Antenne combinée 4x[5G/4G-LTE 3G/2G LPWA] 4x[2.4/5GHz Wifi6E BT] IP67/IP69 | 2.3dBi à 6.6dBi

Référence GC-4H85Me

Gain	2.3dBi à 6.6dBi
Connecteurs	SMA (M) / SMA-RP (M)
Dimensions (mm)	198 x 127 x 51
T° de fonctionnement	-40°C à +85°C

Existe en blanc et en noir.

L'**antenne ultra large bande** 8-en-1 GC-4H85Me est conçue pour toutes les bandes **GSM, LPWA, ISM 2.4, 5 et 6 GHz.**

Cette antenne, offre un **gain et une efficacité élevés** dans les **fréquences 617 MHz - 7125 MHz**.

Câbles 1 à 4 : GMS / IoT

Quatre antennes conçues pour les normes **5G, 4G-LTE, FirstNet, CBRS, LPWA, CAT-X, CAT-Mx, CAT-NBx, NB-IoT, 3G, 2G** dans les bandes de fréquences **617 - 5925 MHz**, tout en maintenant force et **qualité de signal à 360 degrés** sur toute la plage.

Câbles 5 à 8 : WiFi 6E ISM 2.4, 5 et 6 GHz

Ces antennes sont **conçues** pour les dispositifs qui fonctionnent **dans les normes WiFi, Bluetooth et ISM**. Combinant **longue et courte portée,** elles permettent des canaux à large bande passante, **une sécurité améliorée**, **moins d'interférences** et une réduction de la congestion réseau.

INSTALLATION

Fabriquée en matériau ASA stable aux UV, la GC-4H85Me profite d'une **certification IP67/IP69** gage d'une protection maximale contre la poussière, l'eau et l'humidité.

Indépendante du plan de masse, cette antenne mesure 198 x 127 x 51 mm et se fixe grâce à son support magnétique pour une installation fiable et durable.

Livrée en standard avec des connecteurs **SMA-Mâle** (câbles GMS / IoT), **SMA-Mâle-RP** (câble WiFi 6E ISM 2.4,5GHz) et des **câbles D302** de 100cm de long chacun, elle reste entièrement personnalisable sur demande.

CARACTÉRISTIQUES

Caractéristiques communes Câbles 1, 2, 3 et 4 (2G/3G/4G/5G - IoT/LPWAN)

FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
BANDE(S) (MHZ)	600, 700, 850, 900	1500, 1600, 1700, 1800,1900, 2000, 2100, 2300, 2500, 2600	3300, 3500, 3600, 3700, 4500	5200, 5500, 5800
BANDES 5G NR	n5, n8, 12, n20, n28, n71, n81, n82, n83,	n1, n2, n3, n7, n25, n34, n38, n39, n40, n41, n50, n51, n66, n70, n74, n75, n76, n80, n84, n86	n77, n78, n79	
BANDES 4G-LTE	B5, B6, B8, B12, B13, B14, B17, B18, B19, B20, B26, B27, B28, B29, B44, B67, B68, B71, B85	B1, B2, B3, B4, B7, B9, B10, B11, B21, B23, B24, B25, B30, B32, B33, B34, B35, B36, B37, B38, B39, B40, B41, B45, B50, B51, B65, B66, B69, B70, B74, B75, B76	B22, B42, B43, B48, B49, B52	B46, B47, B252, B255
BANDES 3G	B5, B6, B8, B12, B13, B14, B19, B20, B26	B1, B2, B3, B4, B7, B9, B10, B11, B21, B25, B32, B33, B34, B35, B36, B37, B38, B39, B40	B22	
BANDES 2G	710, 750, 810T, 850, 900P, 900E, 900R	1800DCS, 1900PCS		
BANDES CDMA	BC0, BC2, BC3, BC7, BC9, BC10, BC12, BC18, BC19	BC1, BC4, BC6, BC8, BC13, BC14, BC15, BC16, BC20, BC21		
IMPÉDANCE (OHMS)	50			
POLARISATION	Linéaire			
RAYONNEMENT	Omnidirectionnel			
PUISSANCE D'ENTRÉE MAX. (W)	25			
CONNECTEUR	SMA-mâle standard (autres connecteurs disponibles)			
LONGUEUR DU CÂBLE	300 cm standard (toute longueur de câble disponible)			
TYPE DE CÂBLE	Norme D302 (autres câbles disponibles)			

Câble 1

PERTE DE RETOUR (DB)	~-16,3	~-14,9	~-13,1	~-12,9
VSWR	~1.5:1	~1.5:1	~1.7:1	~1.7:1
EFFICIENCE (%)	~58,0	~49,4	~32,3	~32,1
GAIN DE CRÊTE (DBI)	~3,2	~5,2	~4,5	~4,5
GAIN MOYEN (DB)	~-2,4	~-3,1	~-4,9	~-5,0

Câble 2

PERTE DE RETOUR (DB)	~-14,9	~-14,6	~-15,3	~-15,2
VSWR	~1.6:1	~1.5:1	~1.6:1	~1.4:1
EFFICIENCE (%)	~58,1	~47,0	~35,5	~39,8
GAIN DE CRÊTE (DBI)	~3,9	~5,8	~5,6	~6,6
GAIN MOYEN (DB)	~-2,4	~-3,3	~-4,6	~-4,0

Câble 3

PERTE DE RETOUR (DB)	~-16,2	~-14,2	~-14,4	~-13,2
VSWR	~1.6:1	~1.6:1	~1.6:1	~1.6:1
EFFICIENCE (%)	~58,0	~46,7	~35,8	~36,7
GAIN DE CRÊTE (DBI)	~3,4	~5,8	~5,3	~5,7
GAIN MOYEN (DB)	~-2,4	~-3,3	~-4,5	~-4,4

Câble 4

PERTE DE RETOUR (DB)	~-16,2	~-15,5	~-13,1	~-13,1
VSWR	~1.4:1	~1.5:1	~1.7:1	~1.6:1
EFFICIENCE (%)	~58,2	~47,3	~33,9	~37,6
GAIN DE CRÊTE (DBI)	~3,5	~5,7	~5,1	~5,8
GAIN MOYEN (DB)	~-2,4	~-3,3	~-4,7	~-4,3

Caractéristiques communes Câbles 5, 6, 7 et 8 (ISM 2.4/5 et 6 GHz – WiFi, Bluetooth, ZigBee)

BANDE(S) (MHZ)	2,4 GHz	5,0 GHz	6,0 GHz
FRÉQUENCE(S) (MHZ)	2410-2490	4920-5925	5925-7125
IMPÉDANCE (OHMS)	50		
POLARISATION / RAYONNEMENT	Linéaire / Omnidirectionnel		
PUISSANCE D'ENTRÉE MAX. (W)	25		
CONNECTEUR	SMA-Mâle-RP Standard (autres connecteurs disponibles)		
LONGUEUR DU CÂBLE	300 cm standard (toute longueur de câble disponible)		
TYPE DE CÂBLE	Norme D302 (autres câbles disponibles)		

Câble 5

PERTE DE RETOUR (DB)	~-13,4	~-16,0	~-13,4
VSWR	~1.6:1	~1.5:1	~1.6:1
EFFICIENCE (%)	~31,1	~22,8	~31,1
GAIN DE CRÊTE (DBI)	~4,6	~3,3	~4,6
GAIN MOYEN (DB)	~-5,1	~-6,5	~-5,1

Câble 6

PERTE DE RETOUR (DB)	~-12,9	~-13,2	~-11,9
VSWR	~1.7:1	~1.7:1	~1.8:1
EFFICIENCE (%)	~37,7	~31,2	~42,6
GAIN DE CRÊTE (DBI)	~6,1	~4,5	~3,2
GAIN MOYEN (DB)	~-4,2	~-5,1	~-3,5

Câble 7

PERTE DE RETOUR (DB)	~-19,2	~-14,8	~-13,3
VSWR	~1.3:1	~1.6:1	~1.2:1
EFFICIENCE (%)	~37,9	~34,5	~44,7
GAIN DE CRÊTE (DBI)	~2,7	~2,3	~3,2
GAIN MOYEN (DB)	~-4,2	~-4,6	~-3,4

Câble 8

PERTE DE RETOUR (DB)	~-16,5	~-16,8	~-7,5
VSWR	~1.4:1	~1.4:1	~1.6:1
EFFICIENCE (%)	~36,7	~30,8	~39,7
GAIN DE CRÊTE (DBI)	~4,4	~2,6	~3,0
GAIN MOYEN (DB)	~-4,4	~-5,1	~-4,1

Conditions de mesure de l'antenne :
- Montée sur plaque métallique de 30 x 30 cm
- 100 cm de Câble D302
- Mesurée dans une chambre anéchoïque certifiée CTIA 3D

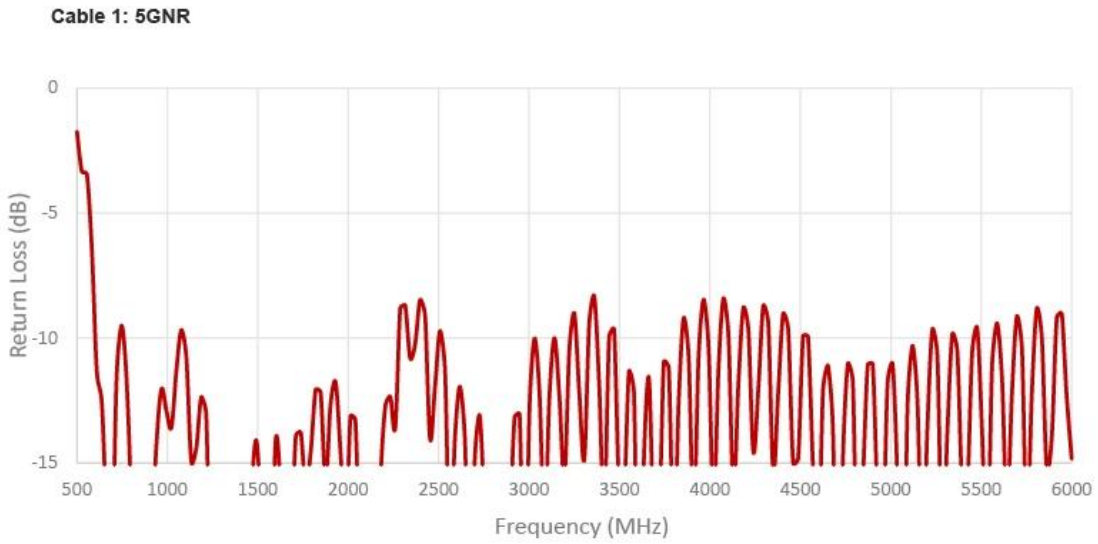
SPÉCIFICATIONS

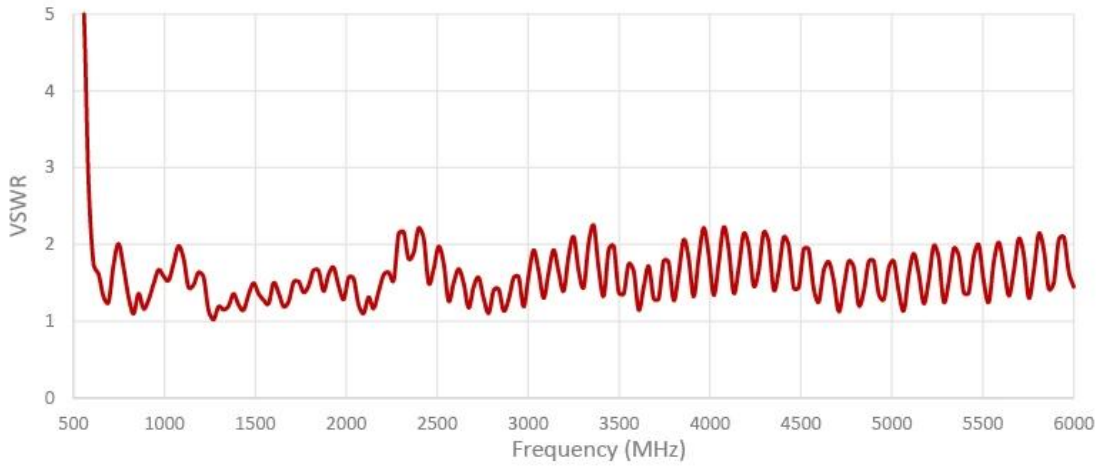
TYPE DE MONTAGE	Monture magnétique
DIMENSIONS (MM)	198 x 127 x 51
MATÉRIAU RADÔME	ASA
COULEUR RADÔME	Noir
T° DE FONCTIONNEMENT (°C)	-40 à +85
T° DE STOCKAGE (°C)	-40 à +85
CERTIFICATION(S)	RoHS
INDICE(S) DE PROTECTION	IP67, IP69, CE

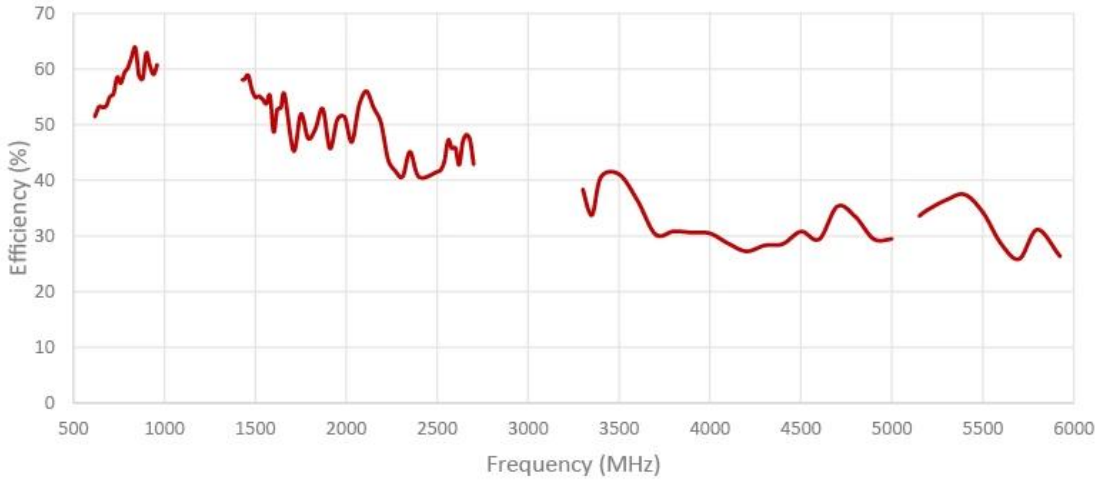
ENVIRONNEMENT

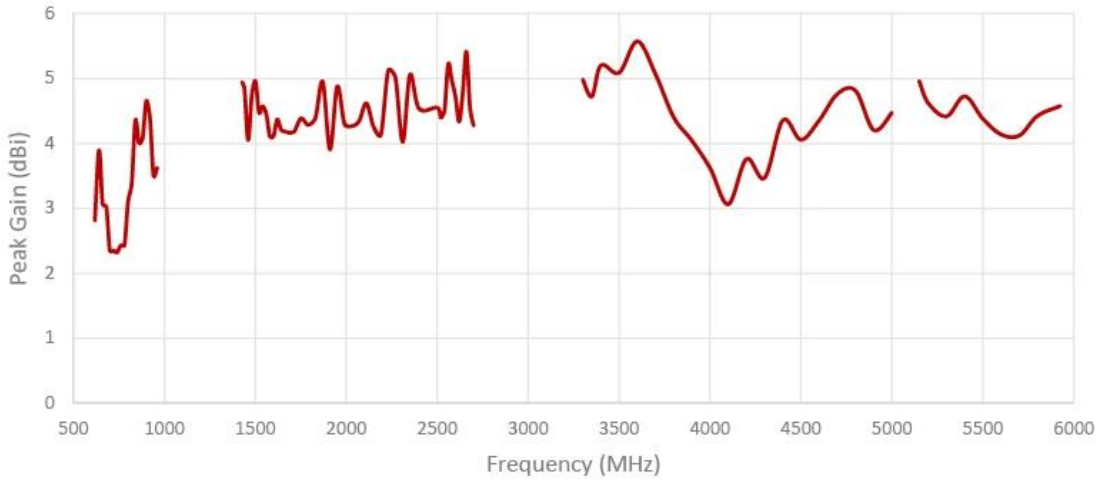
Cette gamme d'antenne est fabriquée sans matières dangereuses tout en maintenant une conformité totale avec **REACH et RoHS**.

