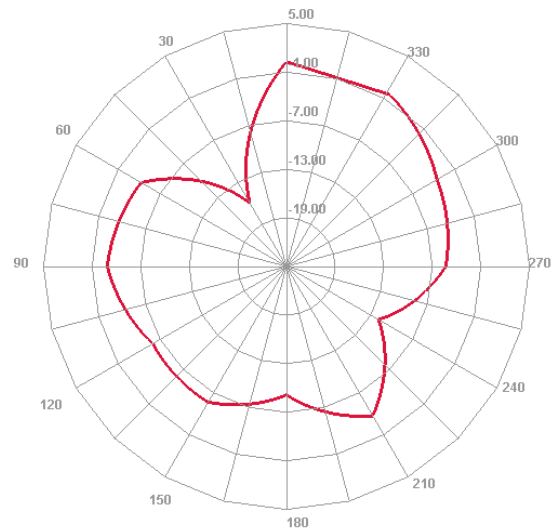
4800 MHz E plane



4800MHz H plane



6000MHz E plane

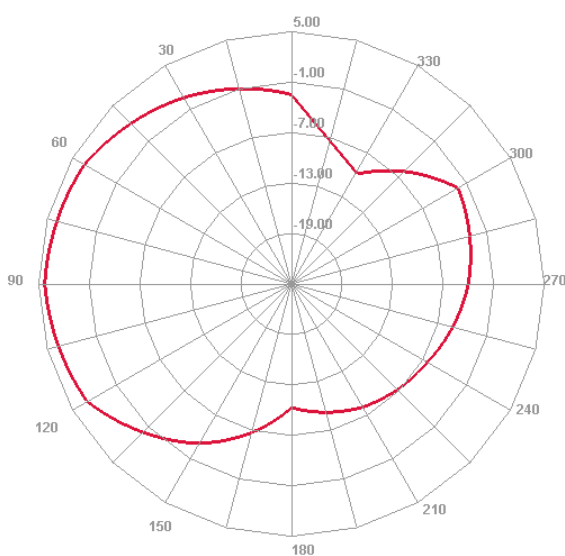


6000MHz H plane

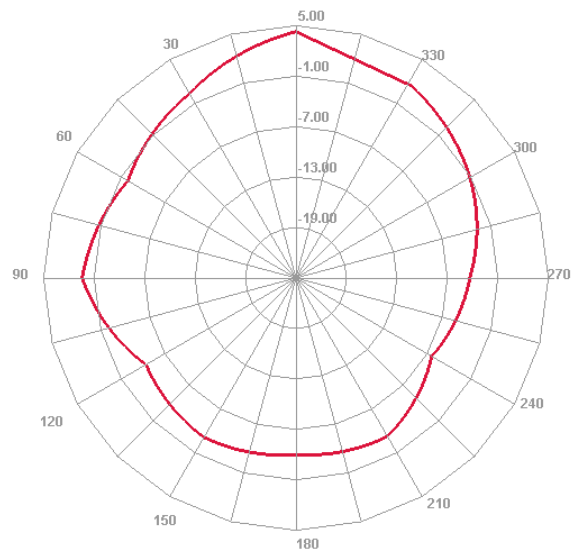
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AN_Master_Cubic_4C4W1GN

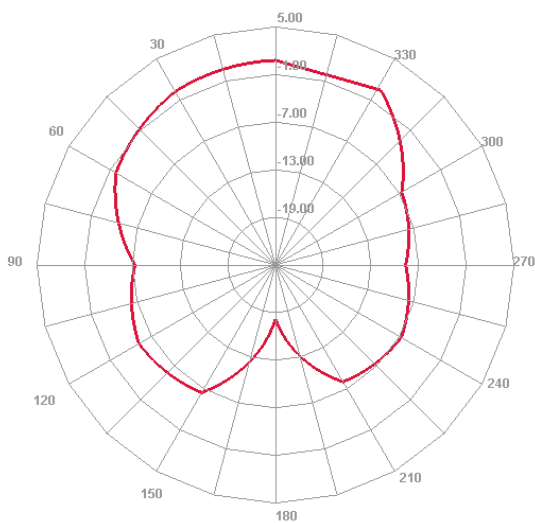
Radiation Pattern (WiFi)



