Antenne combinée 4×[5G 4G-LTE 3G/2G LPWA] traversante omnidirectionnelle | 1.2 à 4.8dBi

Référence GC-7B83Bc

Gain	1.2dBi à 4.8dBi
Connecteurs	SMA (M)
Dimensions (mm)	Ø 96 x H 130
T° de fonctionnement	-40°C à +85°C

L'antenne **ultra-large bande GC-7B83Bc** combine **4 antennes 5G MIMO** et offre une expérience mobile haut débit sans précédent. Elle permet une connectivité mondiale puissante.

Cette antenne facilite les communications en configuration MIMO, ce qui permet aux appareils de rester en ligne tout en se déplaçant dans différentes zones de couverture. Elle offre une combinaison de **4 antennes** haute performance qui prennent en charge les normes **5G NR, 4G-LTE, FirstNet, CBRS, LPWA, CAT-X, CAT-Mx, CAT-NBx, NB-IoT, 3G, 2G**.

Ses caractéristiques sont idéales pour les applications de sécurité publique haut de gamme telles que la police, les ambulances, les services d'incendie, les véhicules ferroviaires, les transports, et toutes les communications critiques.

CÂBLES 1 À 4 : ANTENNE MIMO 5G

Les câbles 1 à 4 sont dédiées aux appareils qui fonctionnent dans toutes les fréquences, de 617 à 5925 MHz.

La technologie 5G introduit un nouvel intervalle de fréquences nommé FR2 (pour Frequency Range 2), qui se situe entre 24 et 53 GHz (peut être jusqu'à 86 GHz dans le futur). A ces fréquences, les ondes sont appelées ondes millimétriques et constitue la solution idéale pour la technologie MIMO.

INSTALLATION / ENVIRONNEMENT

Protégée par un boîtier robuste, stable aux UV et **fabriquée avec un matériau en acrylonitrile styrène acrylate (ASA) de haute qualité** connu pour ses propriétés de résistance thermique, cette antenne est résistante aux chocs, à la poussière et à l'eau (**Certifications IP67, IP69 et IK09**).

L'indépendance du plan de masse et la fiabilité du montage à vis permettent des installations faciles et durables sur une large gamme de surfaces.

CARACTÉRISTIQUES

Câble 1 : 2G/3G/4G/5G - IoT/LPWAN

FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
BANDE (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		
PERTE DE RETOUR (DB)	~-5,6	~-11,7	~-15,2	~-14,2
VSWR	~3,5:1	~1.9:1	~1,5:1	~1.6:1
EFFICACITÉ (%)	~32,0	~41,4	~41,7	~36,9
GAIN DE CRÊTE (DBI)	~1.3	~3,4	~4.8	~4.0
GAIN MOYEN (DB)	~-5,0	~-3,9	~-3.8	~-4,4
IMPÉDANCE (OHM)	50			
POLARISATION	Linéaire			
RAYONNEMENT	Omnidirectionnel			
PUISSANCE D'ENTRÉE MAX.(W)	35			

Câble 2 : 2G/3G/4G/5G - IoT/LPWAN

FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
BANDE (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		
PERTE DE RETOUR (DB)	~-6,2	~-12,5	~-15.1	~-16,0
VSWR	~3.2:1	~1.9:1	~1,5:1	~1,5:1
EFFICACITÉ (%)	~31,8	~41,1	~42,8	~33,1
GAIN DE CRÊTE (DBI)	~1.2	~3,5	~4,6	~3.2
GAIN MOYEN (DB)	~-5,0	~-3,9	~-3,7	~-4.8
IMPÉDANCE (OHM)	50			
POLARISATION	Linéaire			
RAYONNEMENT	Omnidirectionnel			
PUISSANCE D'ENTRÉE MAX.(W)	35			

Câble 3 : 2G/3G/4G/5G - IoT/LPWAN

FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
BANDE (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		
PERTE DE RETOUR (DB)	~-5,6	~-12,8	~-16,7	~-12.4
VSWR	~3,7:1	~1.8:1	~1.4:1	~1.8:1
EFFICACITÉ (%)	~31,7	~41,7	~40,3	~38,5
GAIN DE CRÊTE (DBI)	~1.3	~3,8	~4,5	~4,6
GAIN MOYEN (DB)	~-5,0	~-3.8	~-4.0	~-4,2
IMPÉDANCE (OHM)	50			
POLARISATION	Linéaire			
RAYONNEMENT	Omnidirectionnel			
PUISSANCE D'ENTRÉE MAX.(W)	35			

Câble 4 : 2G/3G/4G/5G - IoT/LPWAN

FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
BANDE (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		
PERTE DE RETOUR (DB)	~-5,9	~-12,7	~-16,8	~-15,4
VSWR	~3,3:1	~1.8:1	~1,5:1	~1,5:1
EFFICACITÉ (%)	~ 31,4	~41,8	~42,7	~35,0
GAIN DE CRÊTE (DBI)	~1.7	~3,4	~4,6	~3,9
GAIN MOYEN (DB)	~-5.1	~-3.8	~-3,7	~-4.6
IMPÉDANCE (OHM)	50			
POLARISATION	Linéaire			
RAYONNEMENT	Omnidirectionnel			
PUISSANCE D'ENTRÉE MAX.(W)	35			

Conditions de mesure de l'antenne :

- Montée sur plaque métallique de 30 × 30 cm
- 200 cm de Câble LL195
- Mesurée dans une chambre anéchoïque certifiée CTIA 3D

Caractéristiques communes Câbles 1, 2,3 & 4

TYPE DE CONNECTEUR	SMA-Mâle Standard (autres connecteurs disponibles)
LONGUEUR DE CÂBLE	300 cm standard (toute longueur de câble disponible)
TYPE DE CÂBLE	Norme LL195 (autres câbles disponibles)

SPÉCIFICATIONS

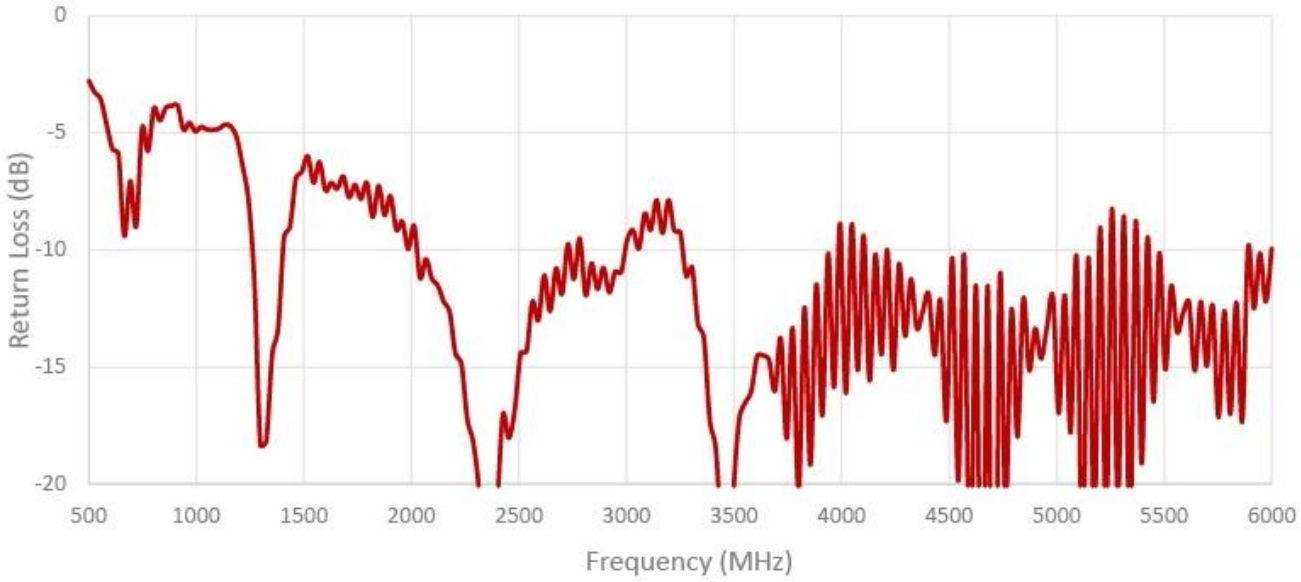
TYPE DE MONTAGE	Traversant / Montage vis
DIMENSIONS (MM)	Ø 96 x H 130
COUPLE DE SERRAGE MAX. (NM)	6 Nm
MATÉRIAU RADÔME	ASA
COULEUR DU MATÉRIAU RADÔME	Blanc ou noir
BASE D' ANTENNE	ASA
T° DE FONCTIONNEMENT (°C)	-40 à +85
T° DE STOCKAGE (°C)	-40 à +85
CERTIFICATION(S)	RoHS
INDICE(S) DE PROTECTION	IP67, IP69, IK09