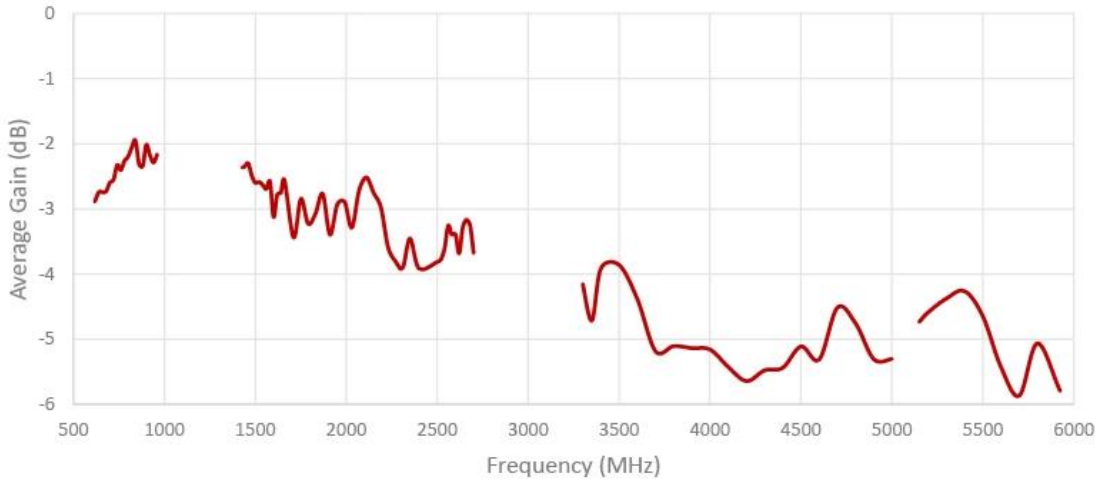
MESURES


Cable 1: 5GNR
Return Loss (dB)
0
-5
-10
-15
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

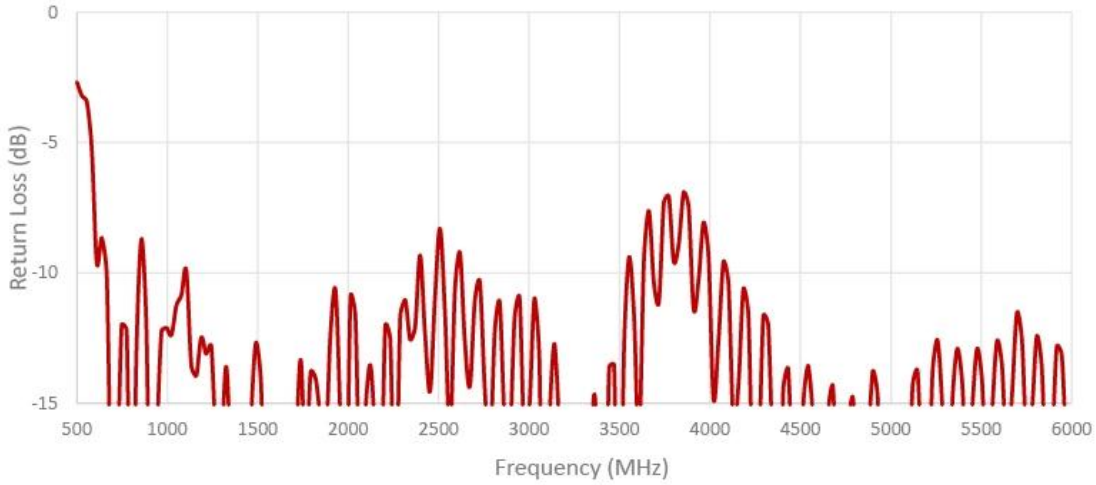

VSWR
5
4
3
2
1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

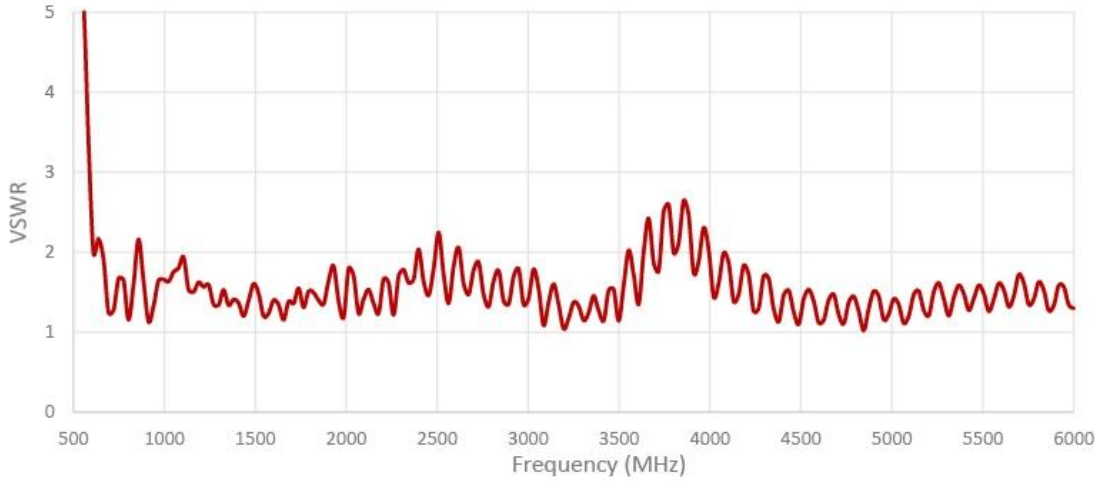

Efficiency (%)
70
60
50
40
30
20
10
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

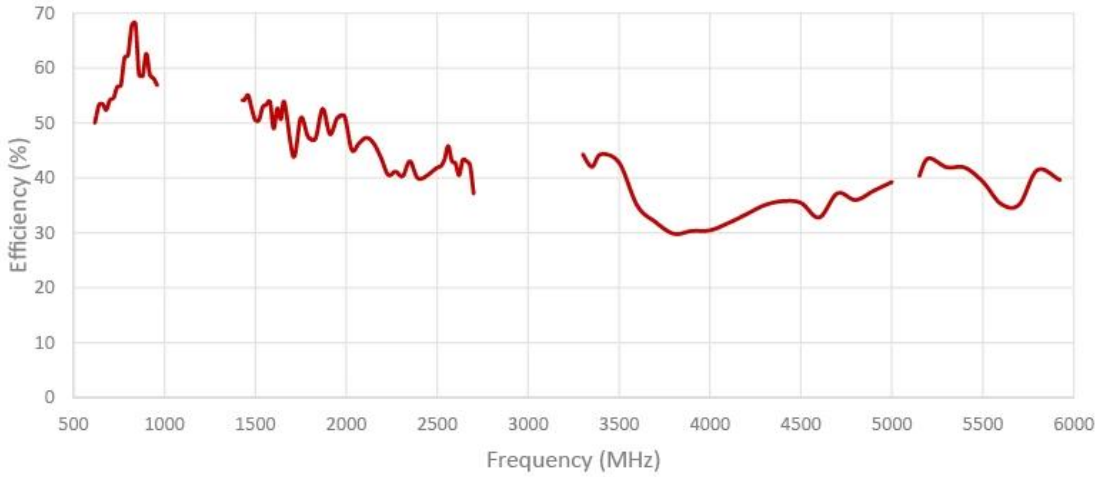

Peak Gain (dBi)
6
5
4
3
2
1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

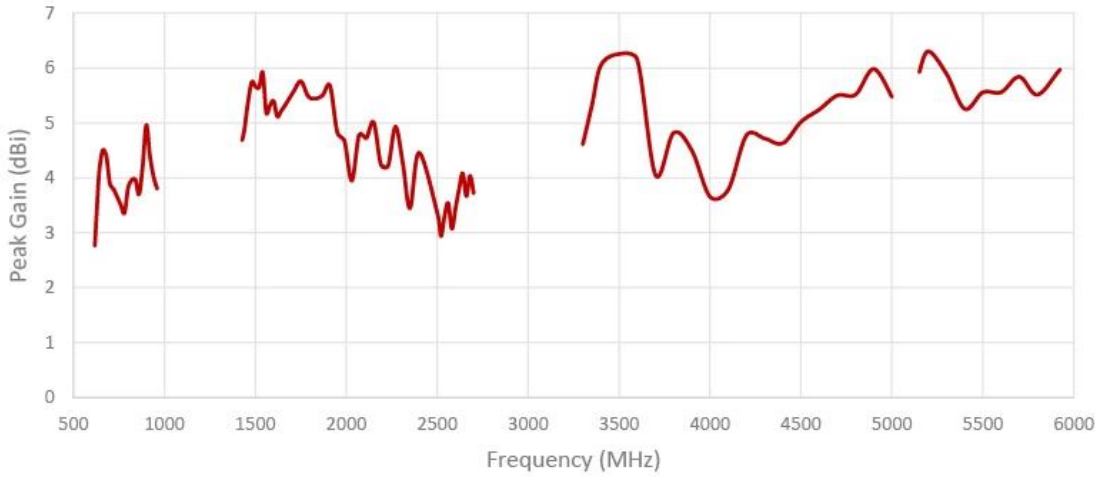

Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

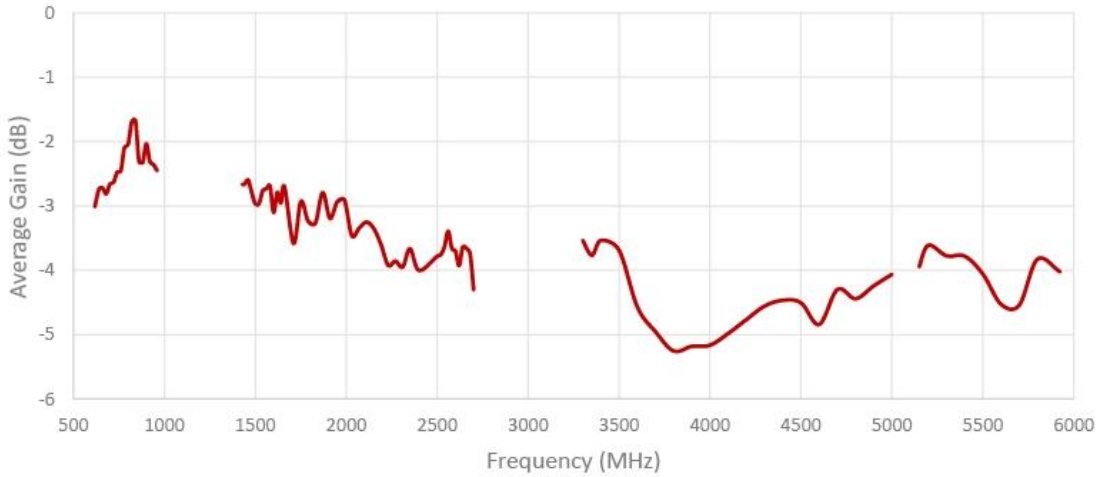
Cable 2: 5GNR


0
-5
-10
-15
Return Loss (dB)
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

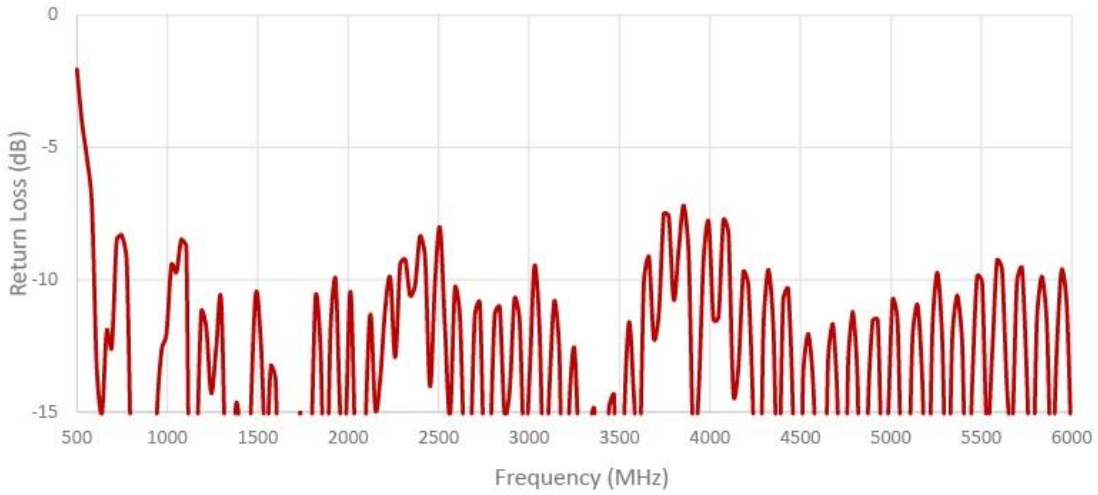

5
4
3
2
1
0
VSWR
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

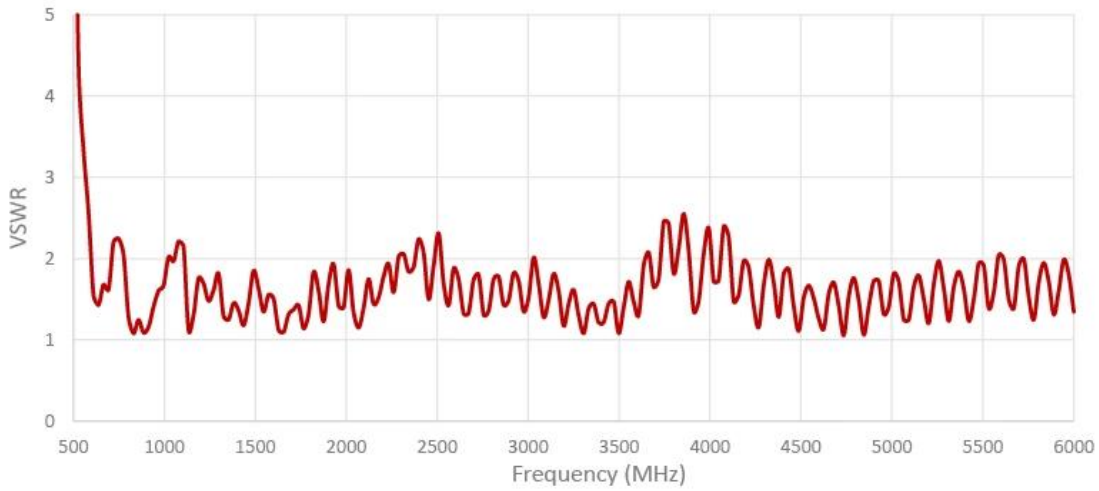

Efficiency (%)
70
60
50
40
30
20
10
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

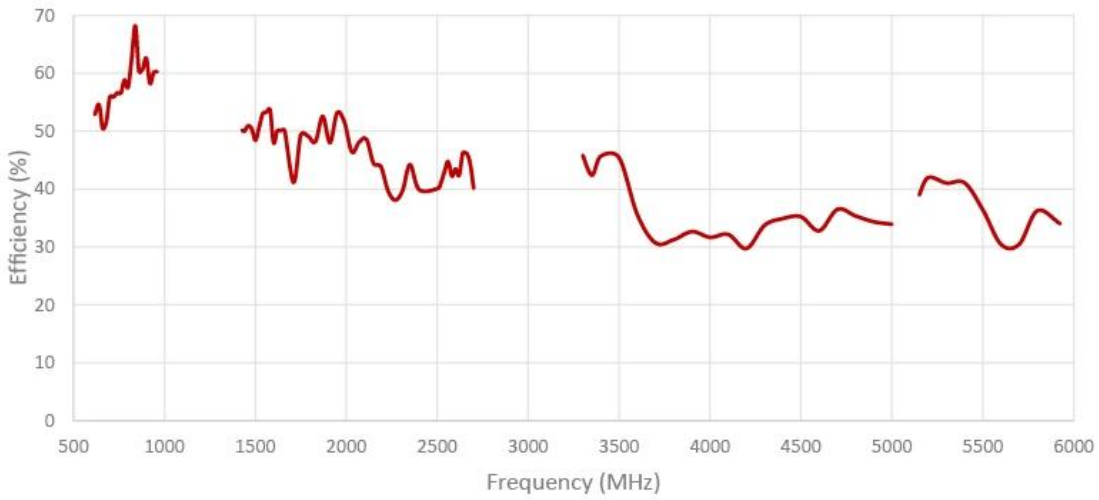

Peak Gain (dBi)
7
6
5
4
3
2
1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

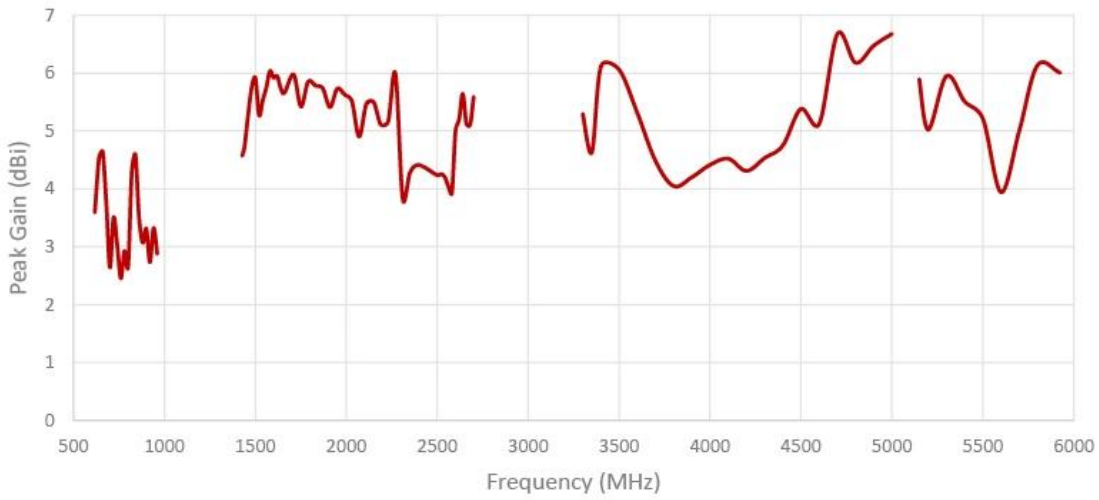

Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

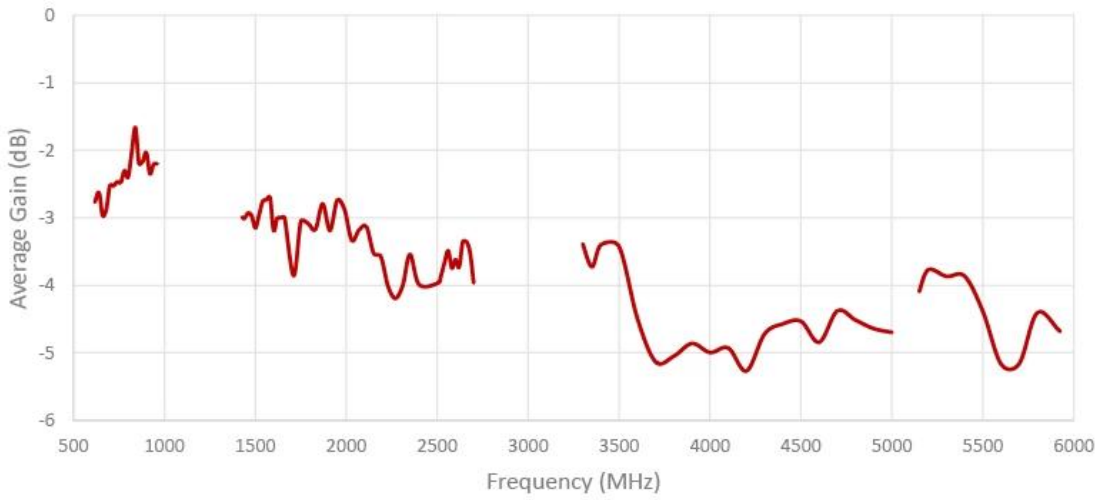
Cable 3: 5GNR


0
-5
-10
-15
Return Loss (dB)
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