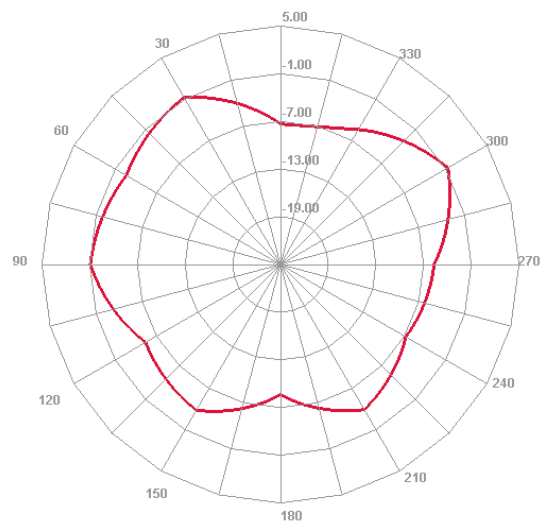
2400 MHz E plane



2400MHz H plane



6000MHz E plane

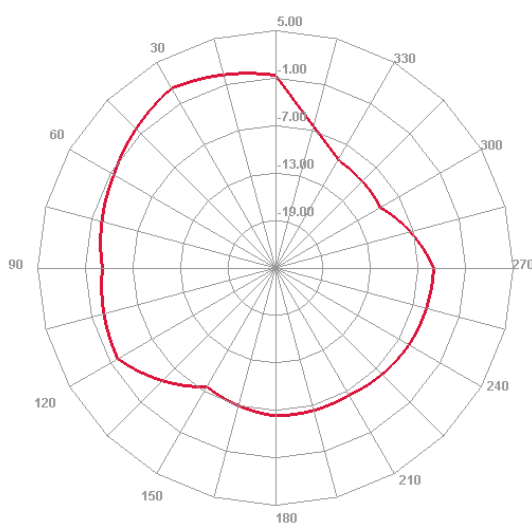


6000MHz H plane

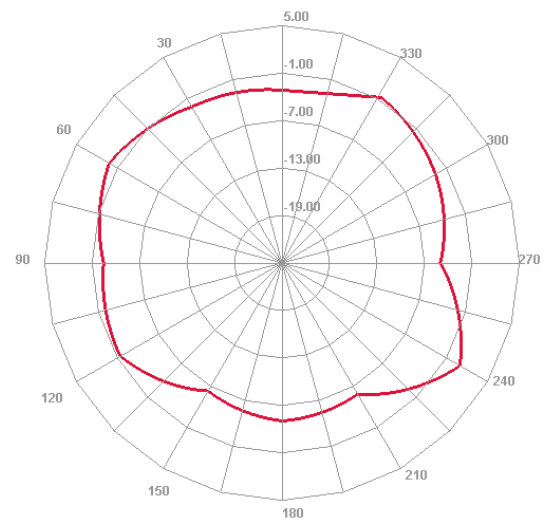
Maswell 5G 7-in-1 ComboAntenna 4X4 MIMO 5G , 2X2 MIMO WiFi and GNSS L Plate and Screw Mount

AN_Master_Cubic_4C4W1GN

Radiation Pattern (WiFi)



7100 MHz E plane



7100MHz H plane



TEST REPORT

EN 60529

Degrees of protection provided by enclosures(IP code)

Report reference No..... : CTB231113016Q

Date of issue..... : 2023-11-16

Testing laboratory

Name : Shenzhen CTB Testing Technology Co., Ltd.

Address..... : 1&2/F., Building A, No.26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China

Testing location..... : Same as above

Client

Applicant..... : Suzhou Maswell Communication Technology Co.Ltd

Address..... : Room 403,Building 1,No.88 Zhenbei Road,High-tech District,Suzhou 215153,Jiangsu,China

Test specification

Standard..... : EN 60529:1991+A1:2000+A2:2013+AC:2019

Procedure deviation..... : N/A

Non-standard test method.... : N/A

Object under test..... : Maswell MIMO Cubic Antenna Series

Model/Type reference..... : AN_Master_Cubic_4C/AN_Master_Cubic_2C2W/AN_Master_Cubic_4W and Variants

Others Model..... : /

Trade mark..... : Maswell

Manufacturer..... : Suzhou Maswell Communication Technology Co.Ltd

Address..... : Room 403,Building 1,No.88 Zhenbei Road,High-tech District,Suzhou 215153,Jiangsu,China

IP degrees..... : IP67

Possible test case verdicts

- test case does not apply to the test object..... : N/A(Not Applicable)

- test object does meet the requirement..... : P(Pass)

- test object does not meet the requirement..... : F(Fail)

Date of receipt of test item..... : 2023-11-10

Date(s) of performance of tests..... : 2023-11-13 to 2023-11-15

Laboratory sample number..... : 2231110007-1,14

Model PW-957(+)(f1)

File Number: E56070



COMPANY

CHI MEI CORPORATION

No 398 Sec 1 Zhongzheng Rd
Rende District
Tainan City, 717010 Taiwan

MODEL INFO

PW-957(+)(f1)

Acrylonitrile Styrene Acrylate (ASA) "KIBILAC", furnished as pellets

(f1) – Suitable for outdoor use with respect to exposure to Ultraviolet Light, Water Exposure and Immersion in accordance with UL 746C.

(+) – Indicate 0~0.5% acid scavengers.

FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		ANSI/UL 94
1.5 mm, Color: ALL	HB	
3.0 mm, Color: ALL	HB	
ISO/IEC FLAMMABILITY PROPERTIES	VALUE	TEST METHOD
Flammability		IEC 60695-11-10
1.5 mm, Color: ALL	HB75	
3.0 mm, Color: ALL	HB40	
ELECTRICAL PROPERTIES	VALUE	TEST METHOD
Hot-wire Ignition (HWI)		UL 746A
1.5 mm	PLC 4	
3.0 mm	PLC 3	
High Amp Arc Ignition (HAI)		UL 746A
1.5 mm	PLC 0	

3.0 mm	PLC 0	
Comparative Tracking Index (CTI)	PLC 0	UL 746A
High Voltage Arc Tracking Rate (HVTR)	PLC 3	
High Voltage, Low Current Arc Resistance	PLC 6	
THERMAL PROPERTIES	VALUE	TEST METHOD
Relative Thermal Index - Electrical Strength		UL 746B
1.5 mm	90 °C	
3.0 mm	90 °C	
Relative Thermal Index - Mechanical Impact		UL 746B
1.5 mm	90 °C	
3.0 mm	90 °C	
Relative Thermal Index - Mechanical Strength		UL 746B
1.5 mm	95 °C	
3.0 mm	95 °C	
PHYSICAL PROPERTIES	VALUE	TEST METHOD
UV Exposure & Water Immersion	f1	UL 746C

Report Date: 2006-08-31

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