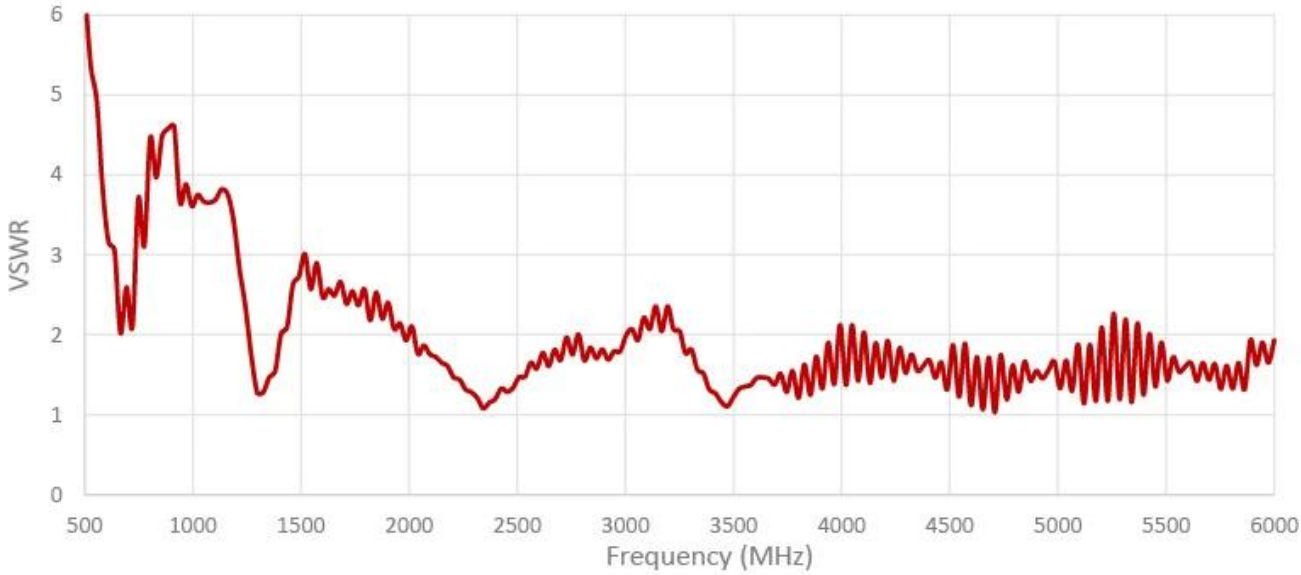
ENVIRONNEMENT

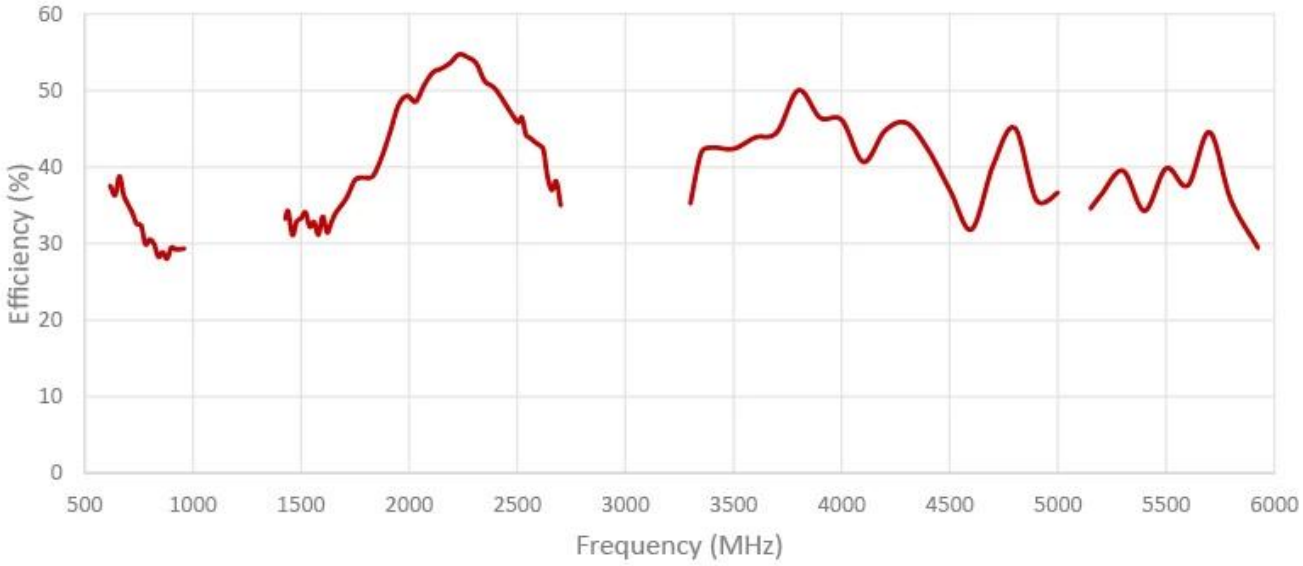
Cette gamme d'antenne est fabriquée sans matières dangereuses tout en maintenant une conformité totale avec REACH et RoHS.