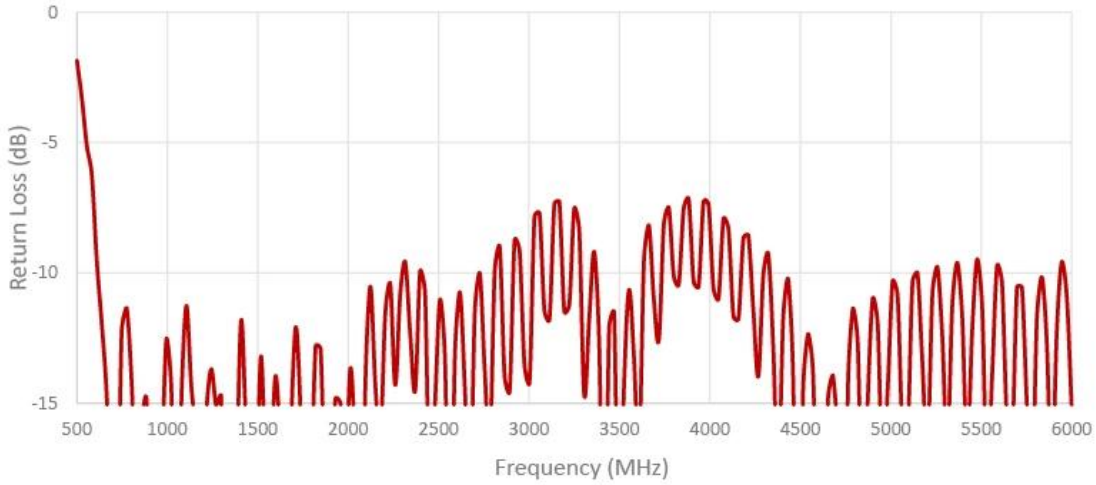

5
4
3
2
1
0
VSWR
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

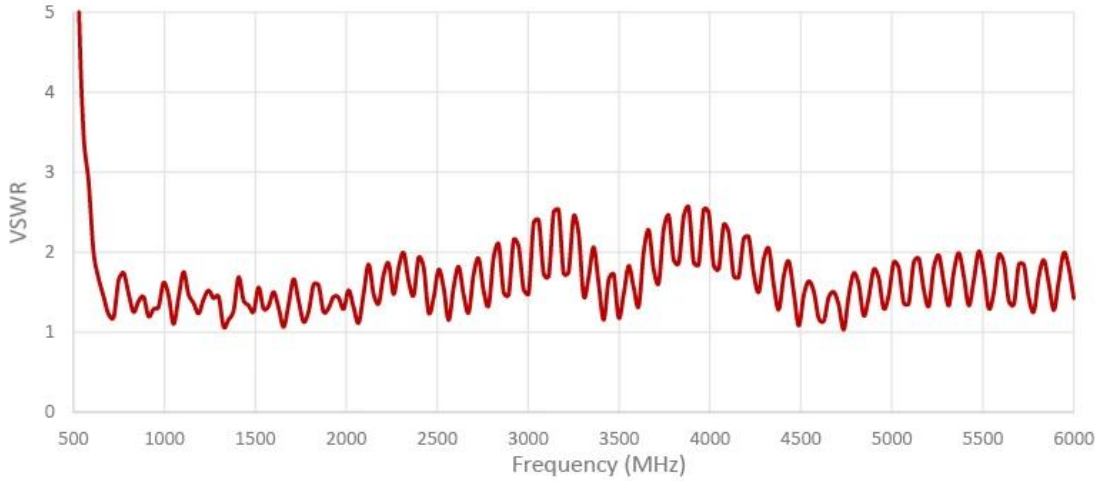

Efficiency (%)
70
60
50
40
30
20
10
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

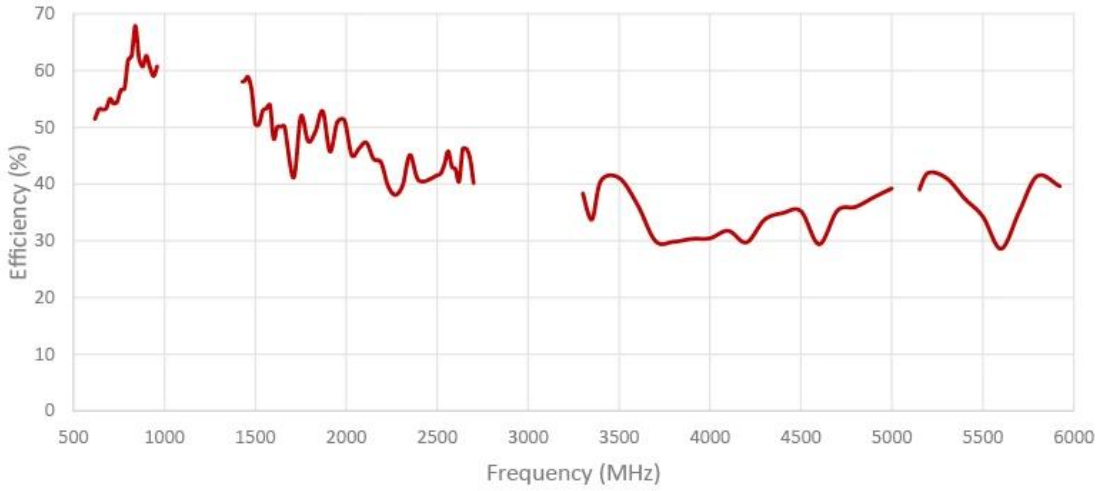

Peak Gain (dBi)
7
6
5
4
3
2
1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

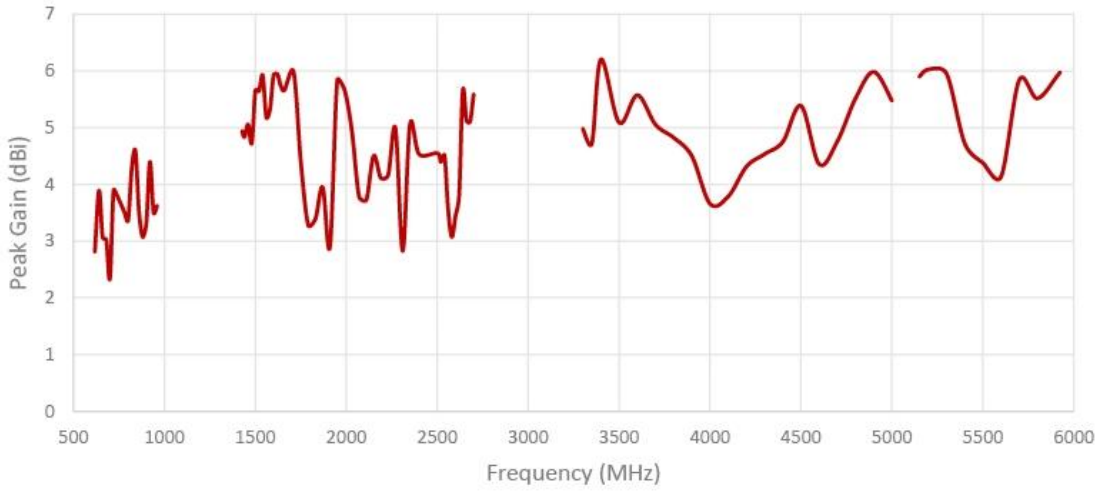

Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

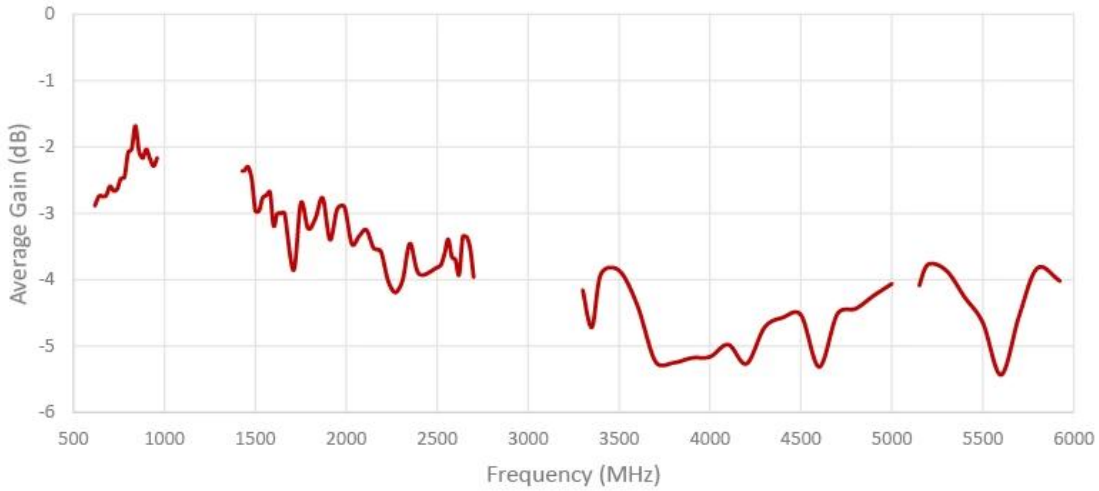
Cable 4: 5GNR


Return Loss (dB)
0
-5
-10
-15
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

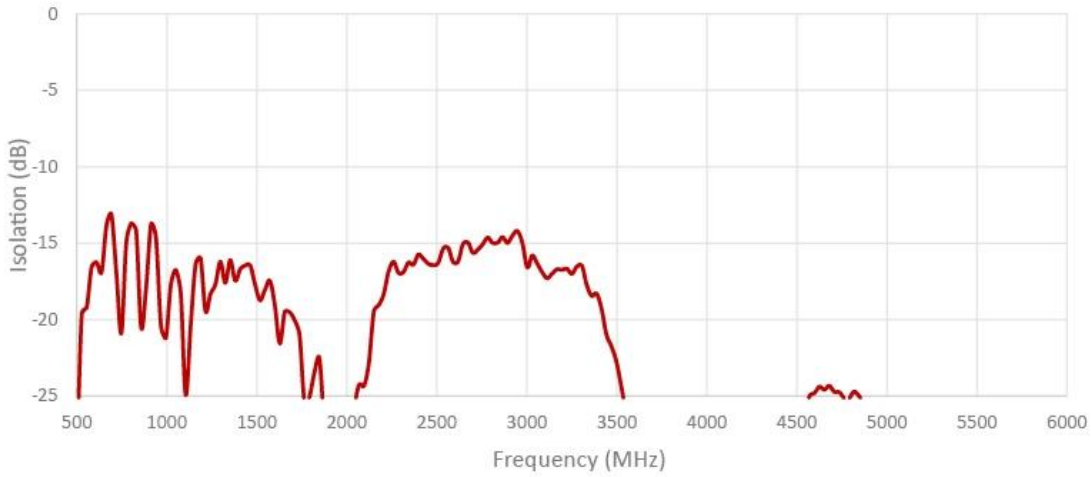

VSWR
5
4
3
2
1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)


Efficiency (%)
70
60
50
40
30
20
10
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

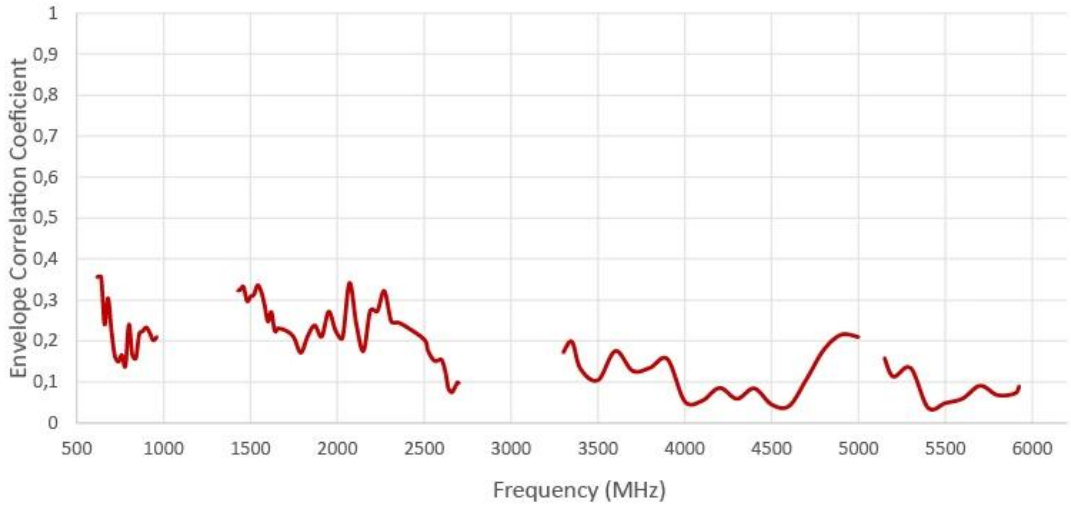

Peak Gain (dBi)
7
6
5
4
3
2
1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)


Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

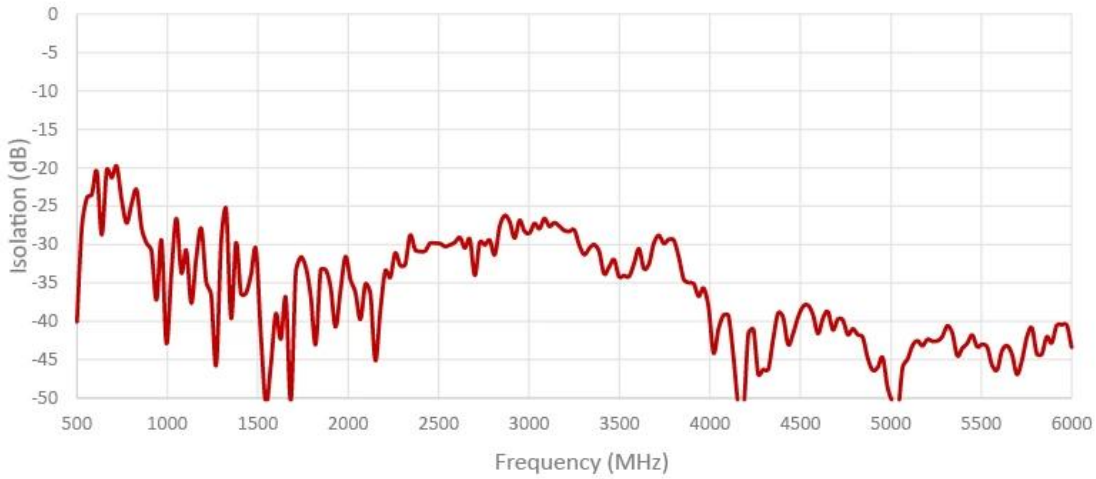
ISOLATION FOR CABLES 1 AND 2



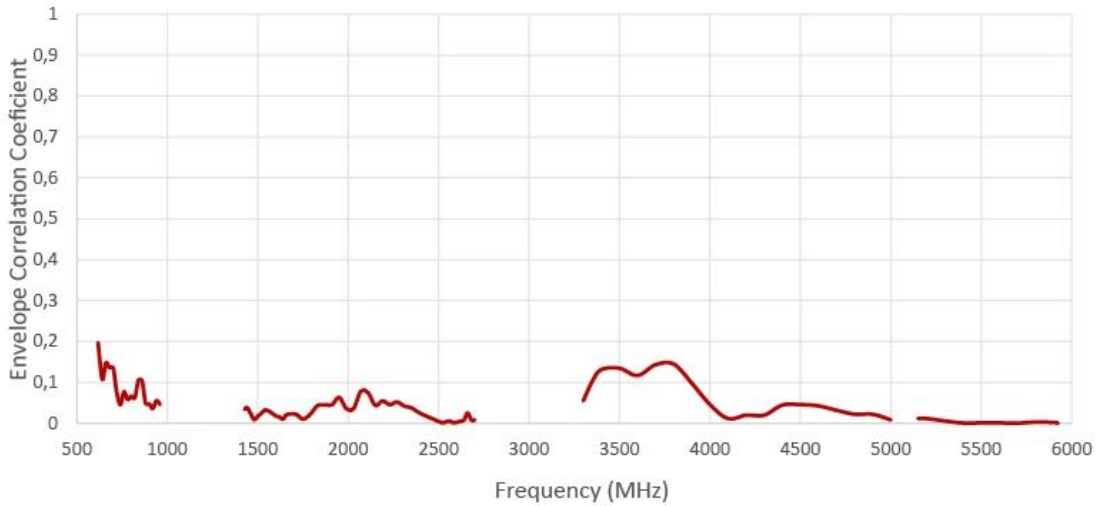
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2



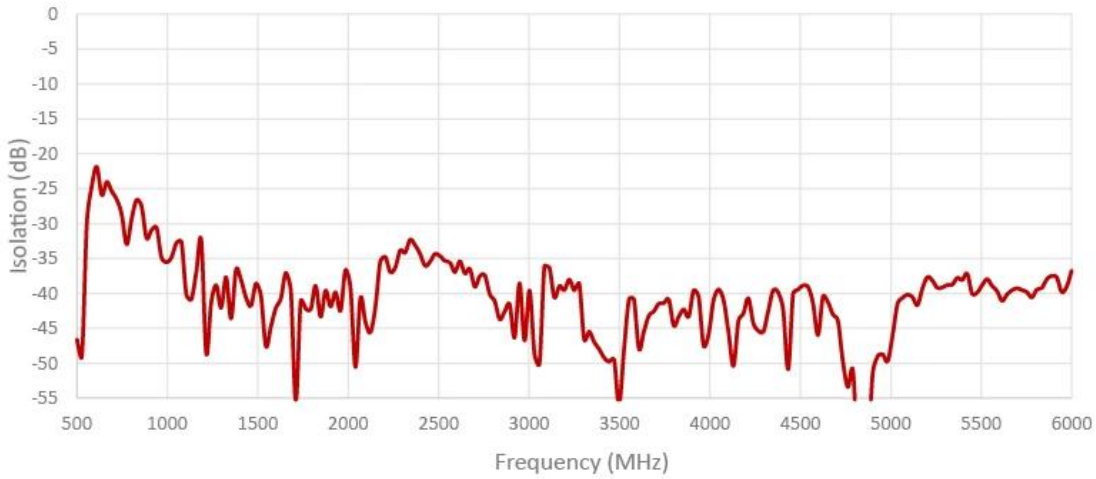
ISOLATION FOR CABLES 1 AND 3



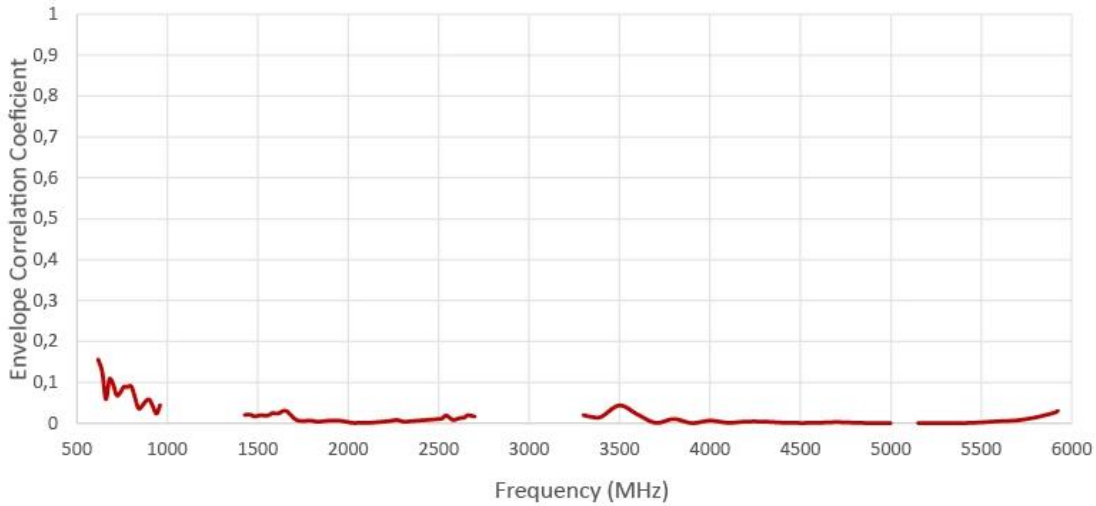
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 3