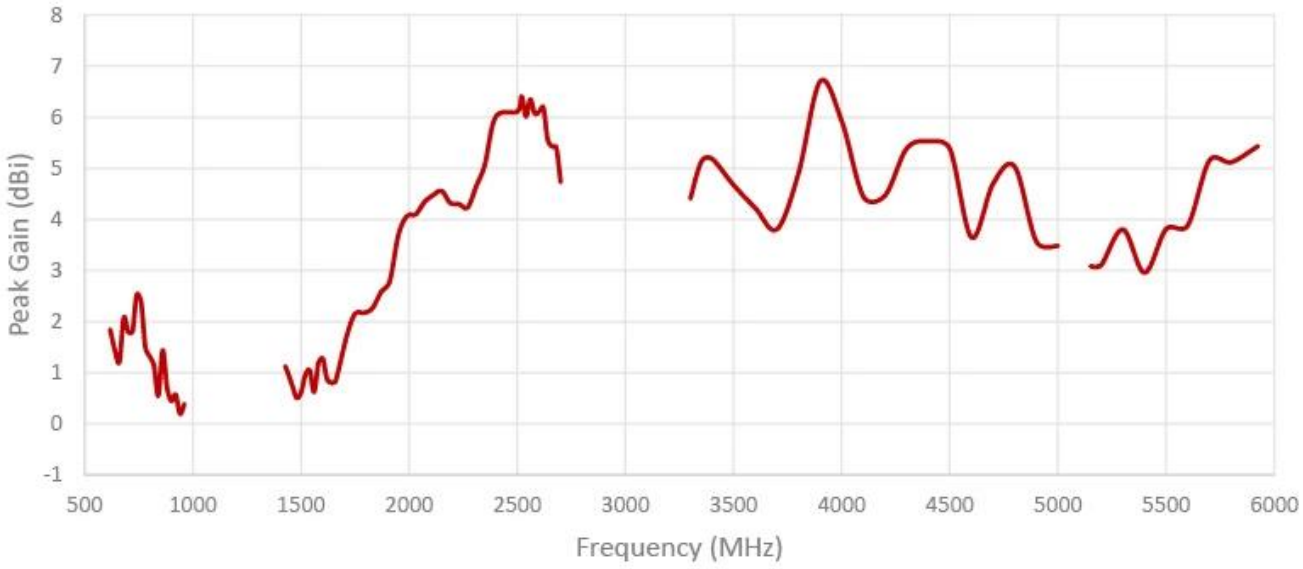
MESURES

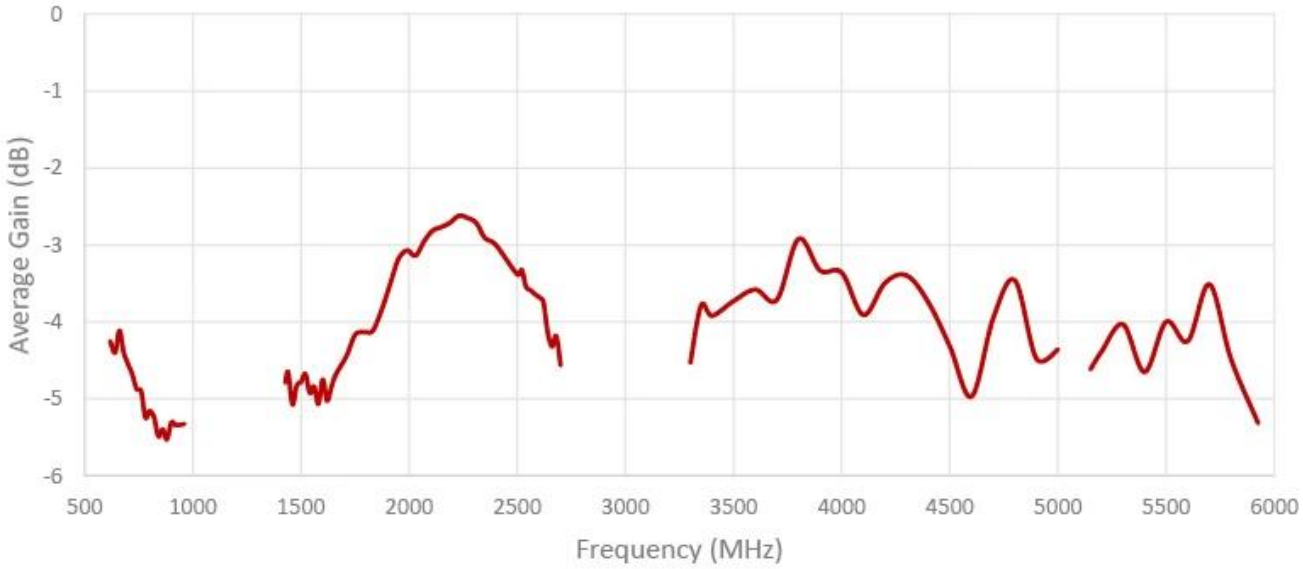
Câble 1 : 2G/3G/4G/5G - IoT/LPWAN



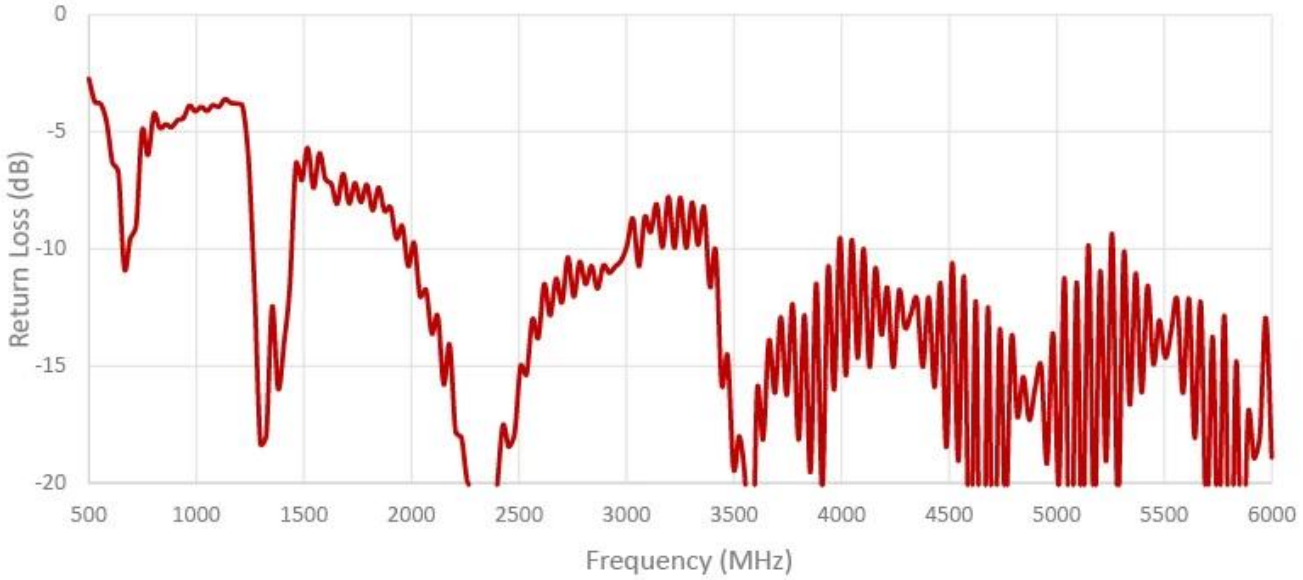


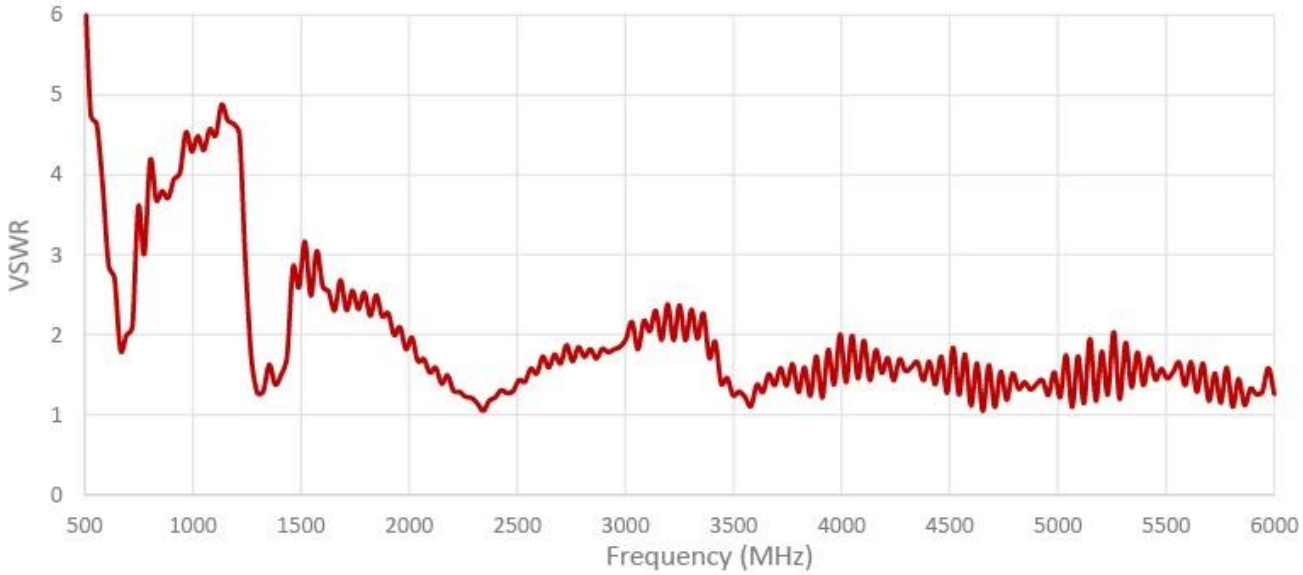

Efficiency (%)
60
50
40
30
20
10
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

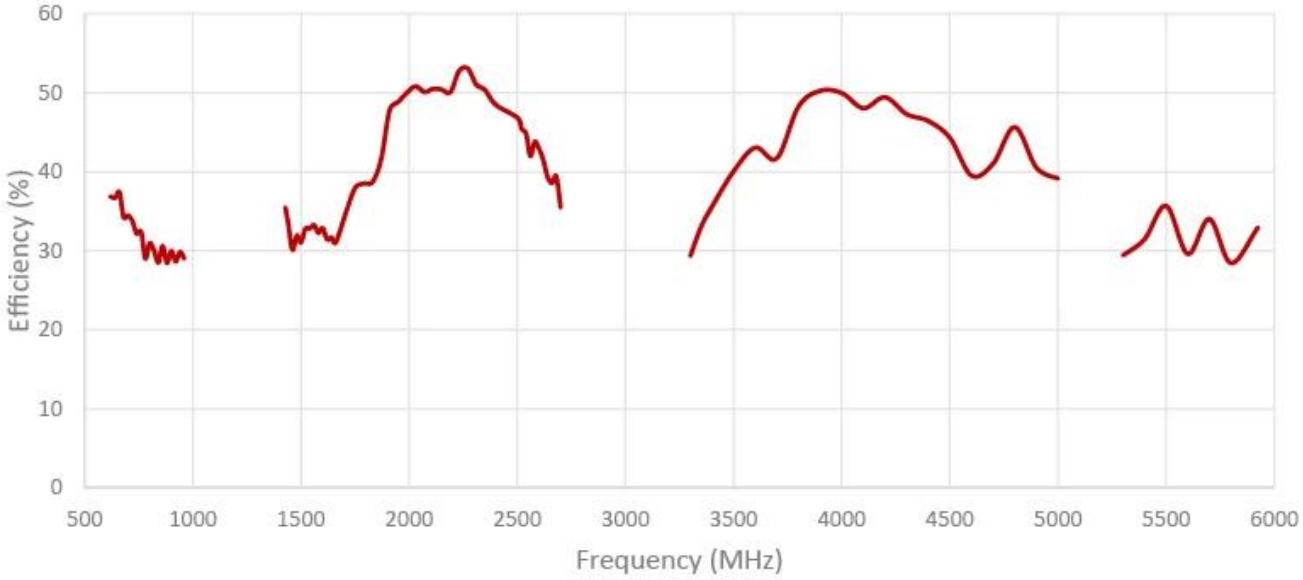

Peak Gain (dBi)
8
7
6
5
4
3
2
1
0
-1
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