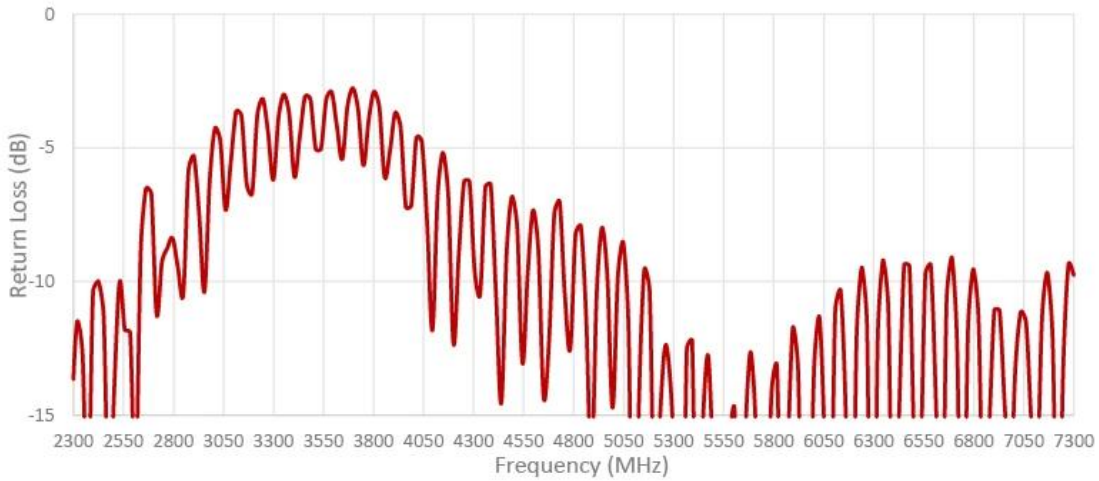
ISOLATION FOR CABLES 1 AND 4

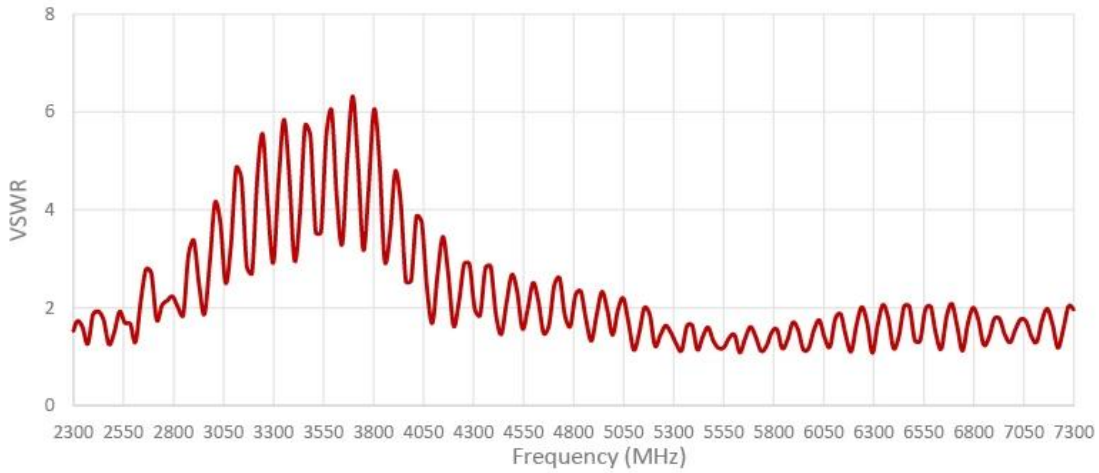


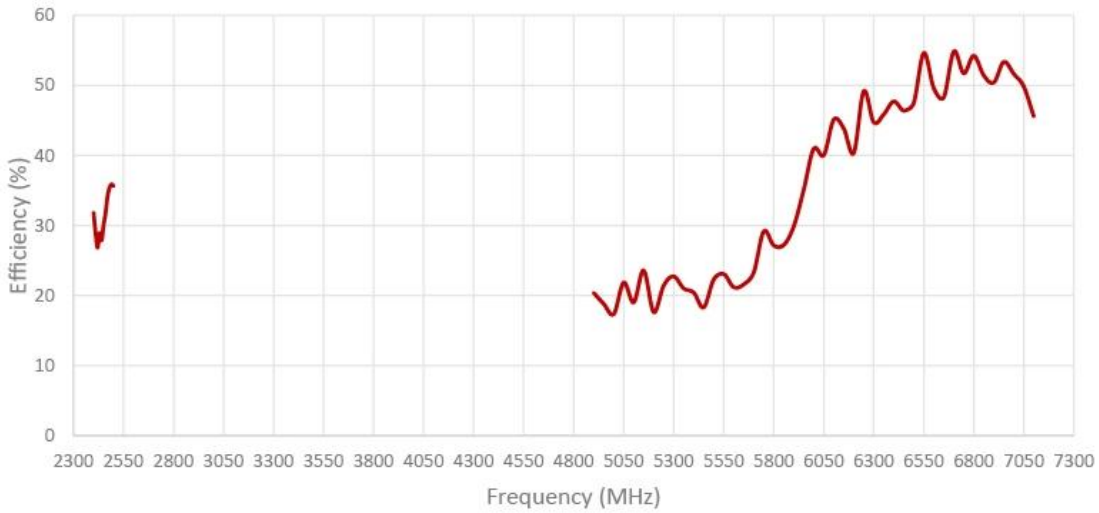
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 4

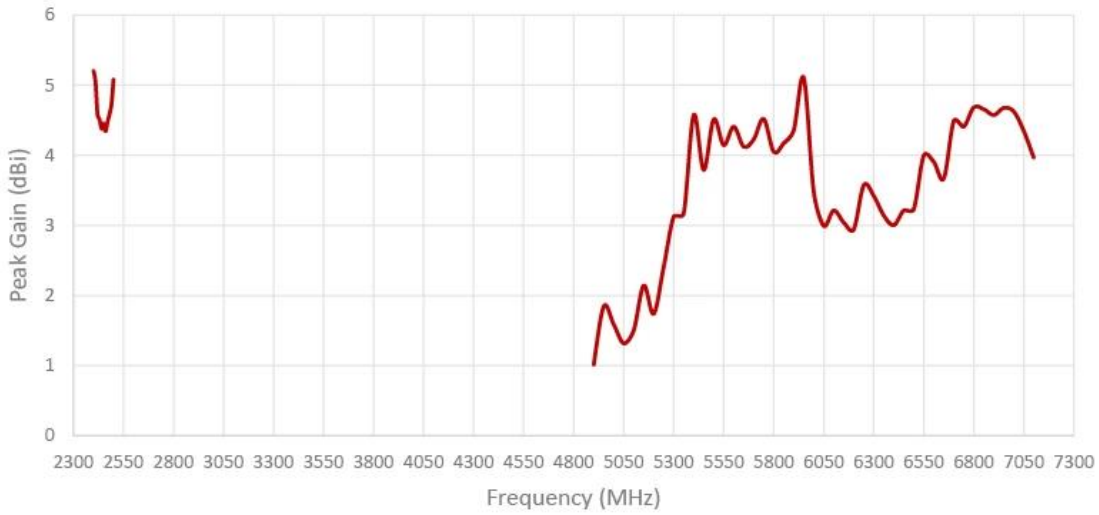


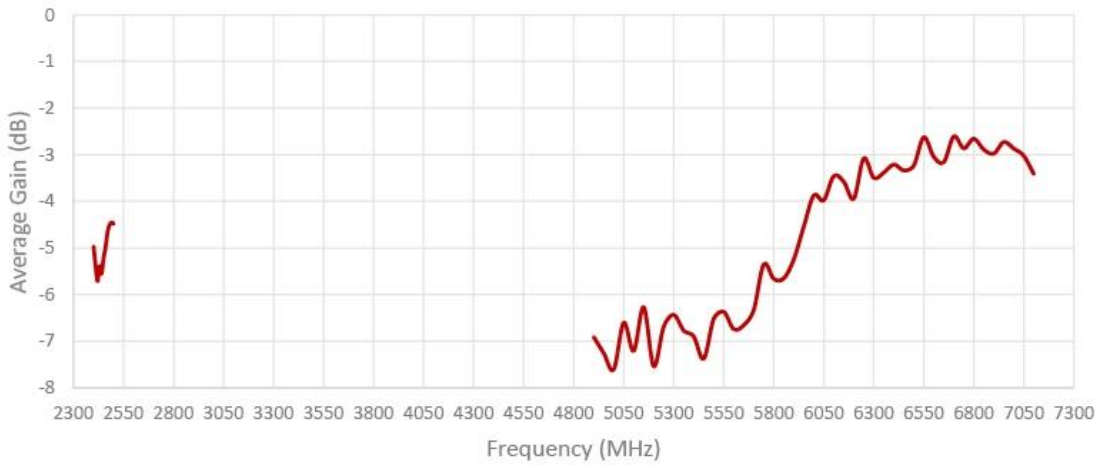
Cable 5: 2.4/5.0/6.0 GHz ISM



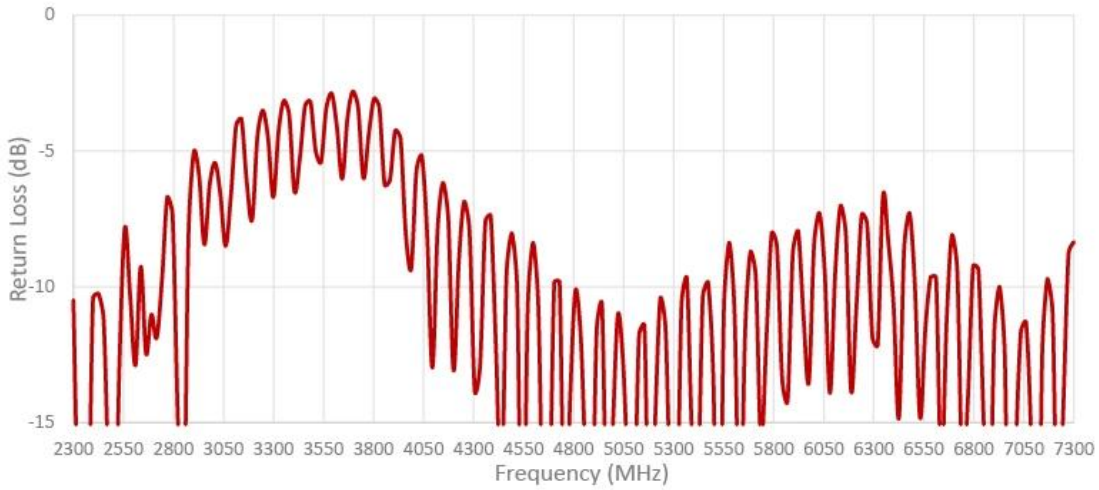


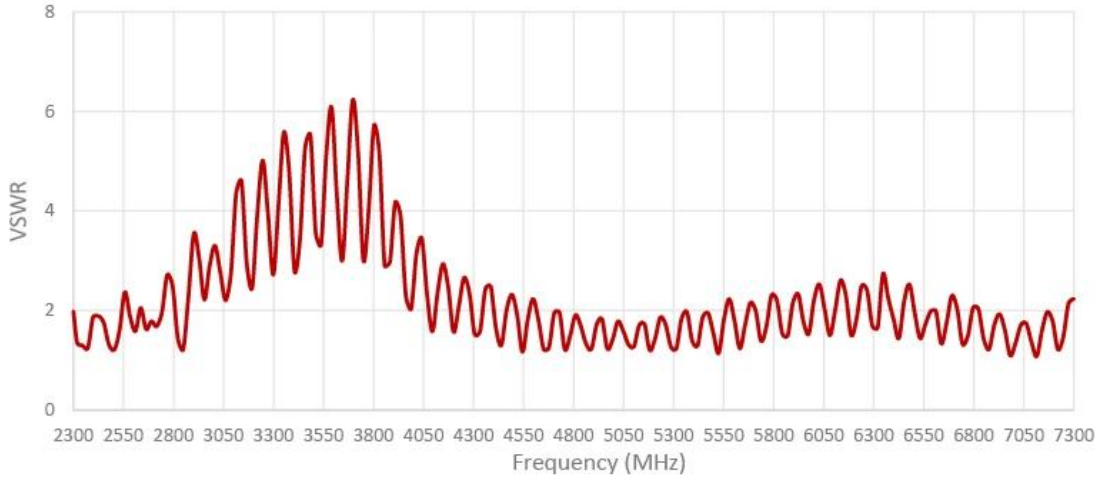

Efficiency (%)
60
50
40
30
20
10
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

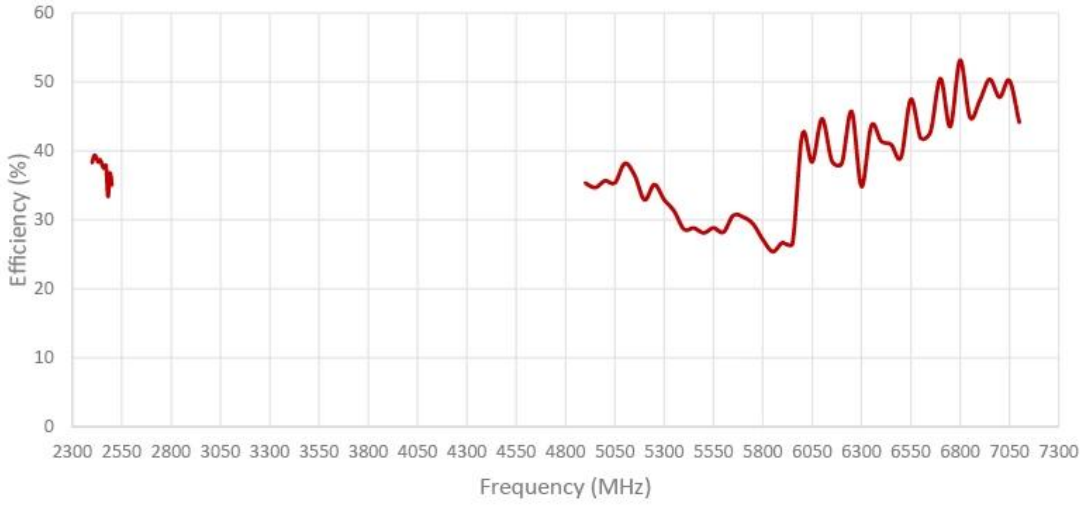

Peak Gain (dBi)
6
5
4
3
2
1
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

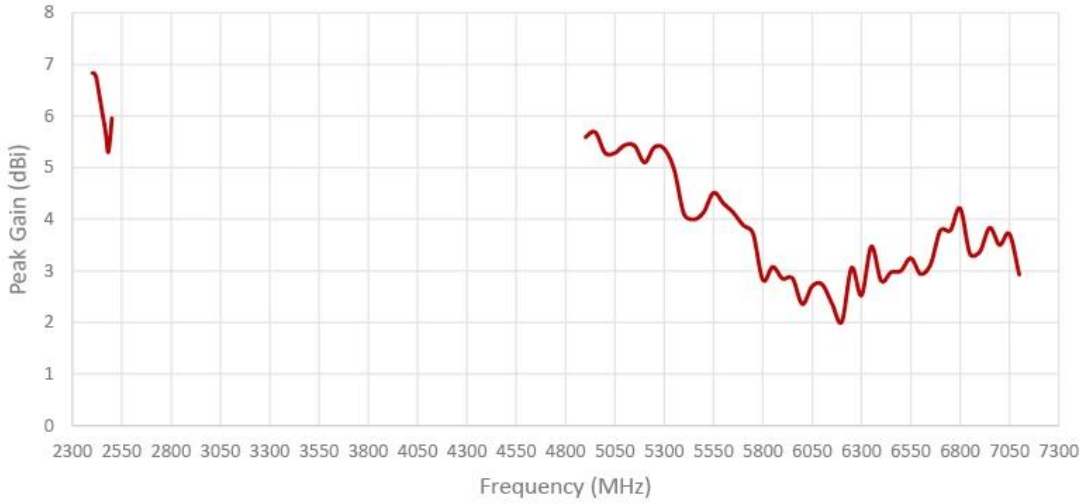

Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
-7
-8
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