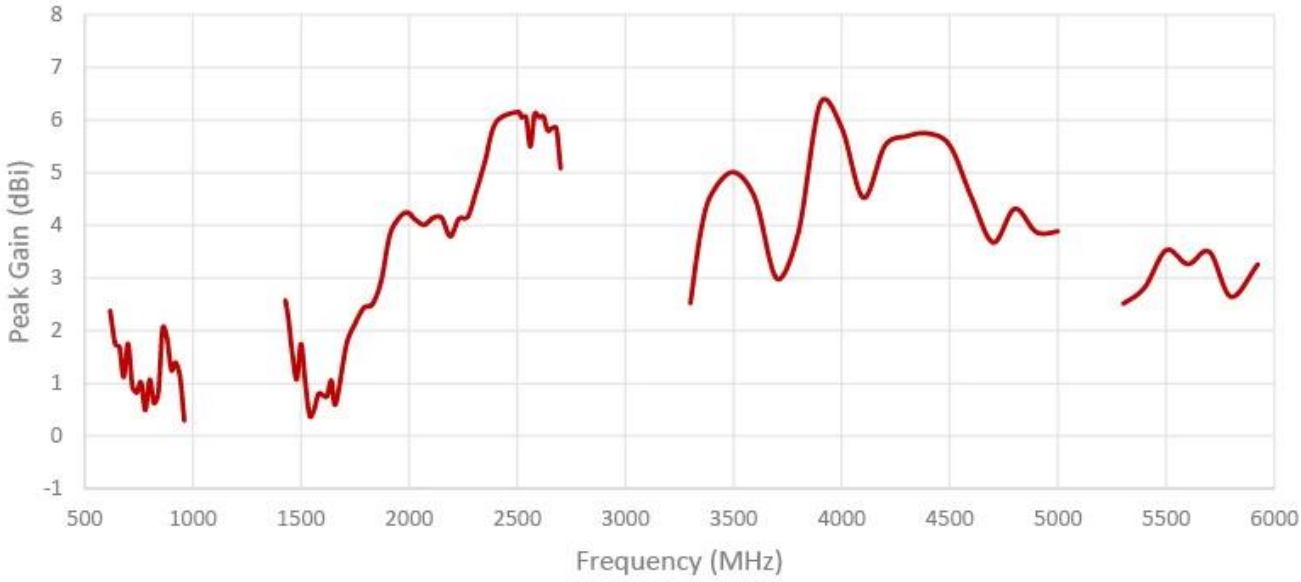


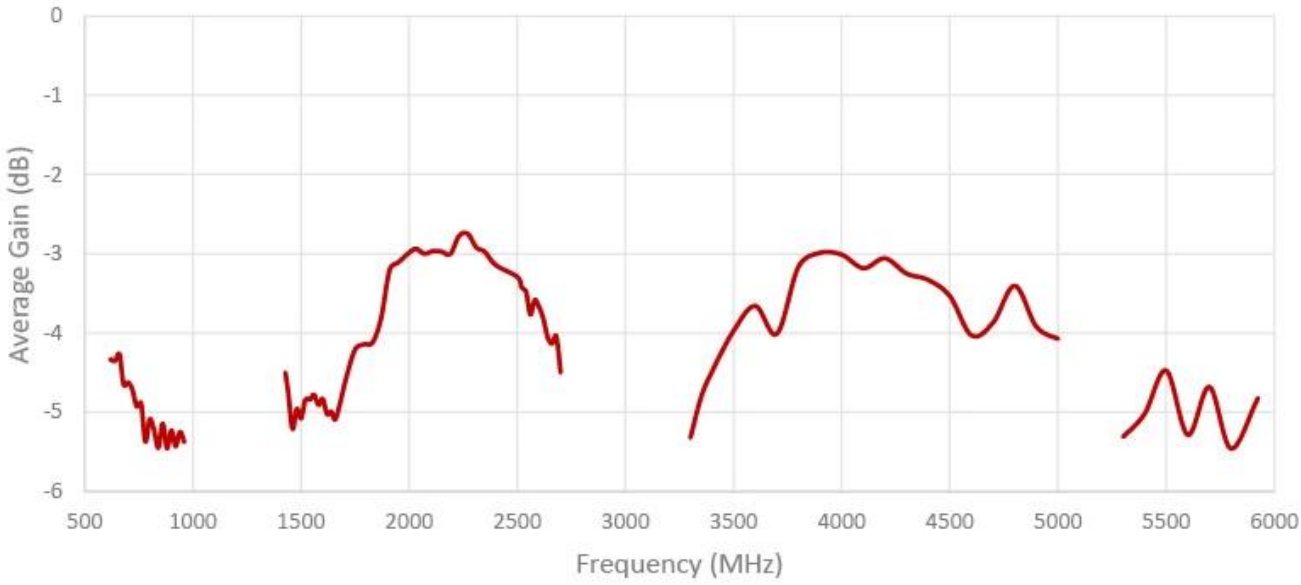
Câble 2 : 2G/3G/4G/5G - IoT/LPWAN



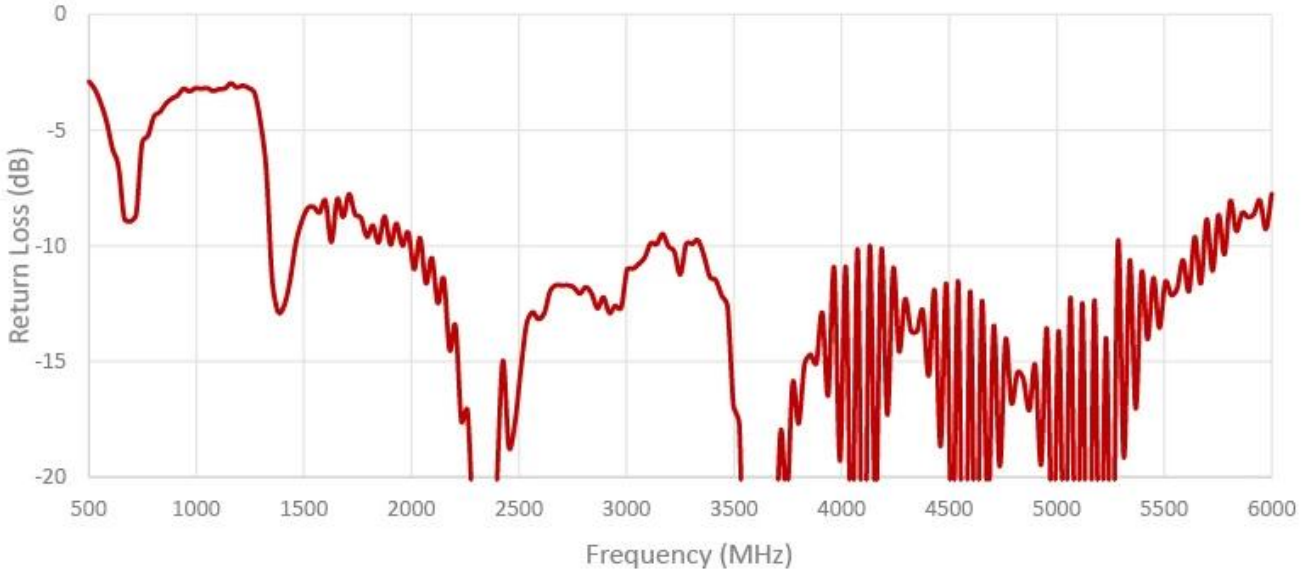

VSWR
0
1
2
3
4
5
6
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

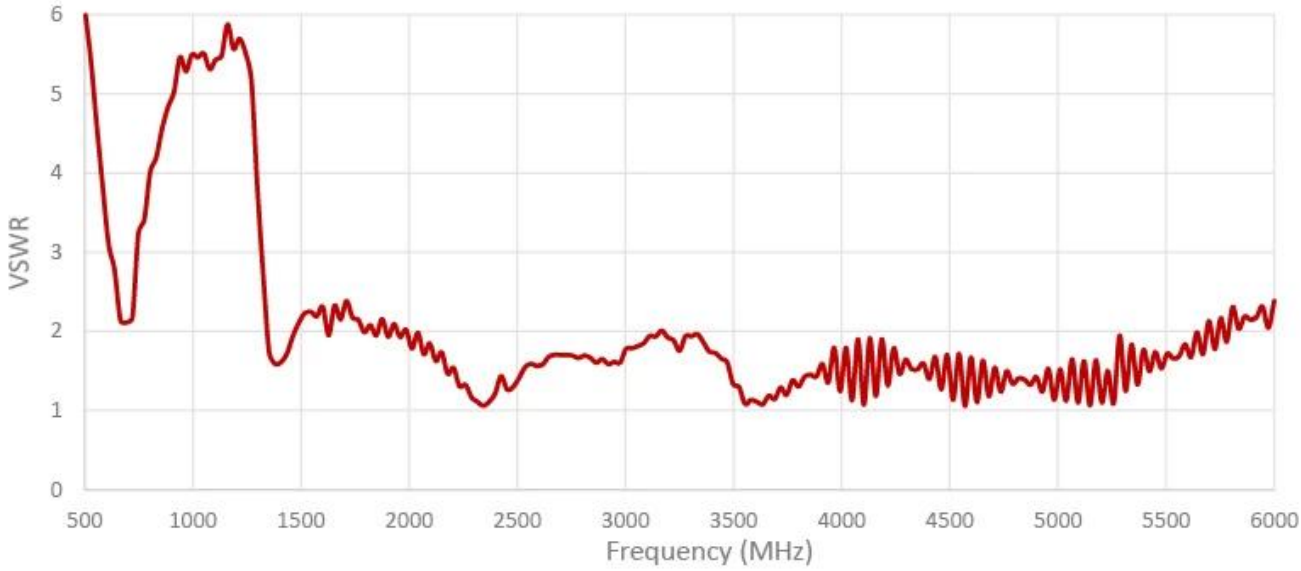

Efficiency (%)
0
10
20
30
40
50
60
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

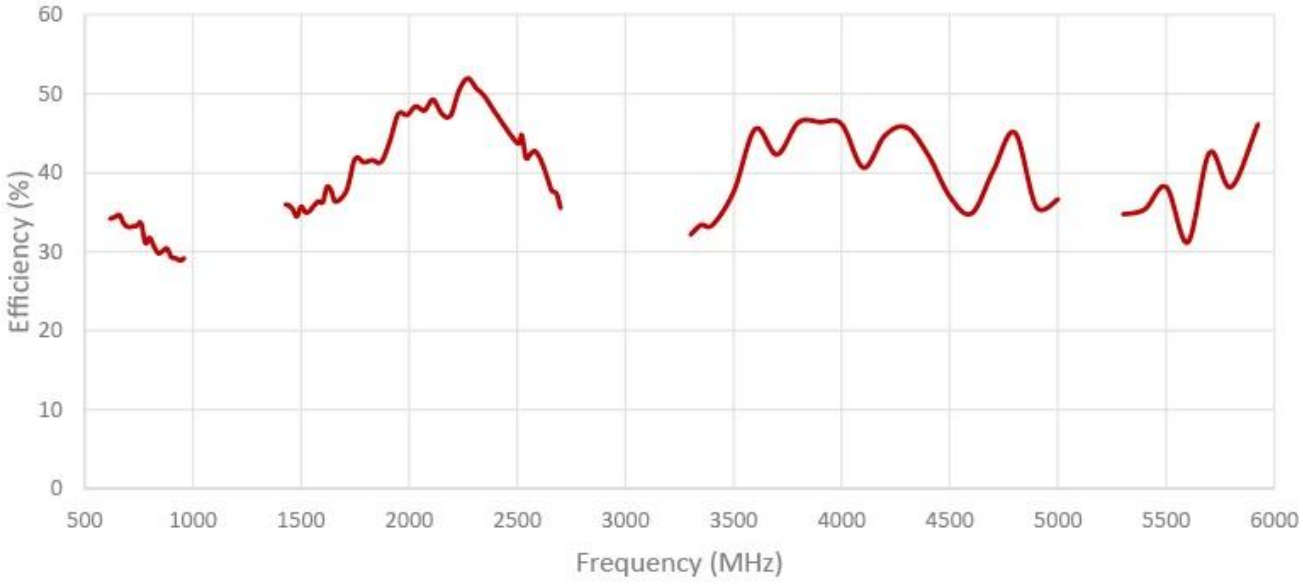

Peak Gain (dBi)
8
7
6
5
4
3
2
1
0
-1
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

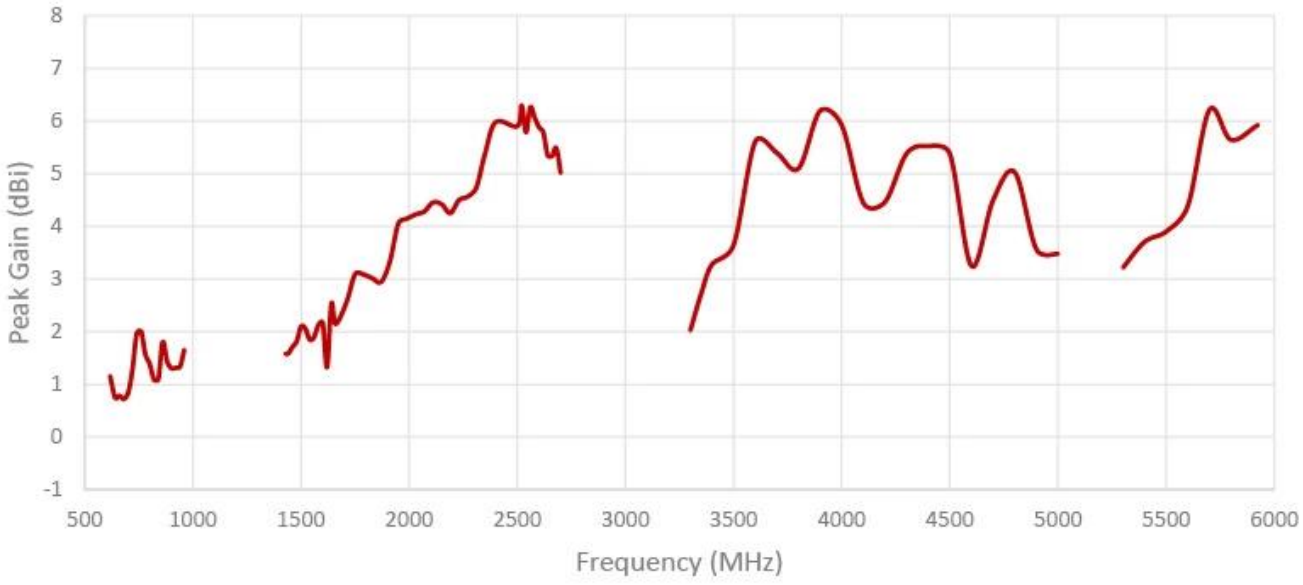

Average Gain (dB)
0
-1
-2
-3
-4
-5
-6
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