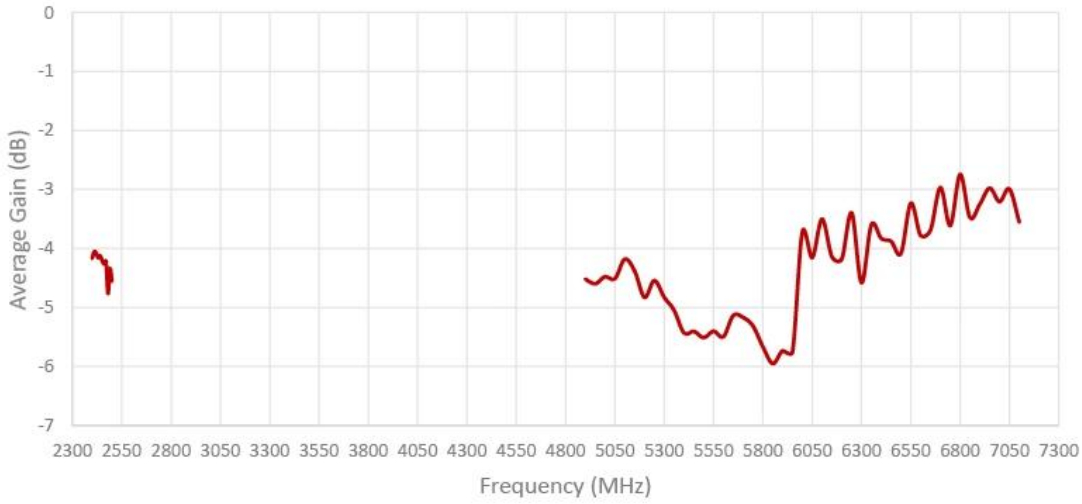
Cable 6: 2.4/5.0/6.0 GHz ISM



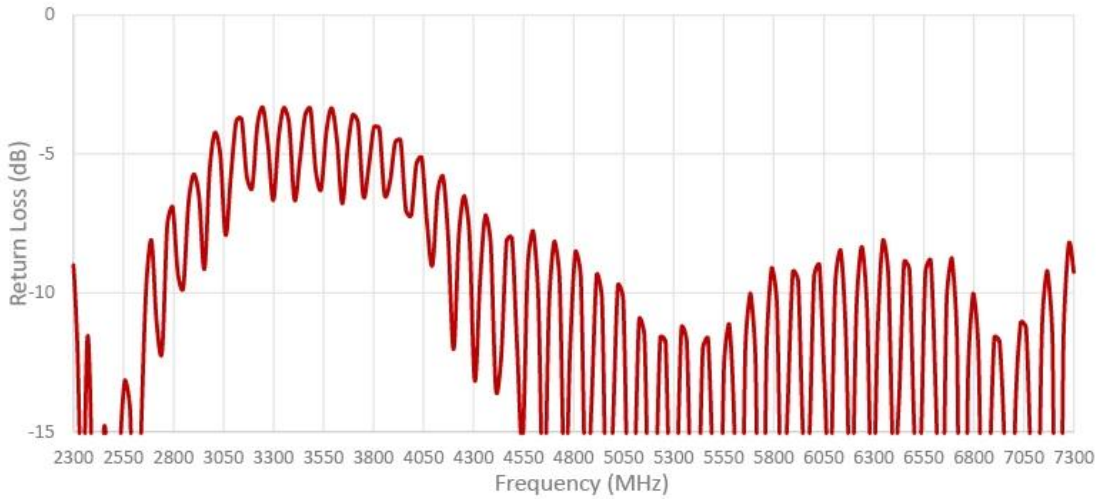


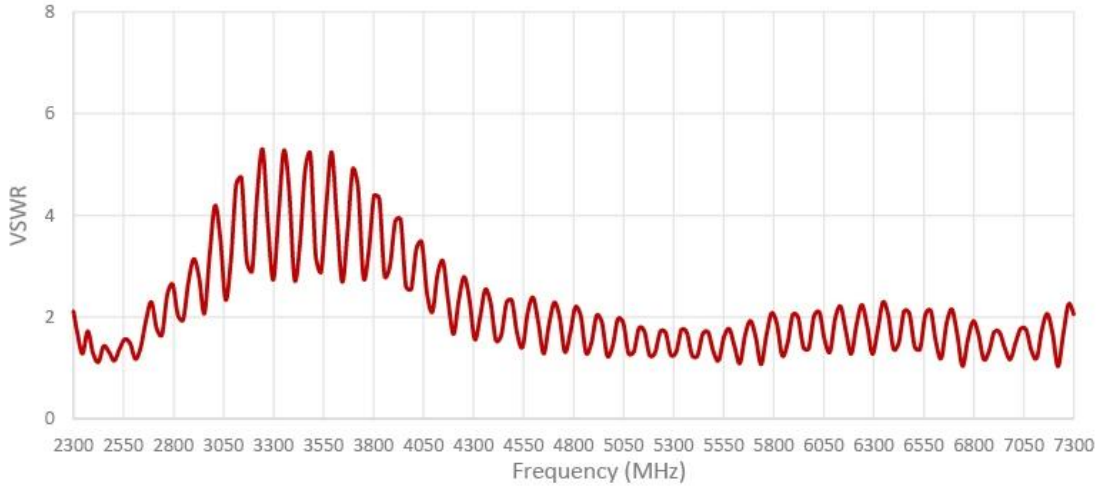

Efficiency (%)
60
50
40
30
20
10
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

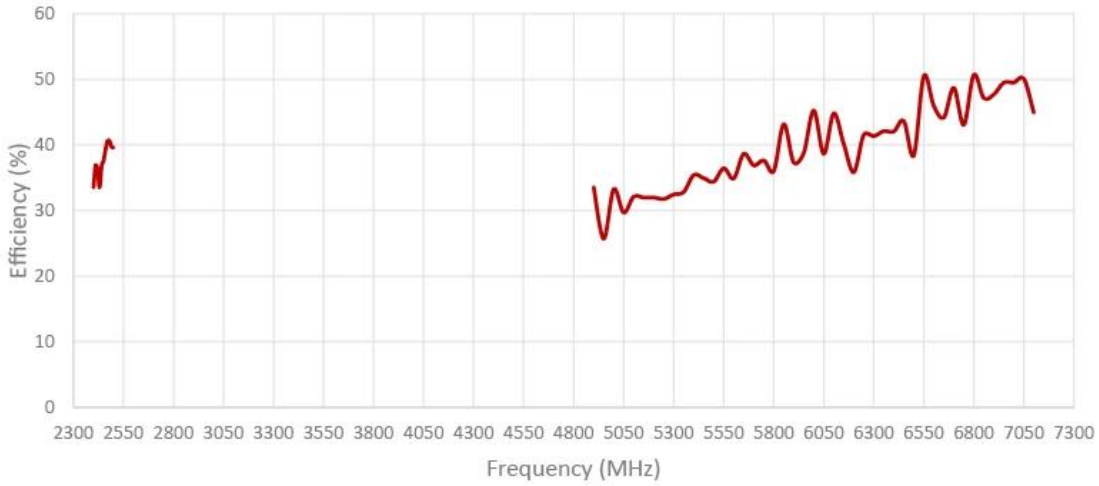

Peak Gain (dBi)
8
7
6
5
4
3
2
1
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

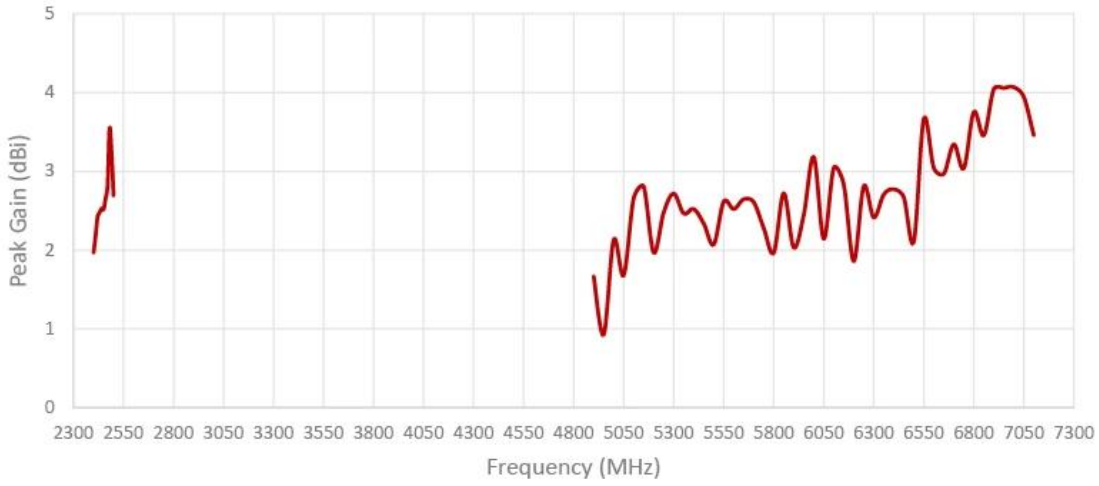

Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
-7
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

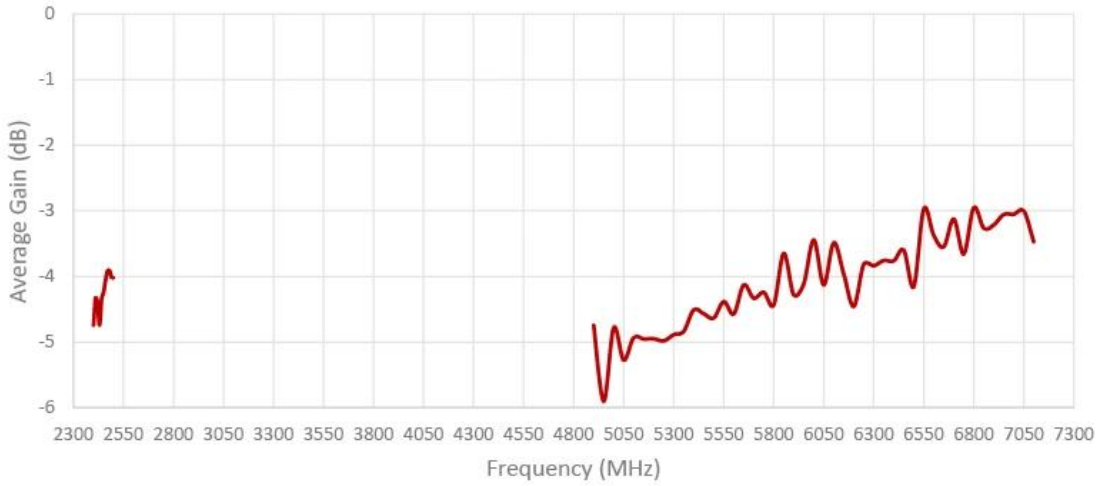
Cable 7: 2.4/5.0/6.0 GHz ISM



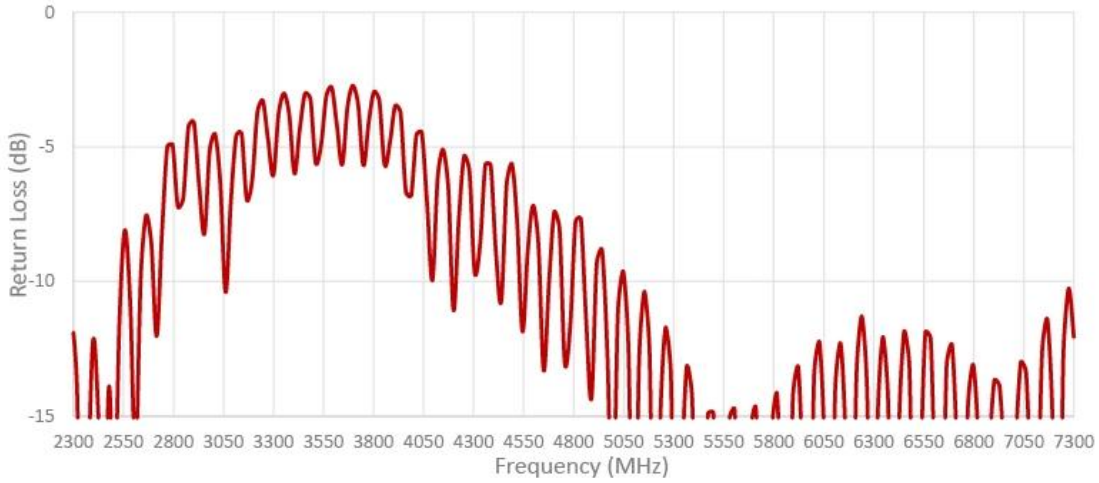


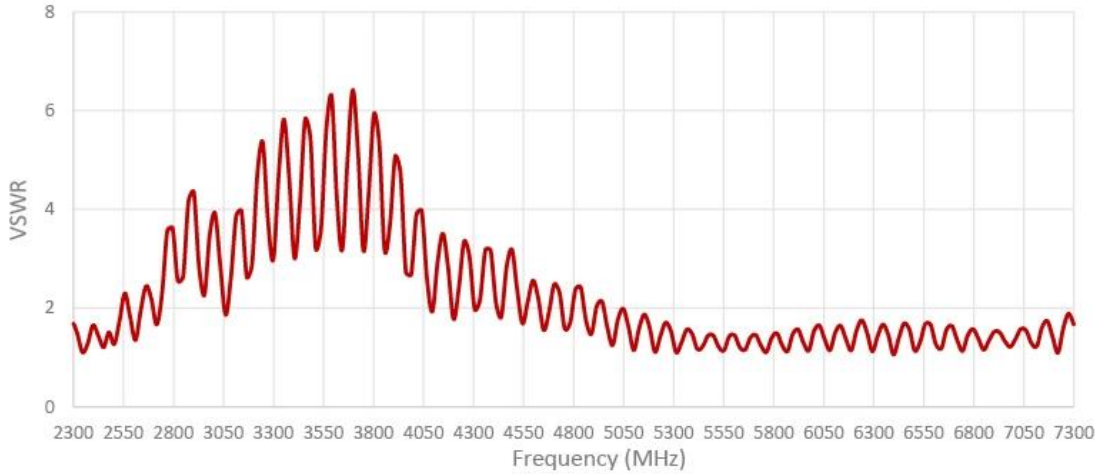

Efficiency (%)
60
50
40
30
20
10
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

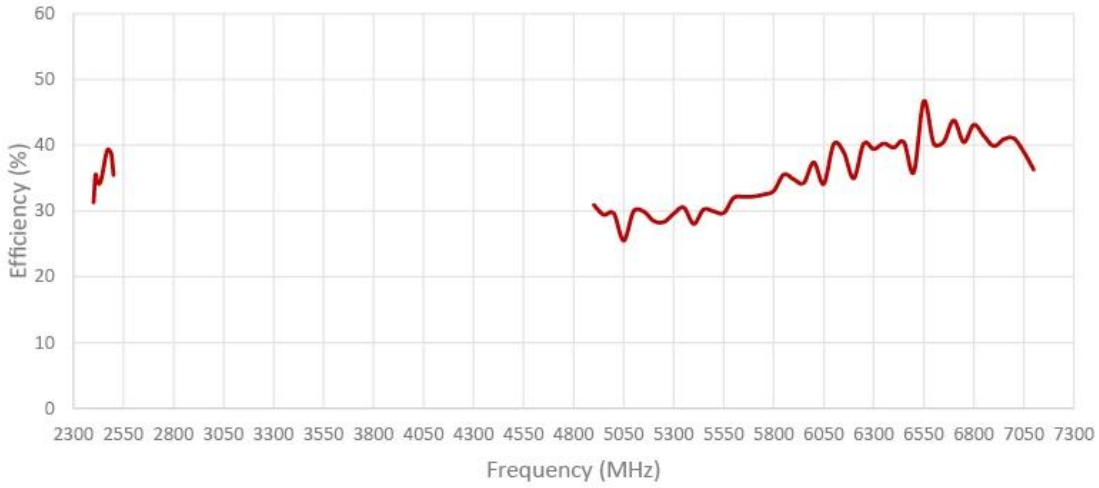

Peak Gain (dBi)
5
4
3
2
1
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

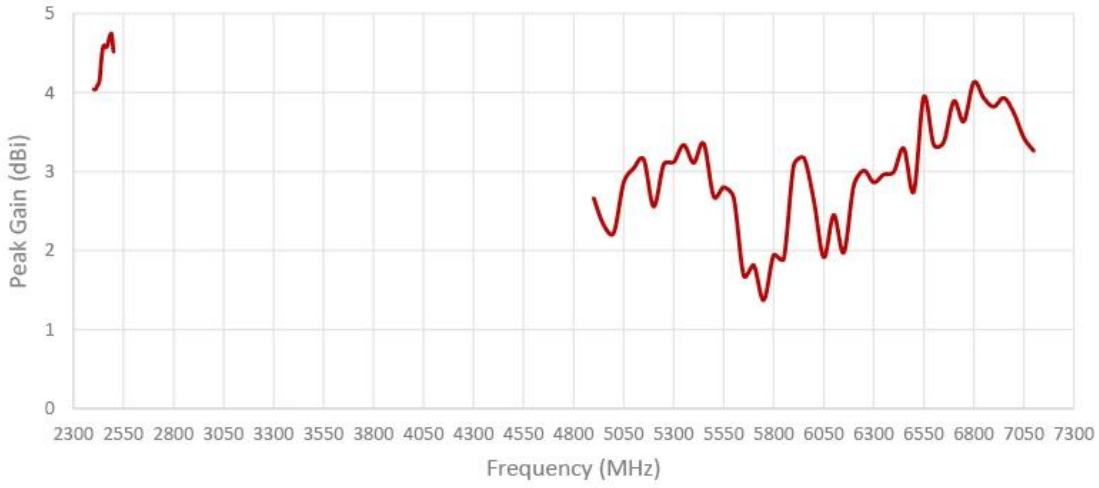

Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

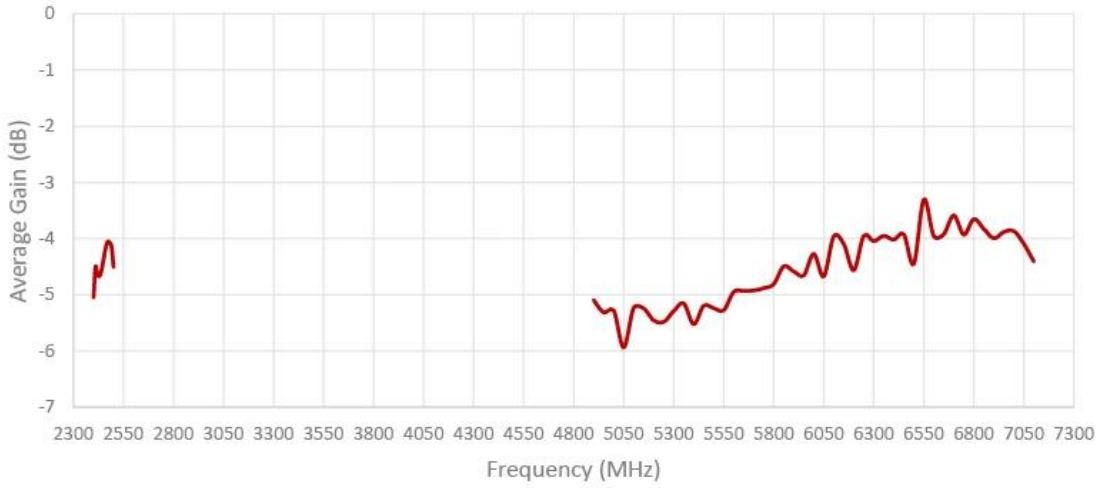
Cable 8: 2.4/5.0/6.0 GHz ISM



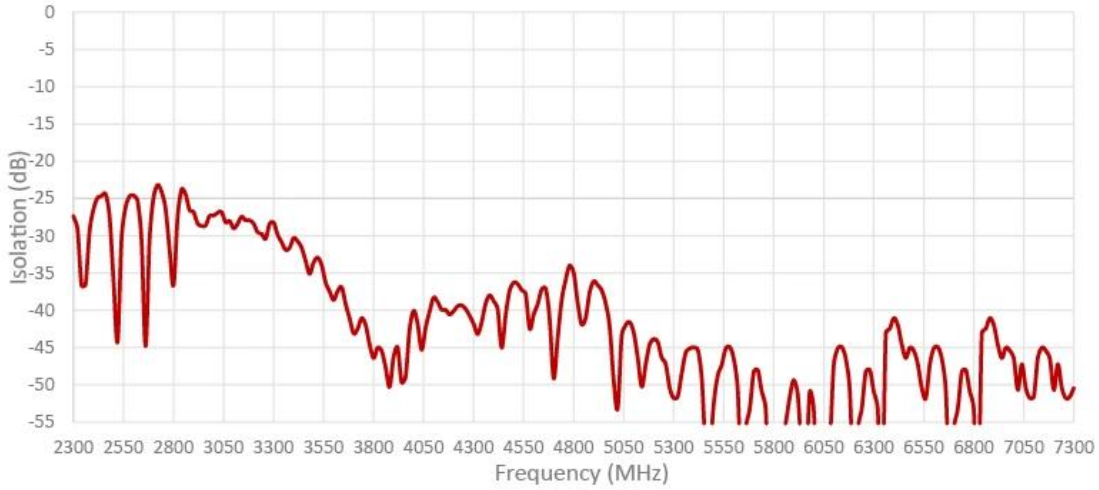



Efficiency (%)
60
50
40
30
20
10
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

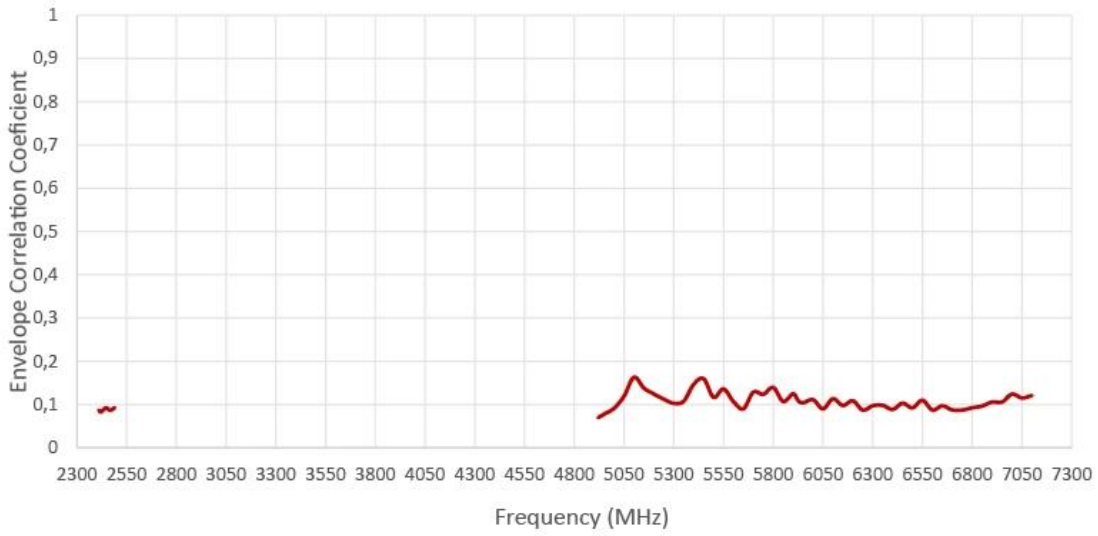

Peak Gain (dBi)
5
4
3
2
1
0
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)


Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
-7
2300 2550 2800 3050 3300 3550 3800 4050 4300 4550 4800 5050 5300 5550 5800 6050 6300 6550 6800 7050 7300
Frequency (MHz)

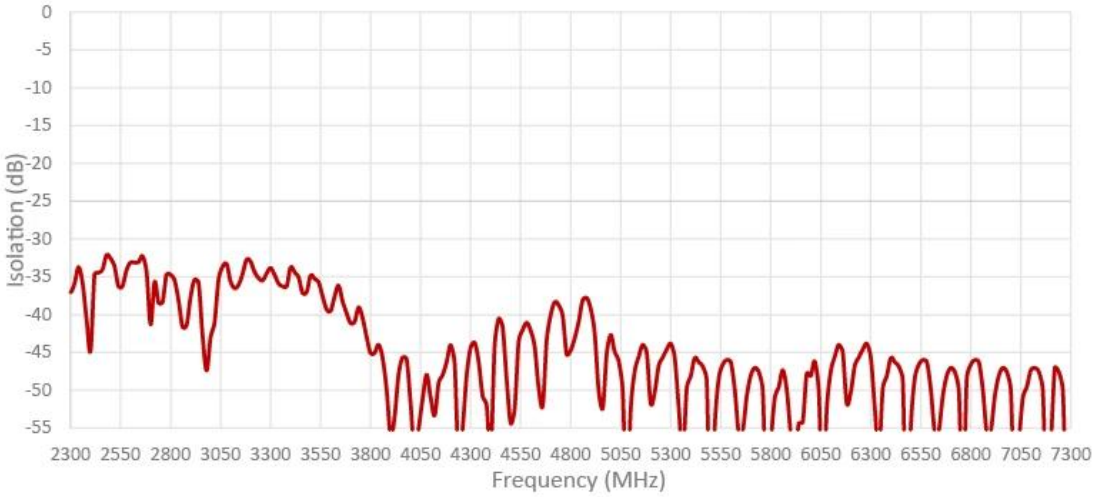
ISOLATION FOR CABLES 5 AND 6



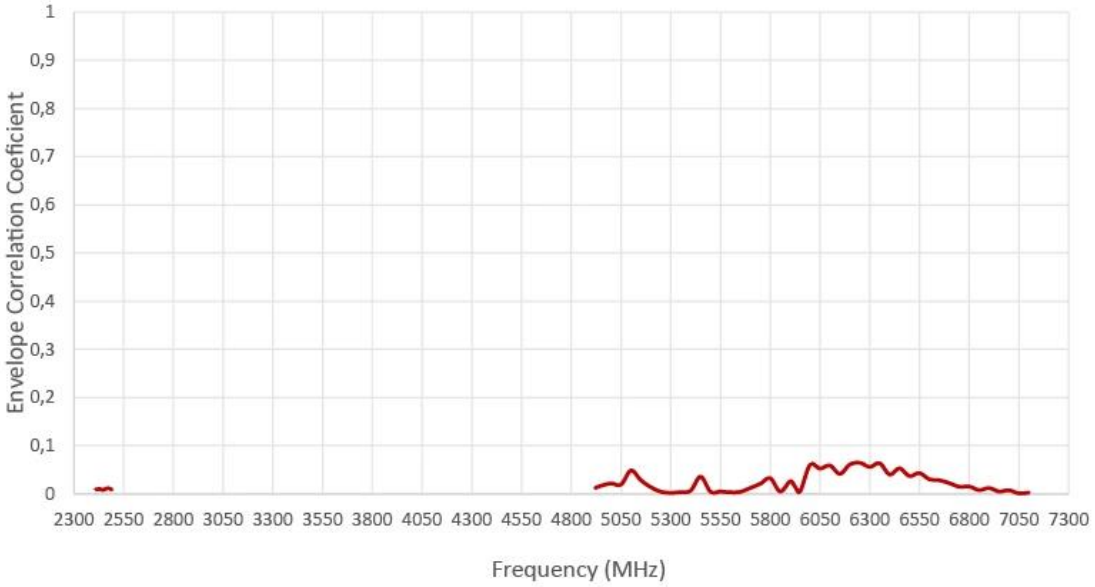
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 5 AND 6



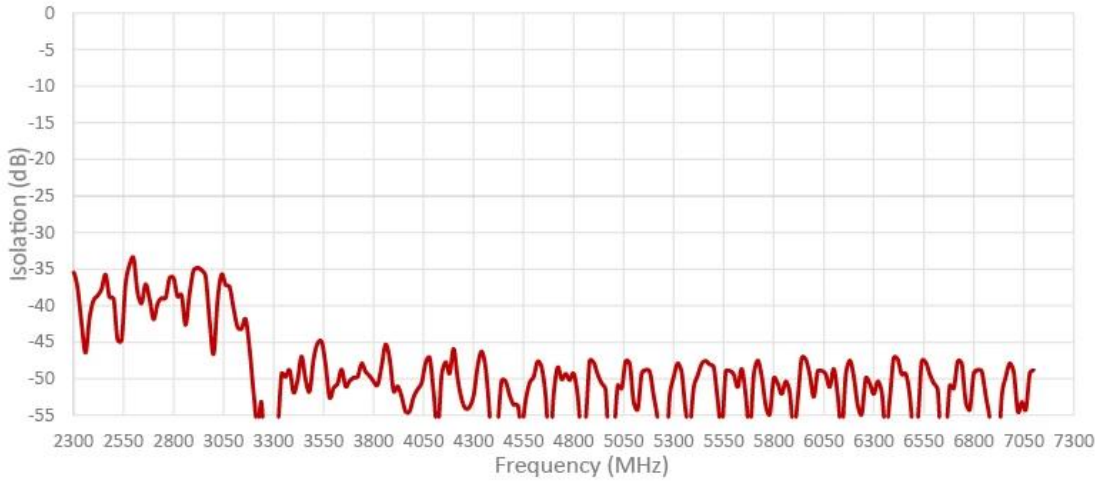
ISOLATION FOR CABLES 5 AND 7



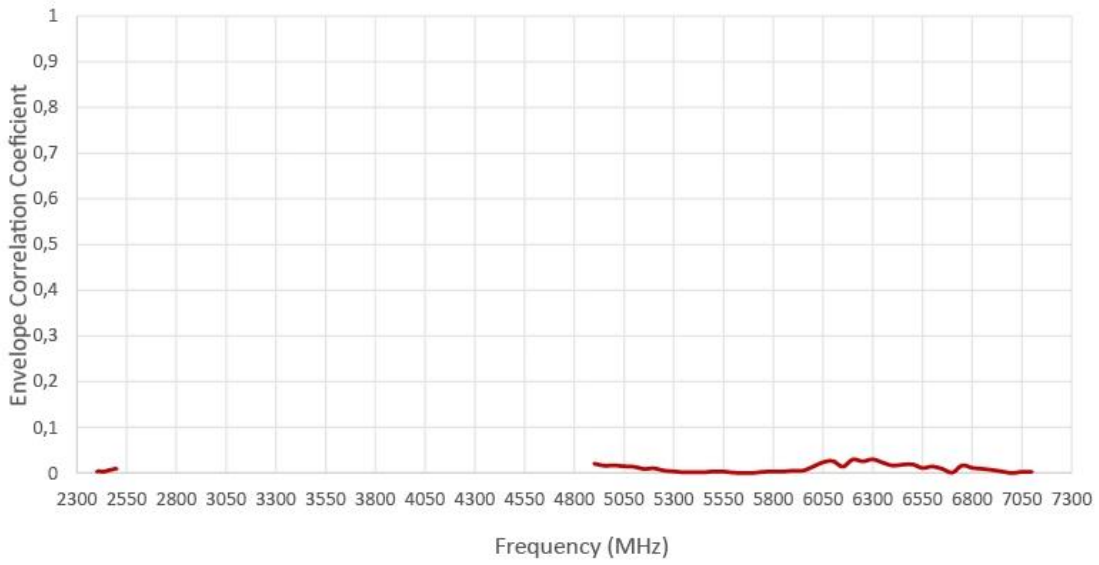
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 5 AND 7



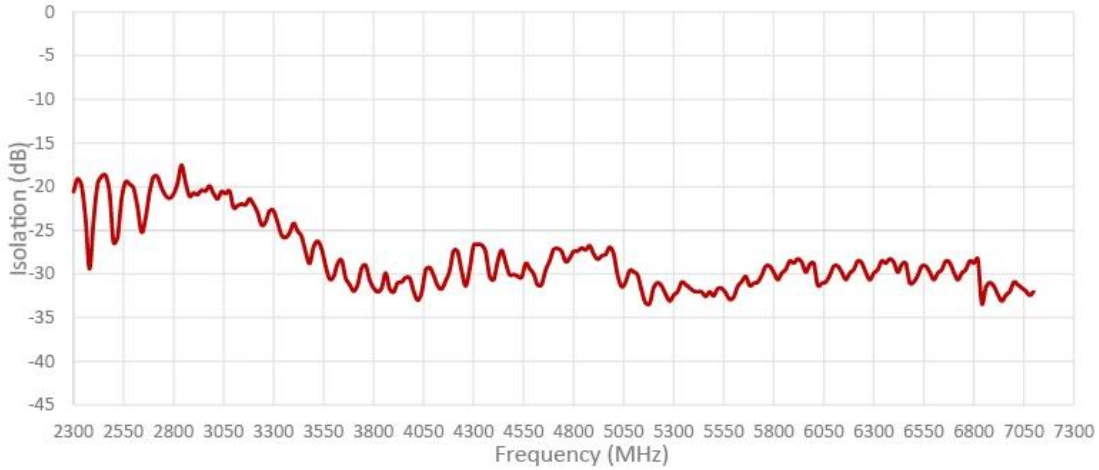
ISOLATION FOR CABLES 5 AND 8



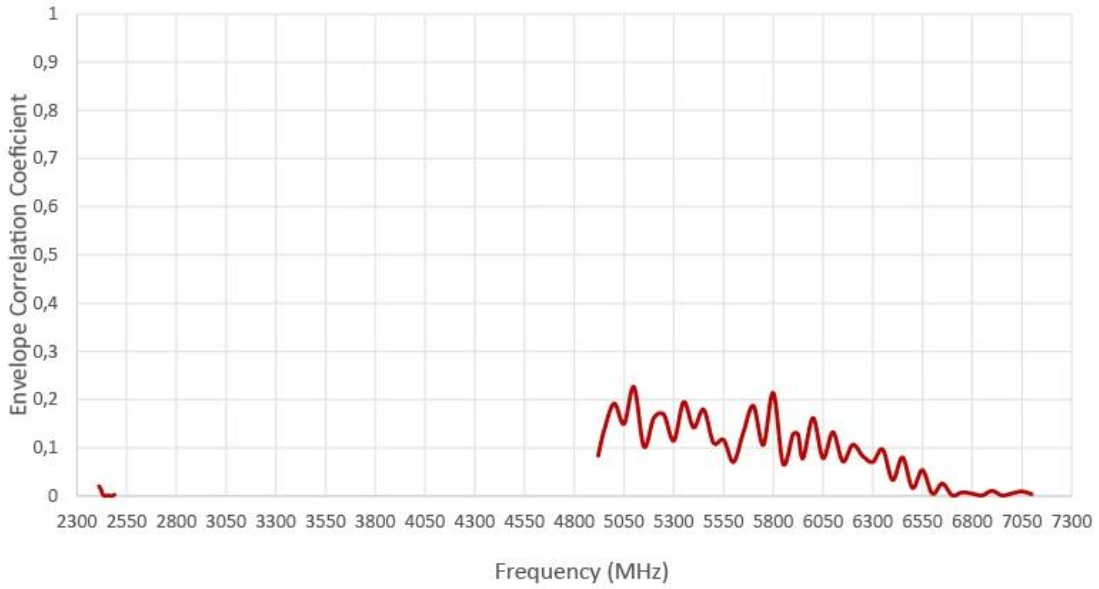
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 5 AND 8

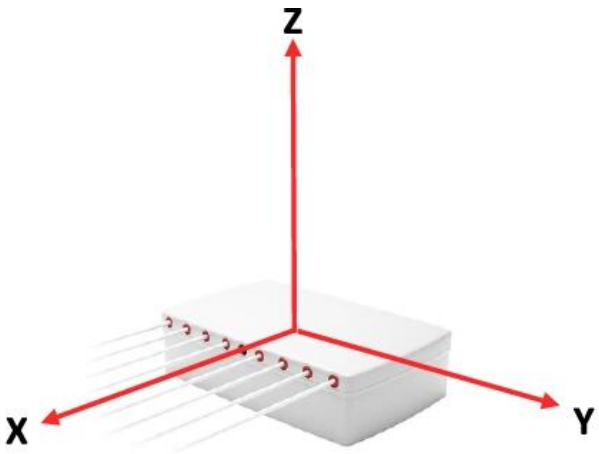


ISOLATION FOR CABLES 6 AND 7



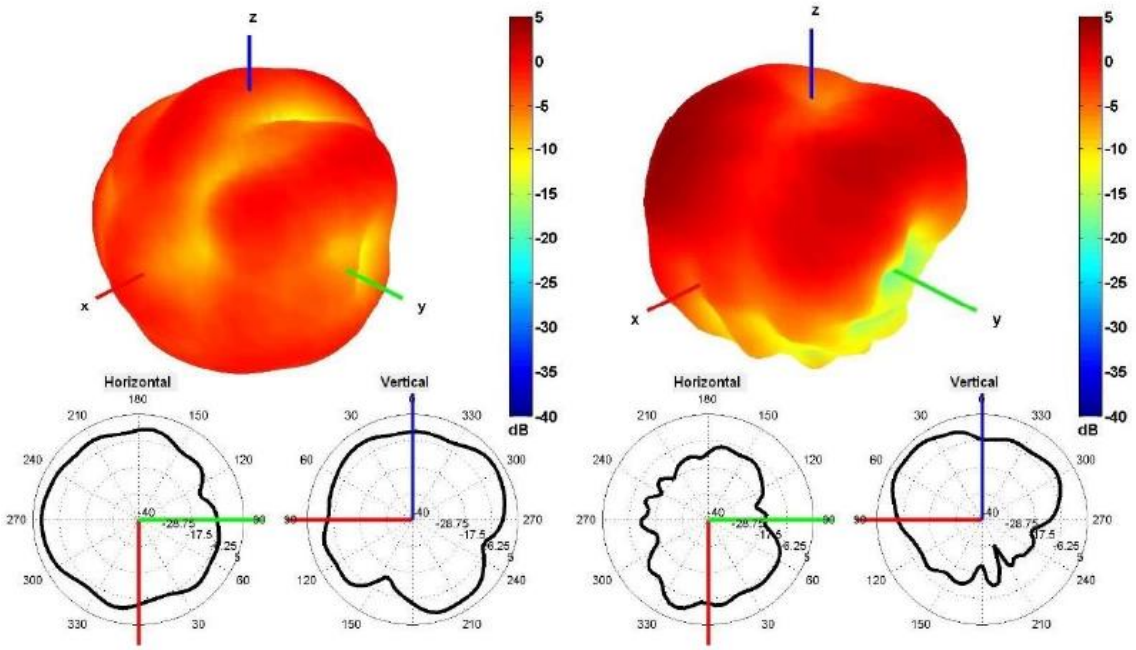
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 6 AND 7