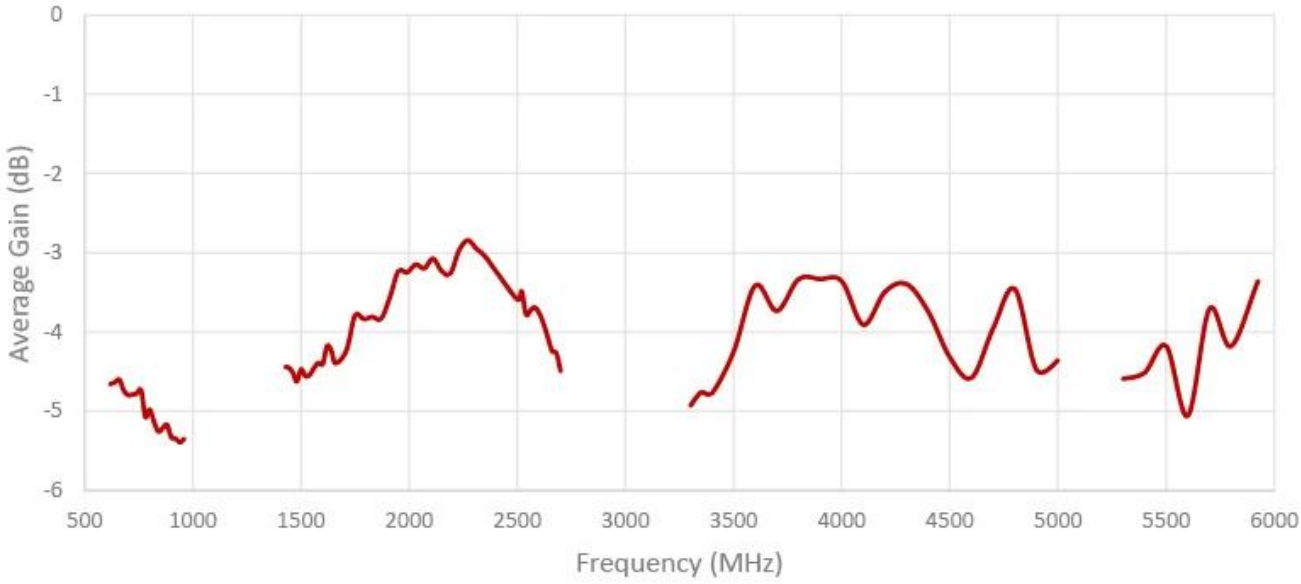
Câble 3 : 2G/3G/4G/5G - IoT/LPWAN



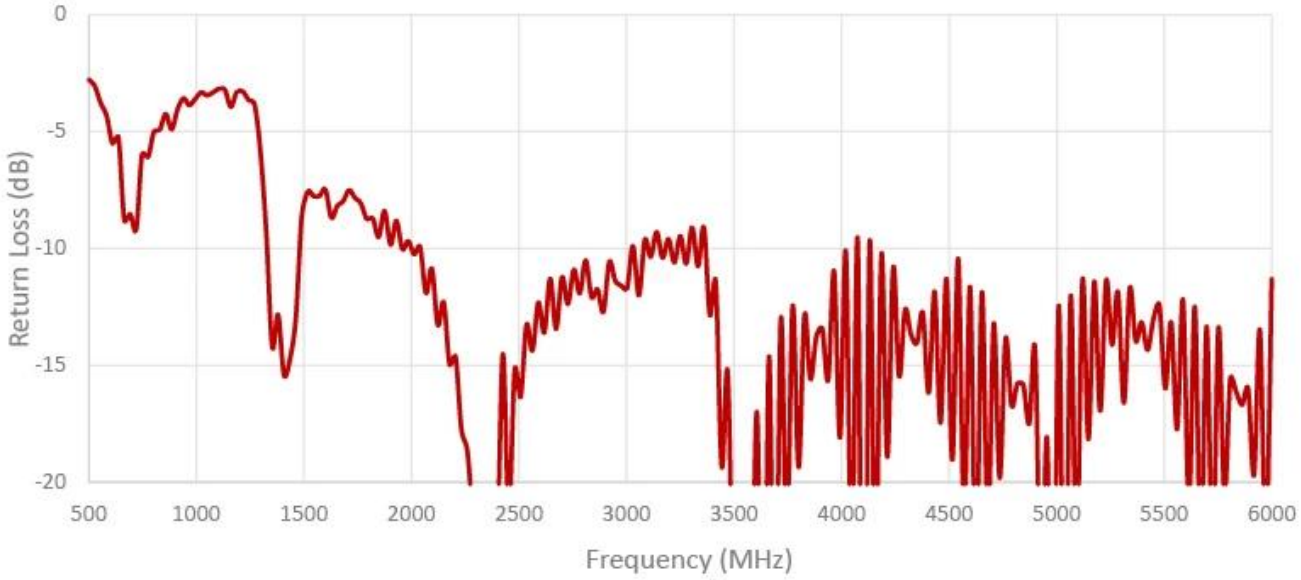


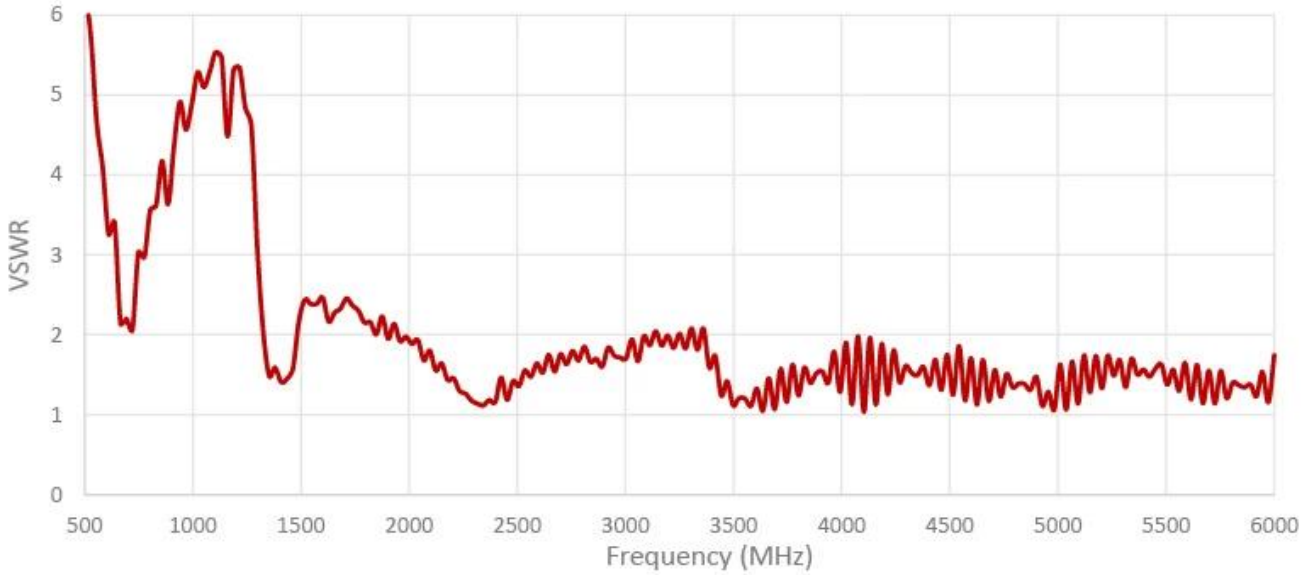

Efficiency (%)
60
50
40
30
20
10
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

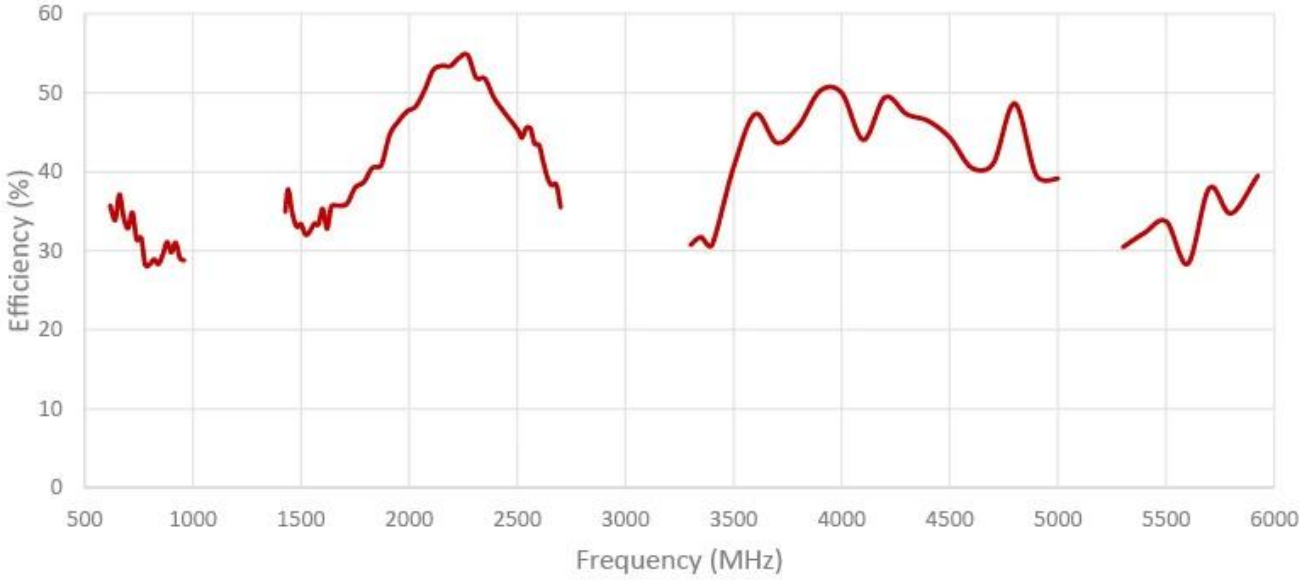

Peak Gain (dBi)
8
7
6
5
4
3
2
1
0
-1
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)