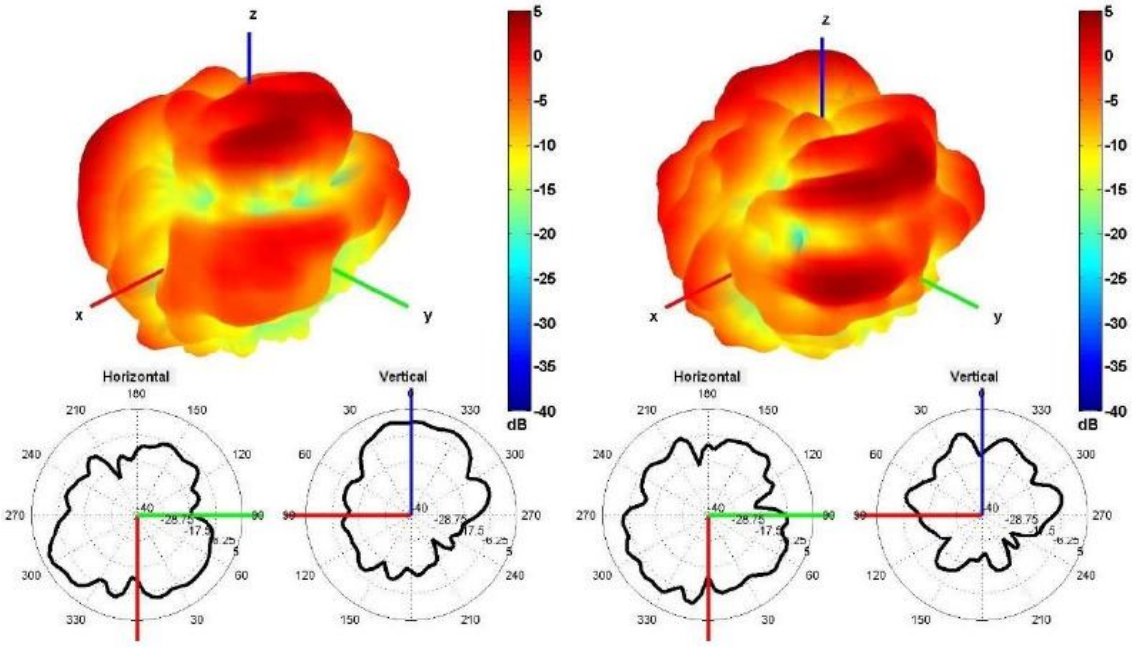


Radiation pattern reference

Cable 1: 5GNR

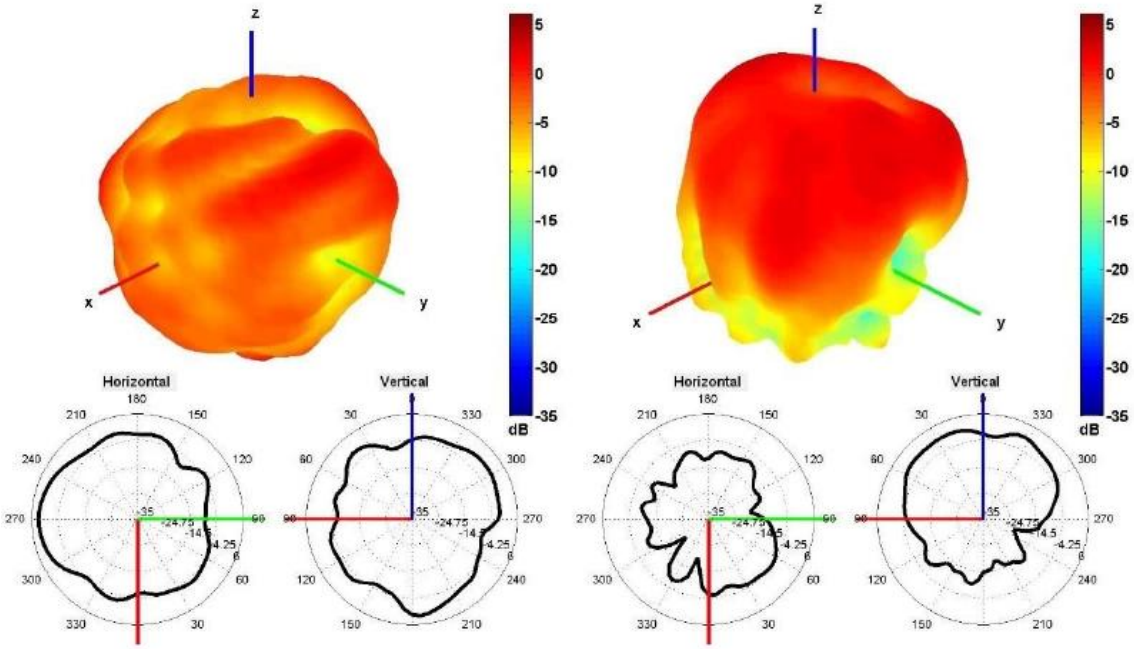


750 and 2500 MHz Radiation pattern

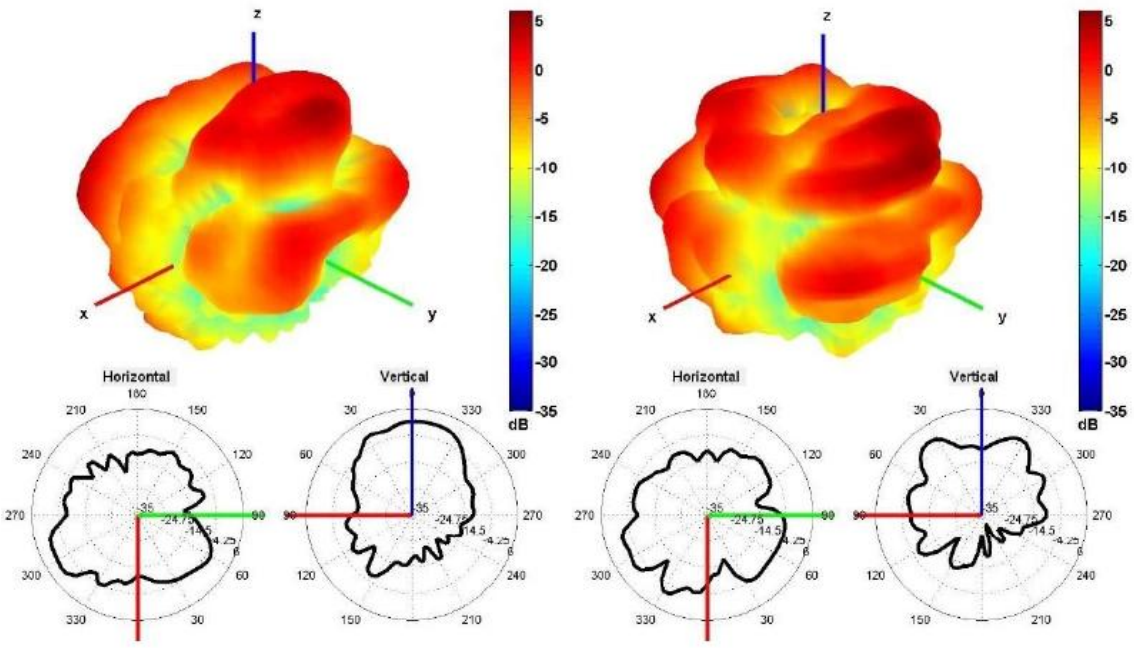


4500 and 5500 MHz Radiation pattern

Cable 2: 5GNR

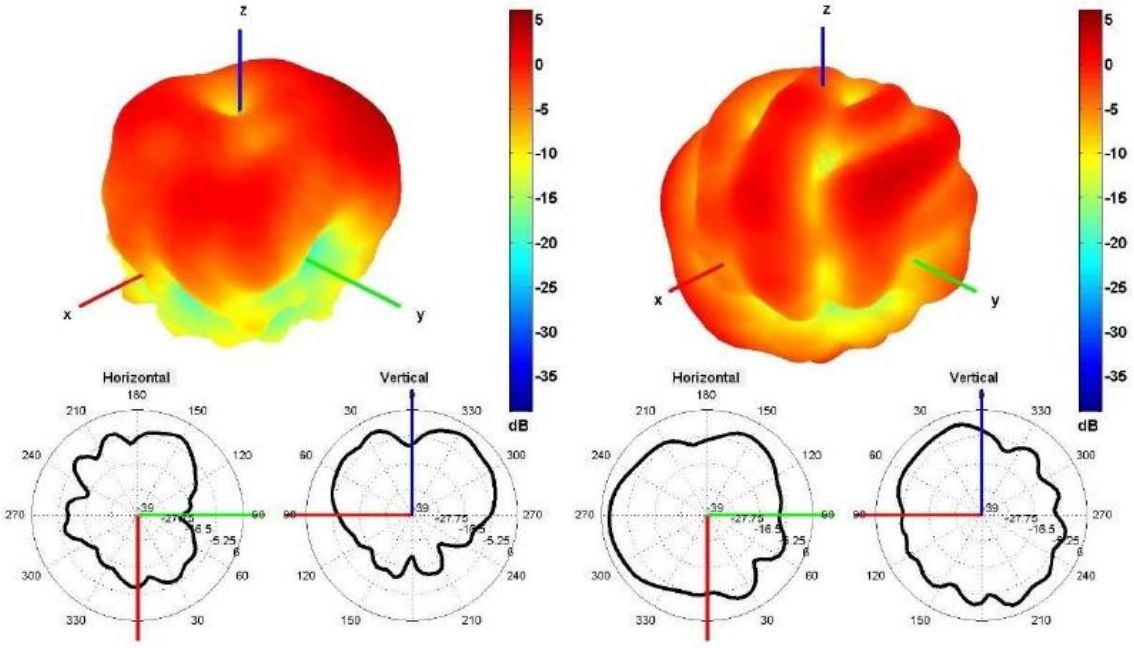


750 and 2500 MHz Radiation pattern

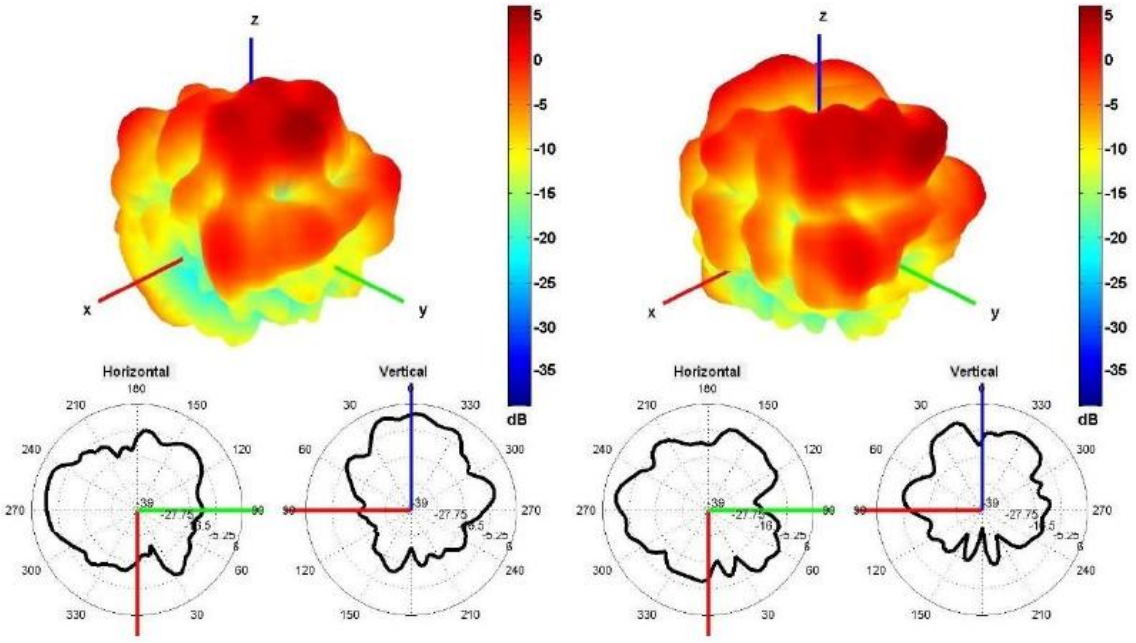


4500 and 5500 MHz Radiation pattern

Cable 3: 5GNR

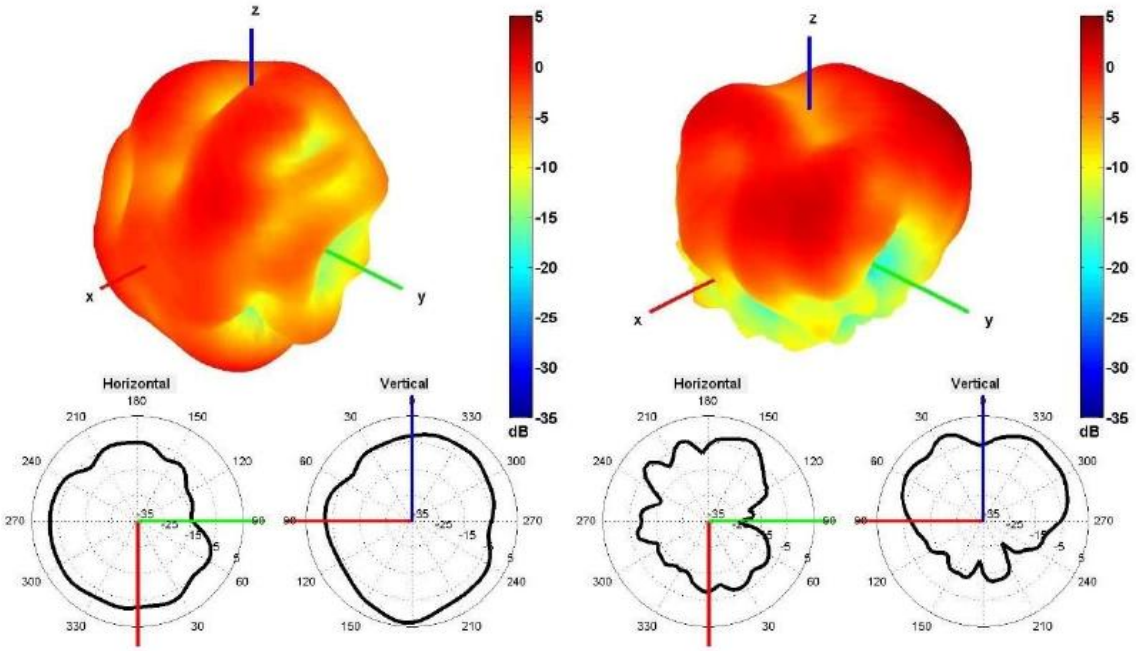


750 and 2500 MHz Radiation pattern

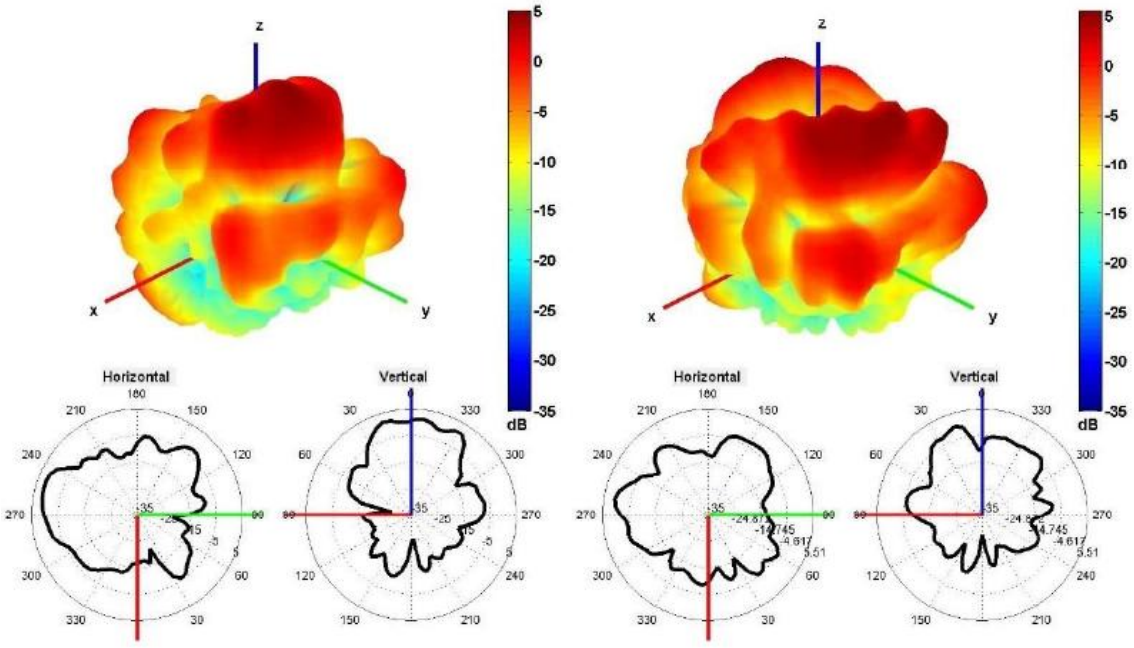


4500 and 5500 MHz Radiation pattern

Cable 4: 5GNR

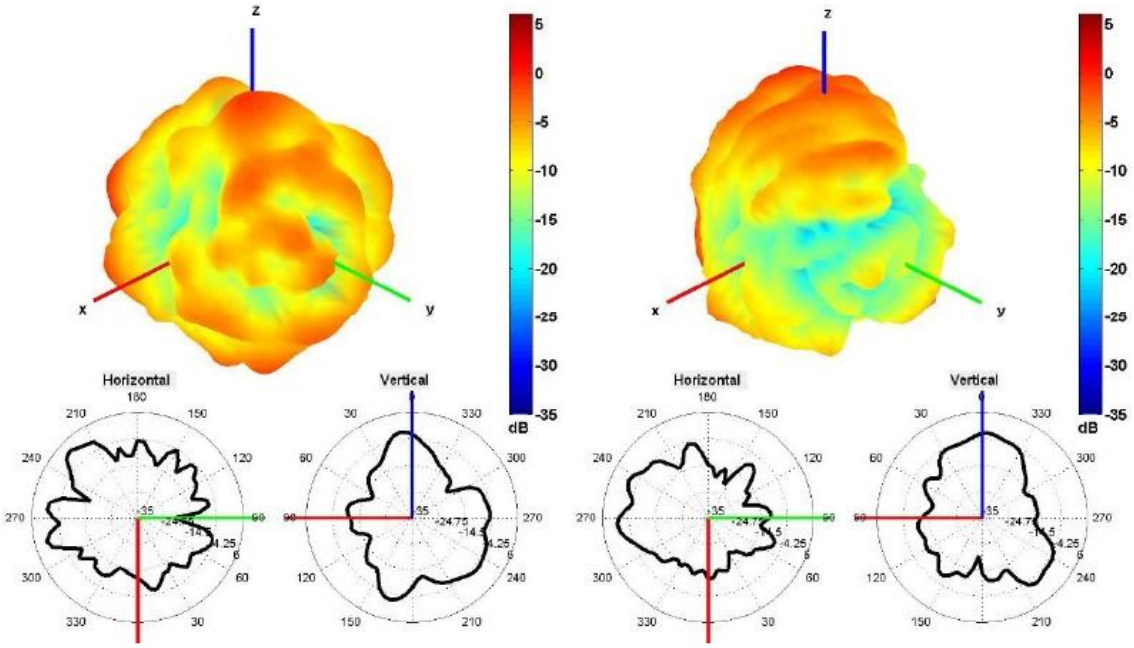


750 and 2500 MHz Radiation pattern

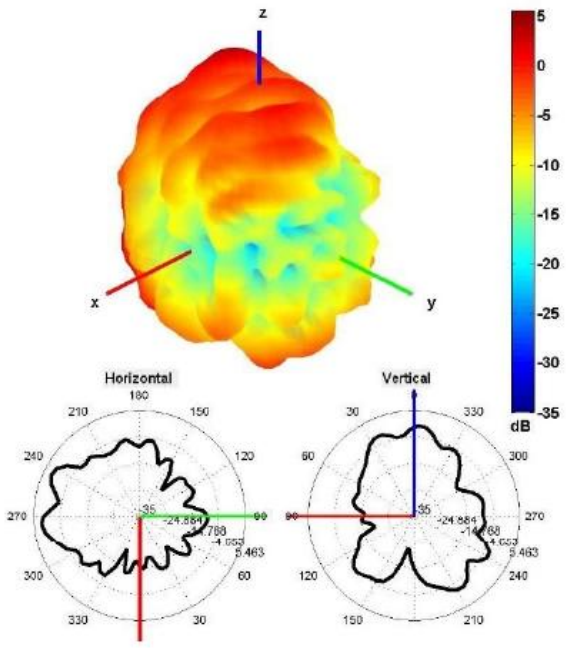


4500 and 5500 MHz Radiation pattern

Cable 5: 2.4/5.0/6.0 GHz ISM