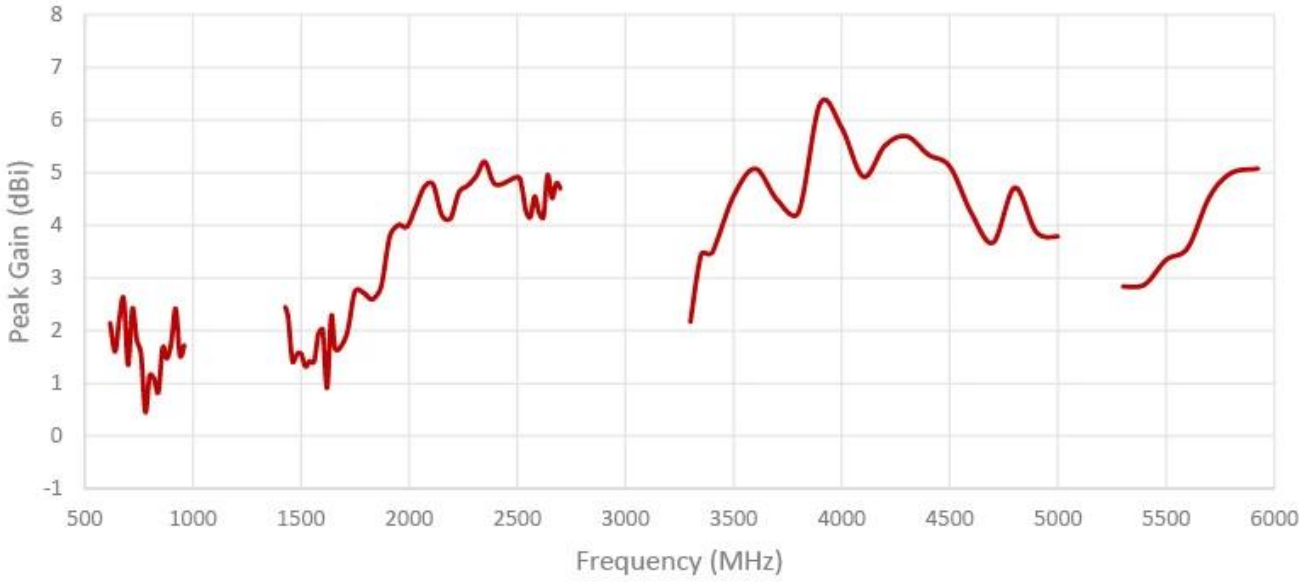


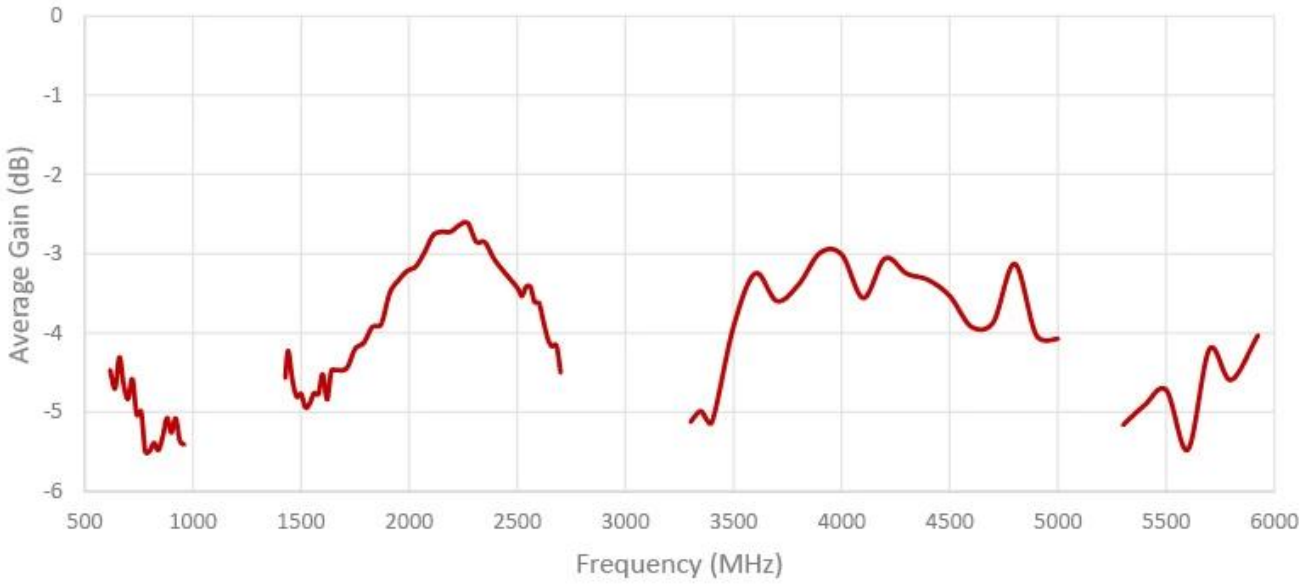
Câble 4 : 2G/3G/4G/5G - IoT/LPWAN



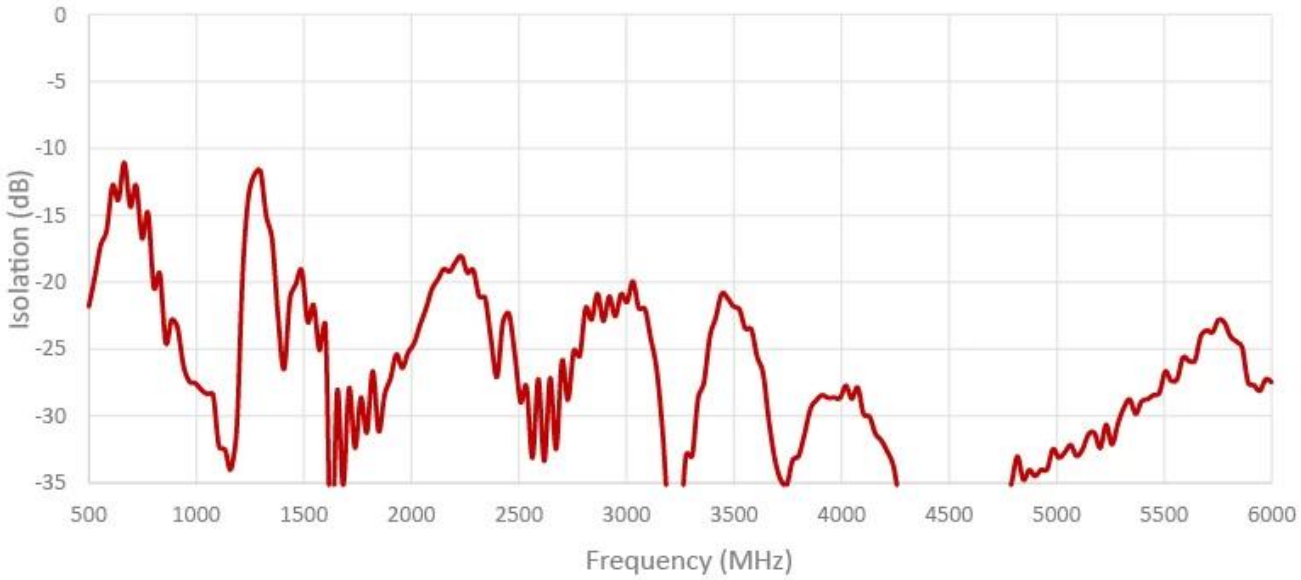

VSWR
0
1
2
3
4
5
6
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)


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

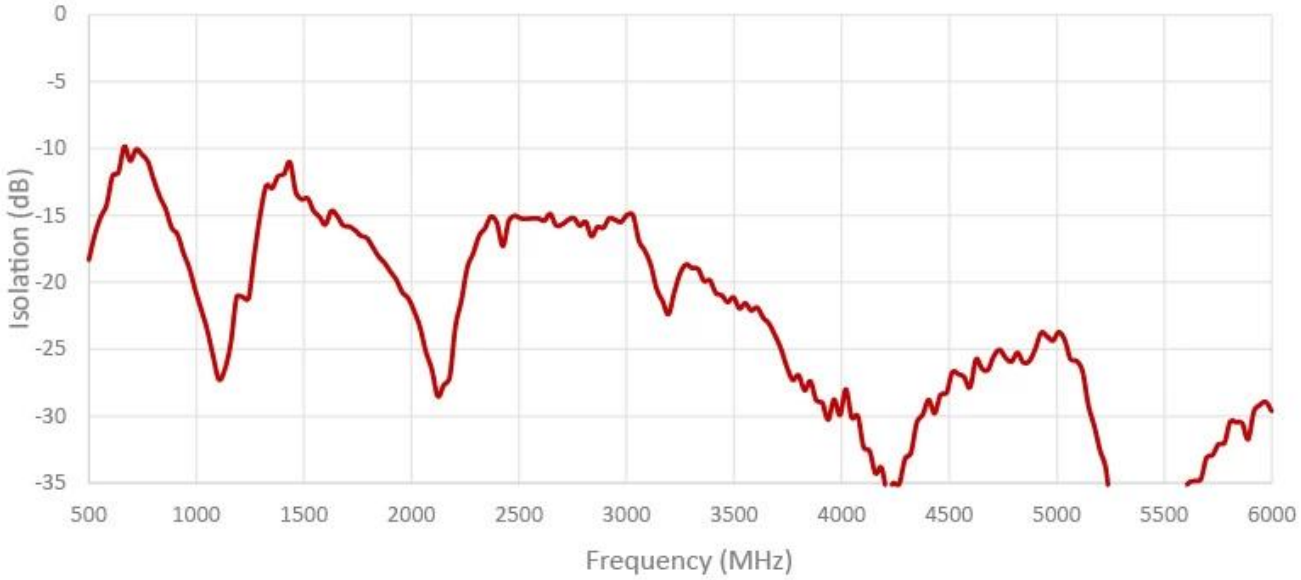

Peak Gain (dBi)
8
7
6
5
4
3
2
1
0
-1
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
Frequency (MHz)


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

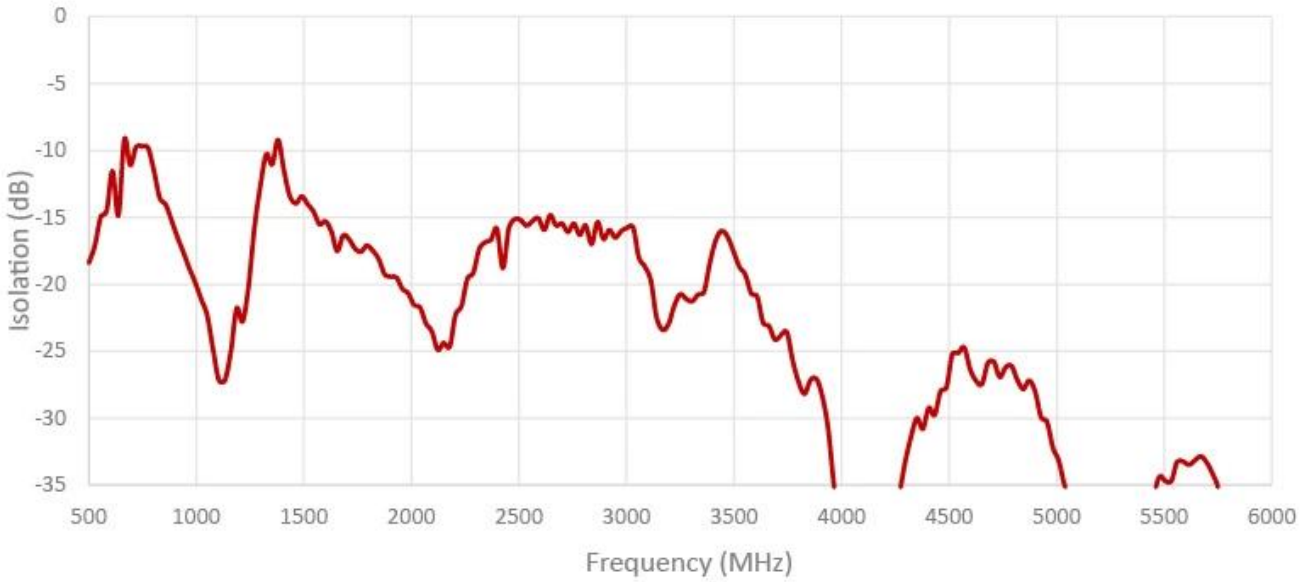
Isolation câble 1 et 2



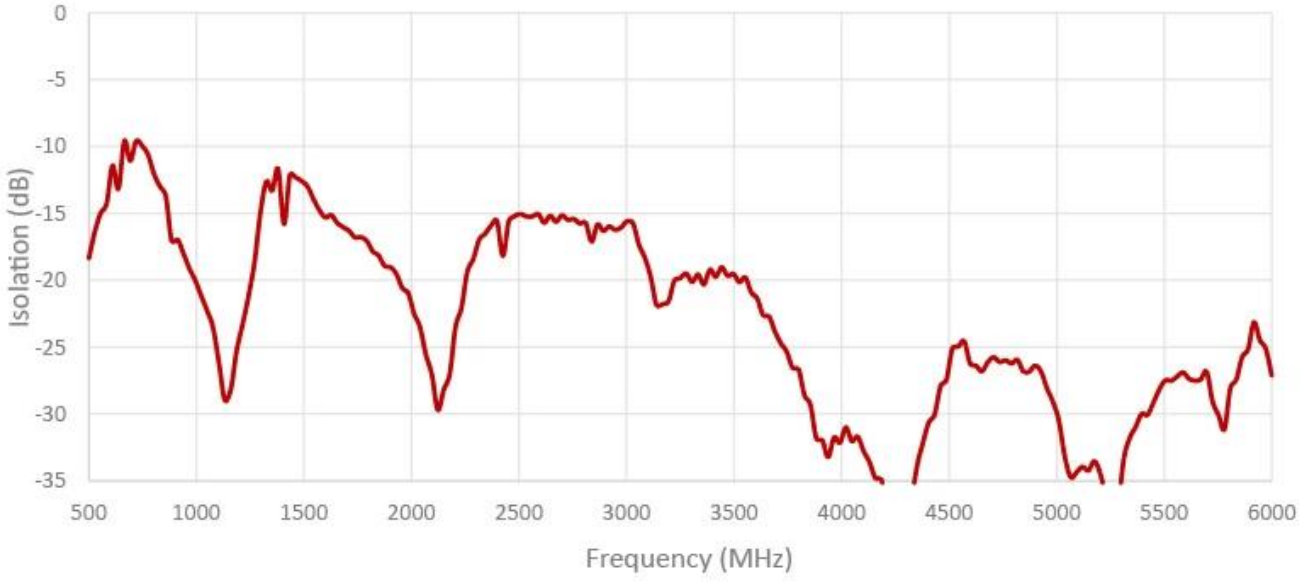
Isolation câble 1 et 3



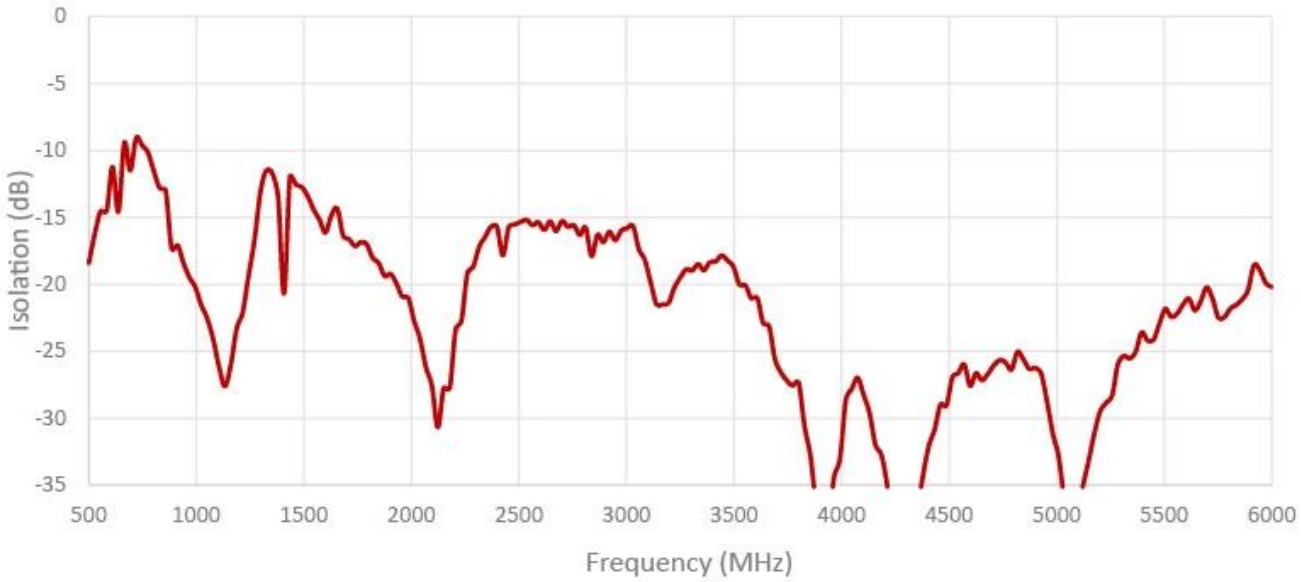
Isolation câble 1 et 4



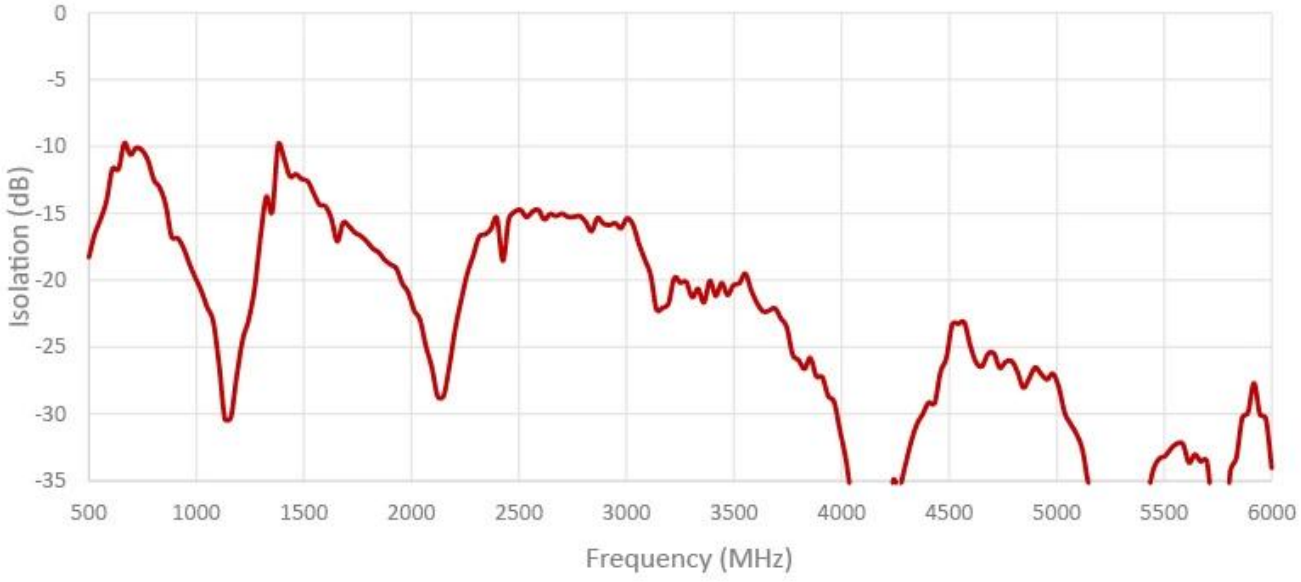
Isolation câble 2 et 3



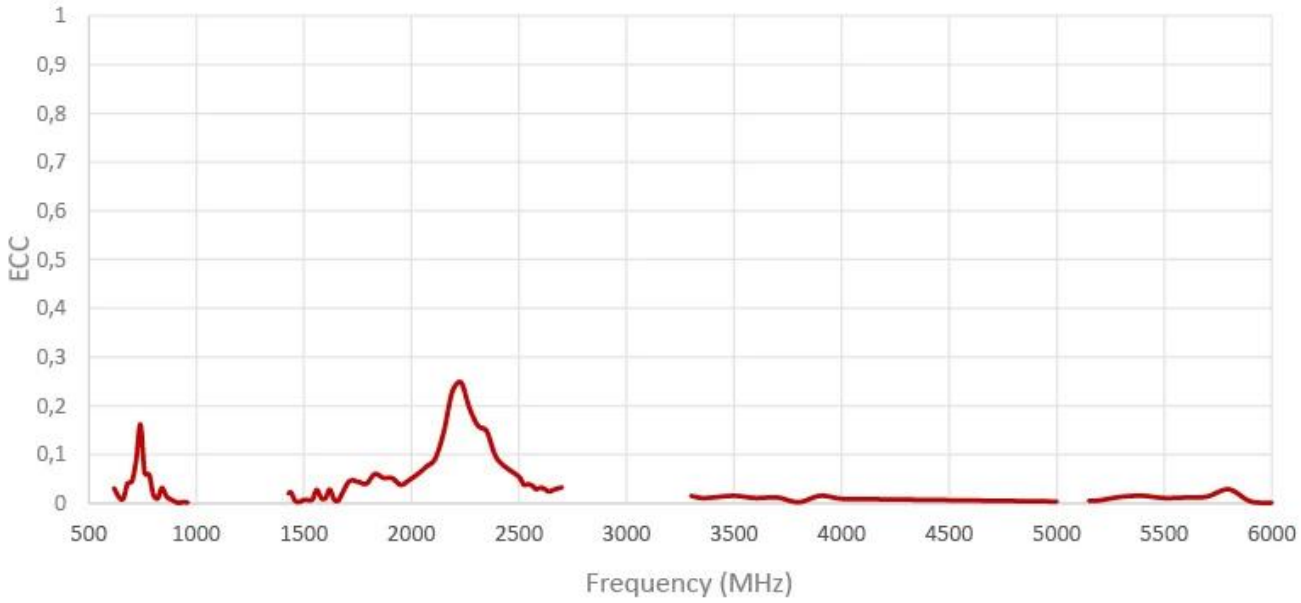
Isolation câble 2 et 4



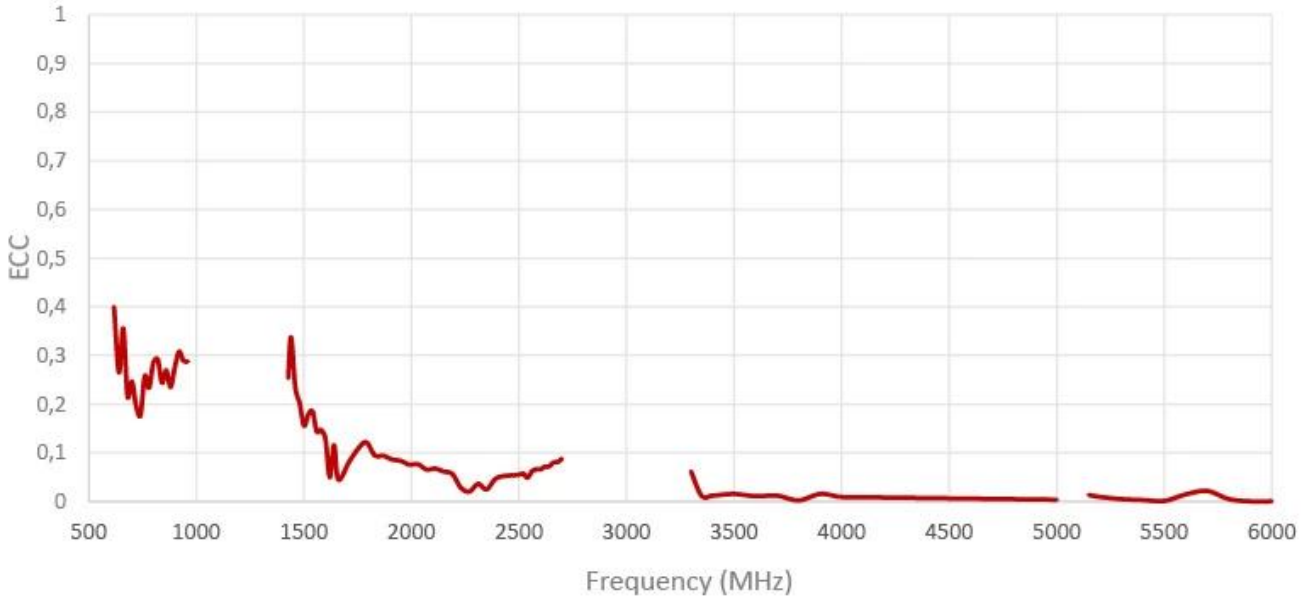
Isolation câble 3 et 4