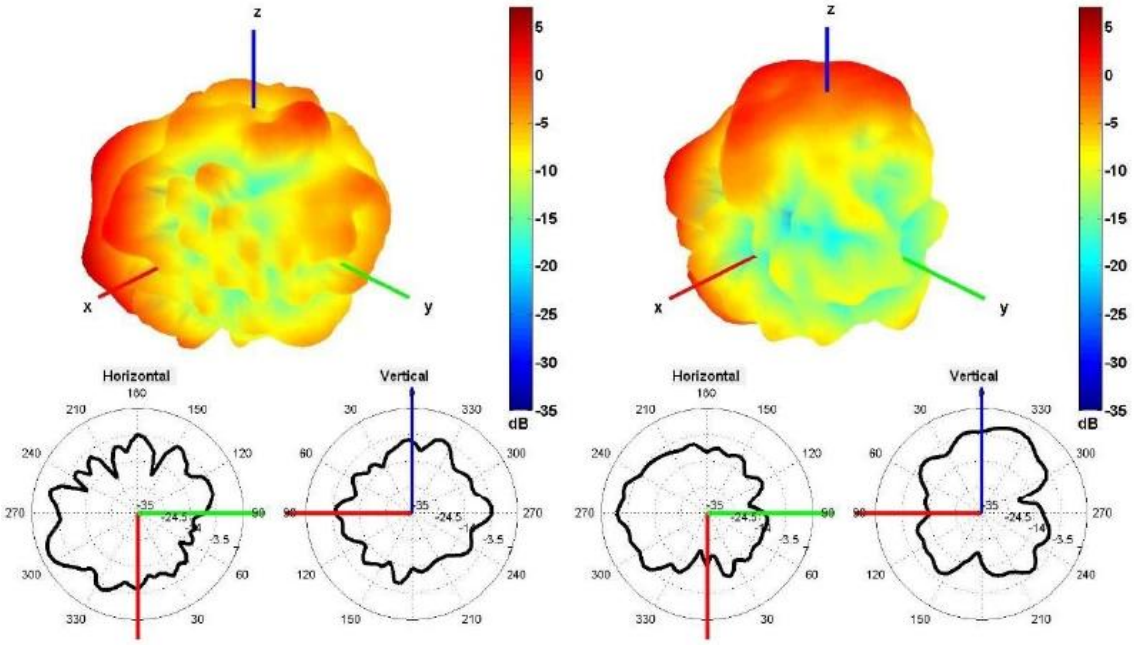


2450 and 5500 MHz Radiation pattern

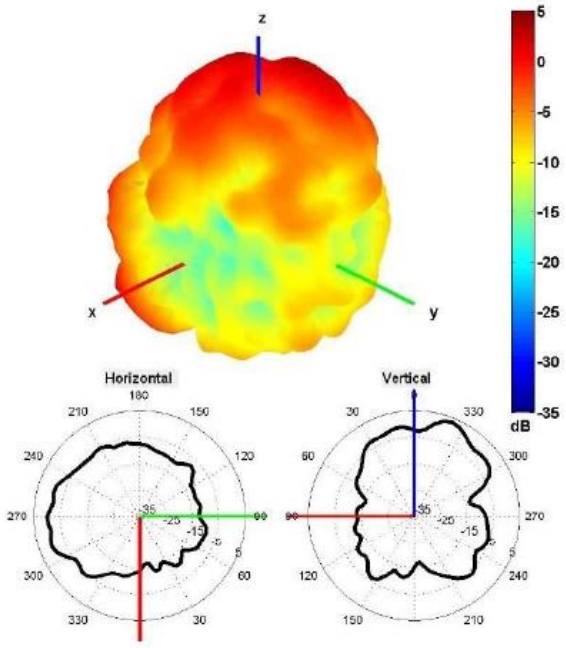


6500 MHz Radiation pattern

Cable 6: 2.4/5.0/6.0 GHz ISM

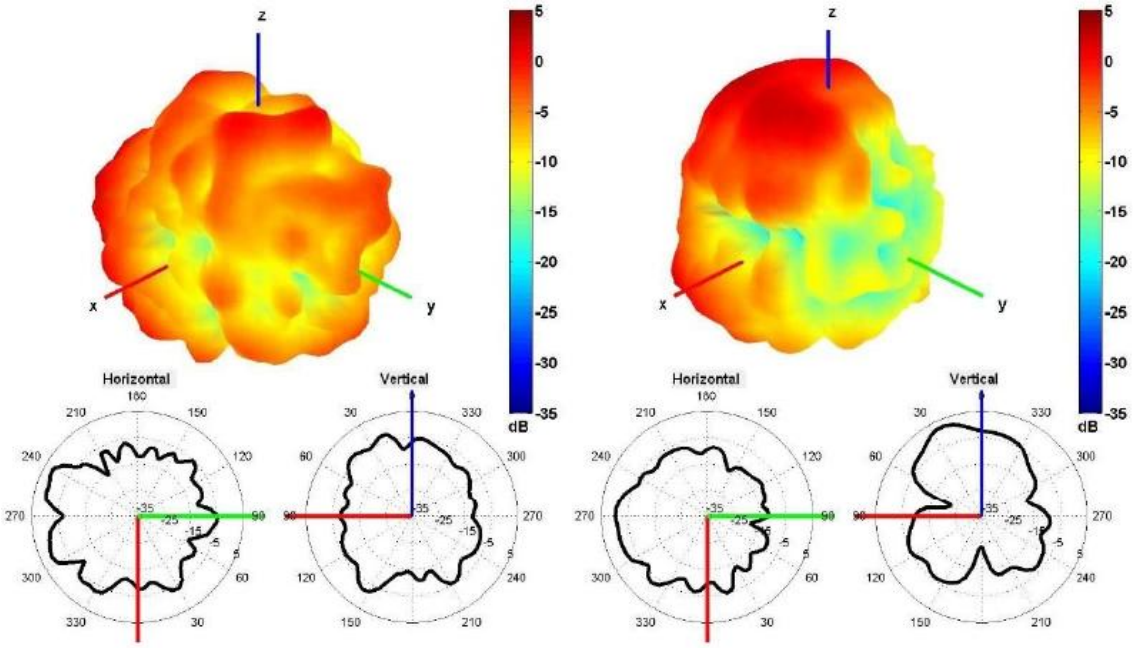


2450 and 5500 MHz Radiation pattern

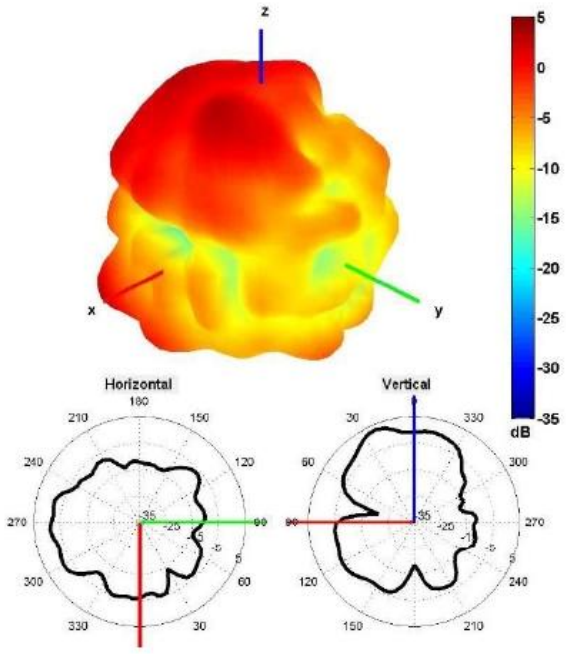


6500 MHz Radiation pattern

Cable 7: 2.4/5.0/6.0 GHz ISM

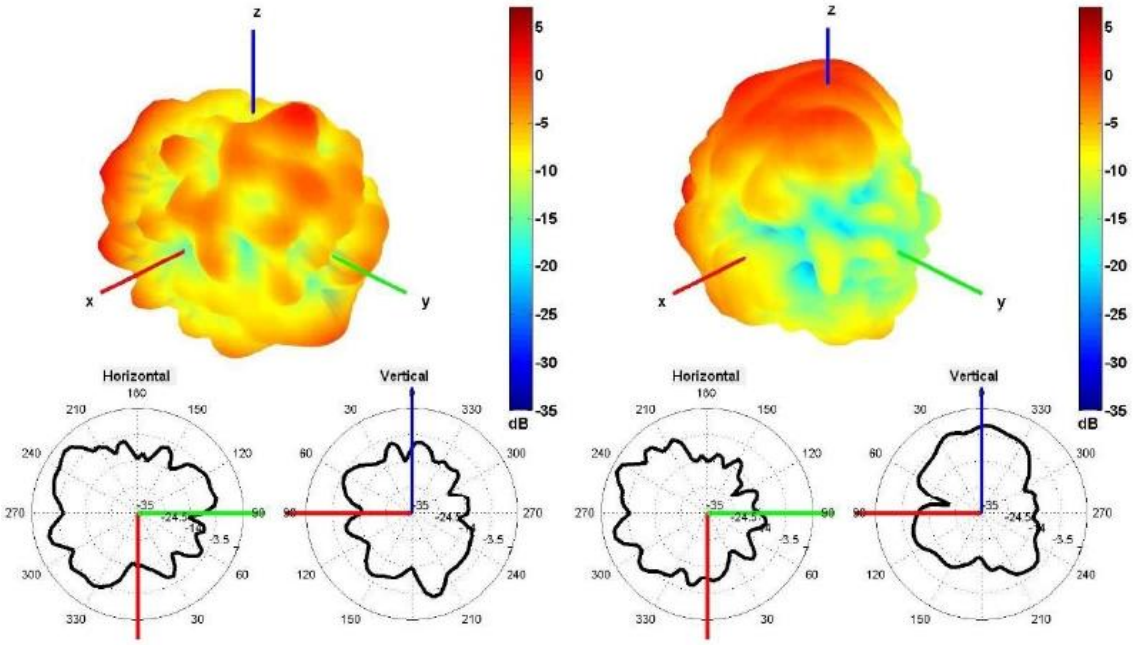


2450 and 5500 MHz Radiation pattern

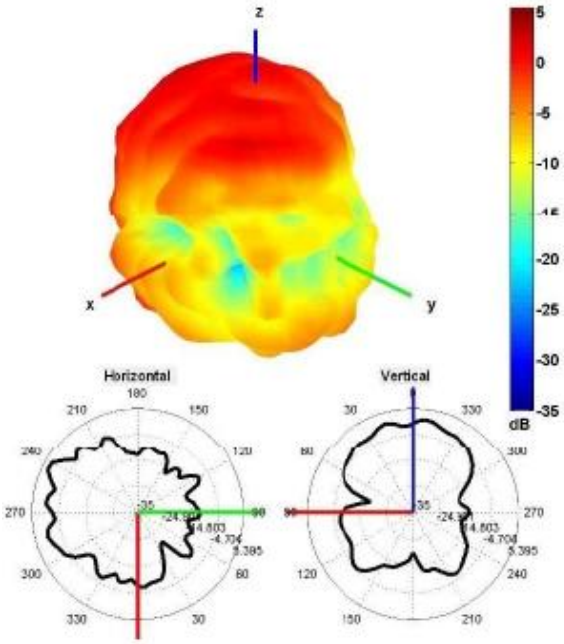


6500 MHz Radiation pattern

Cable 8: 2.4/5.0/6.0 GHz ISM

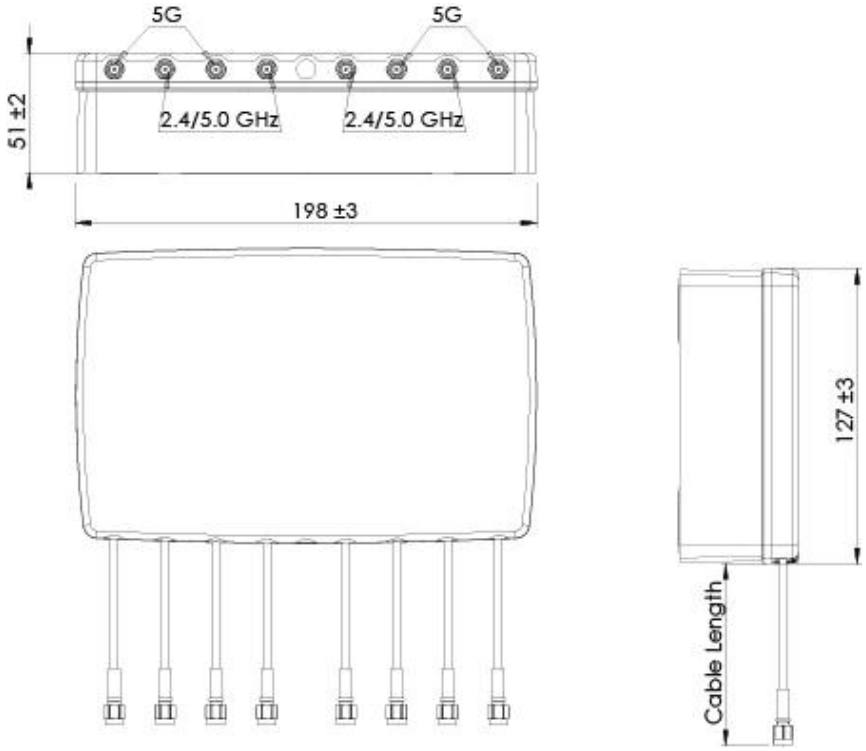


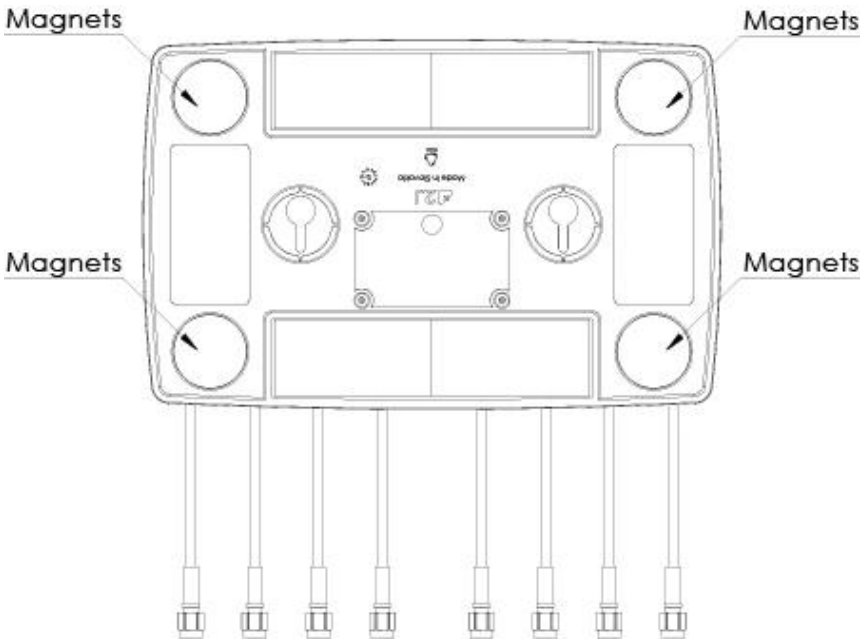
2450 and 5500 MHz Radiation pattern



6500 MHz Radiation pattern

SCHÉMA(S)


5G
5G
2.4/5.0 GHz
2.4/5.0 GHz
51 ±2
198 ±3
127 ±3
Cable Length


Magnets
Magnets
Magnets
Magnets