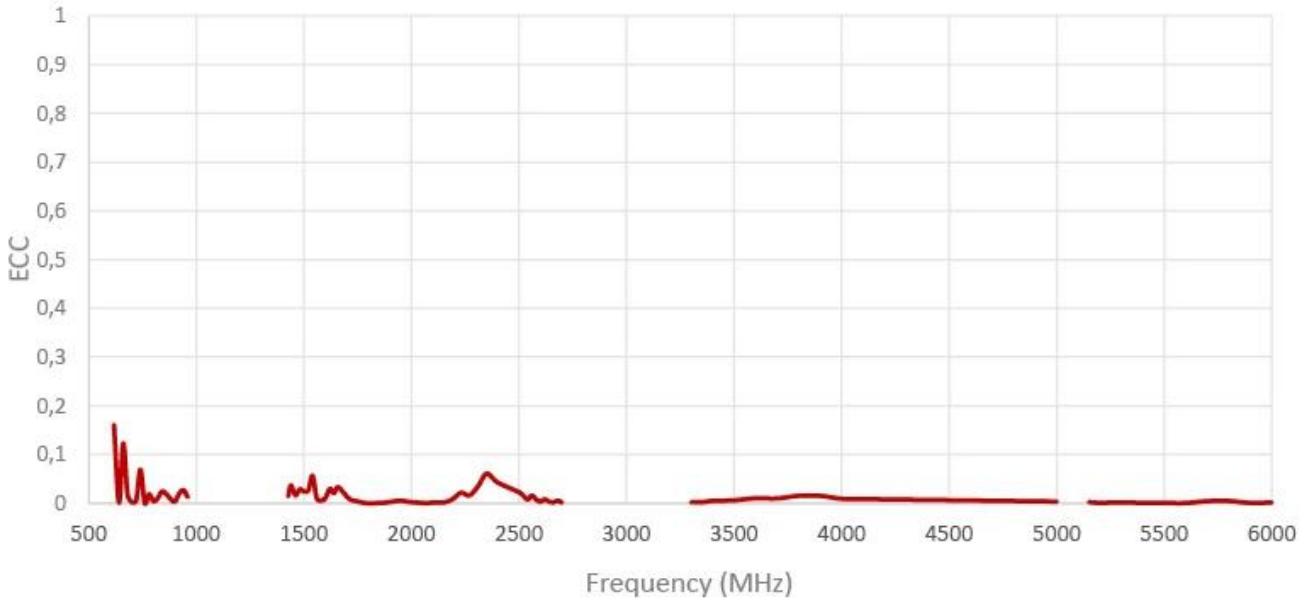
Coefficient de corrélation de l'enveloppe câble 1 et 2



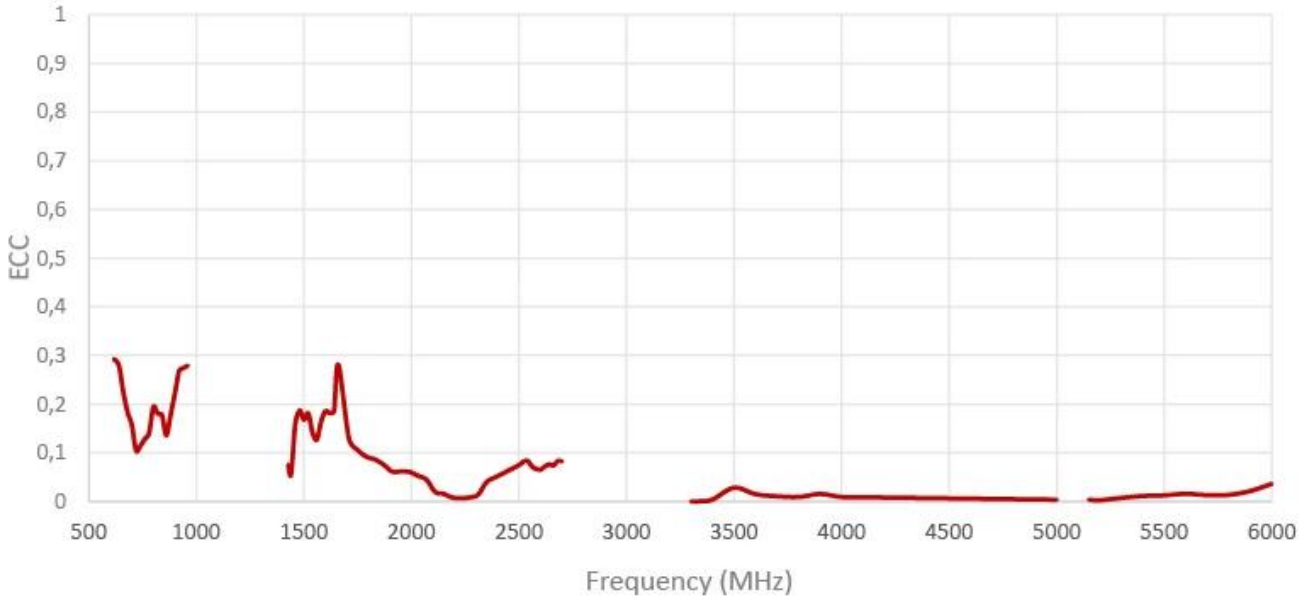
Coefficient de corrélation de l'enveloppe câble 1 et 3



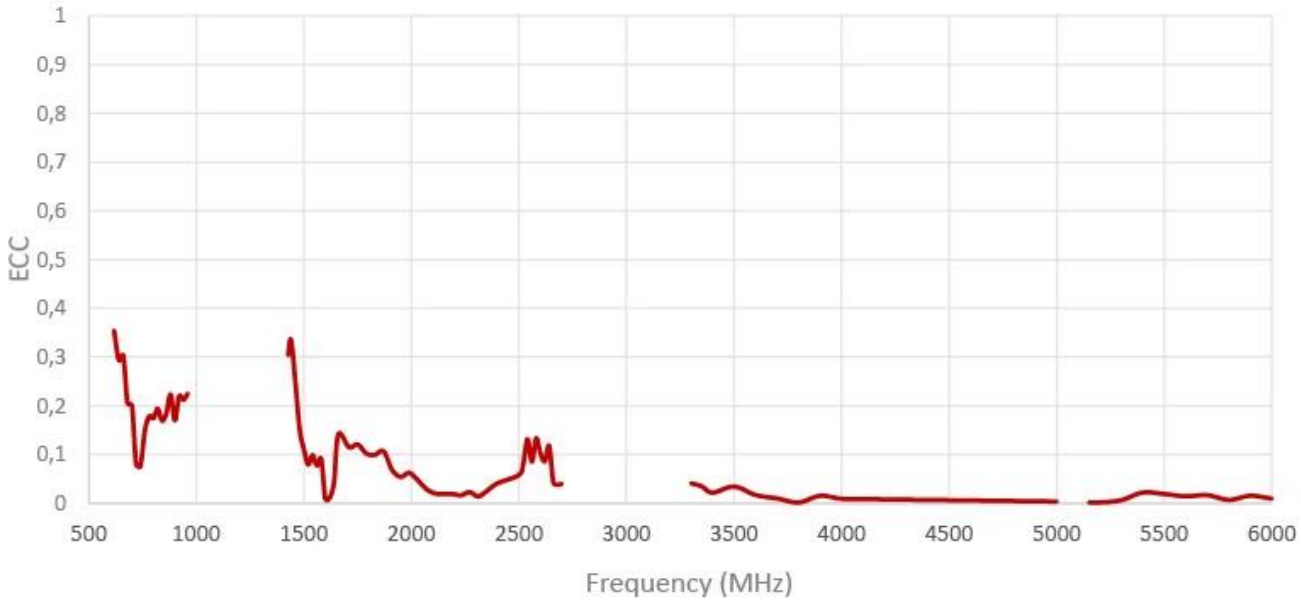
Coefficient de corrélation de l'enveloppe câble 1 et 4



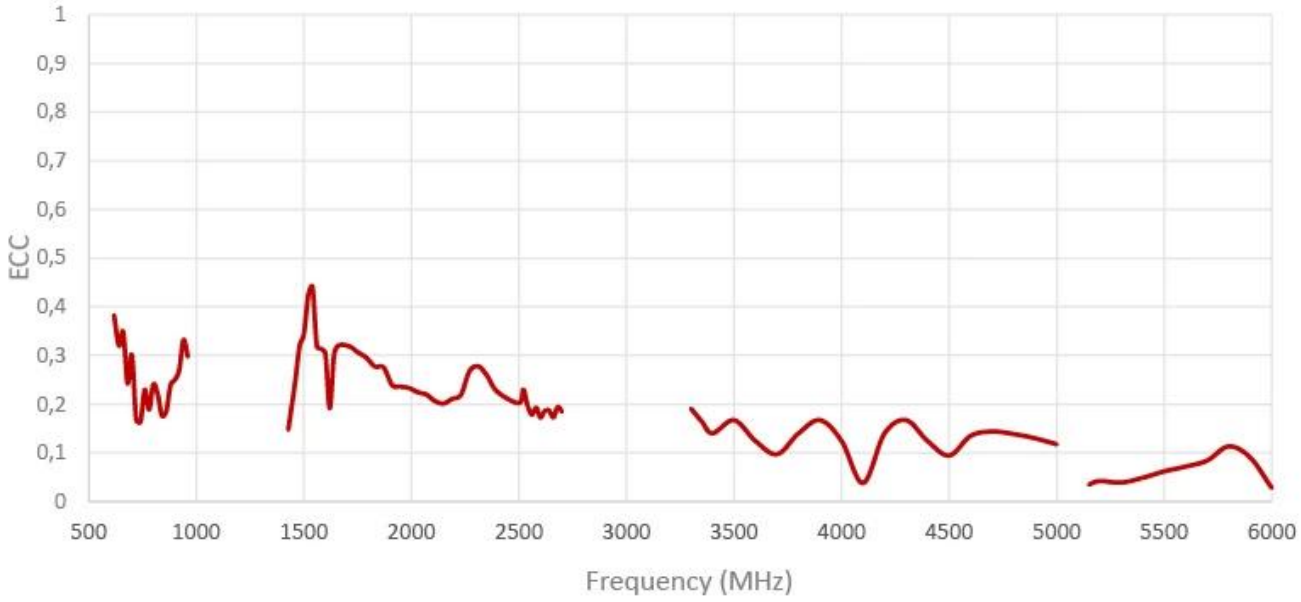
Coefficient de corrélation de l'enveloppe câble 2 et 3



Coefficient de corrélation de l'enveloppe câble 2 et 4

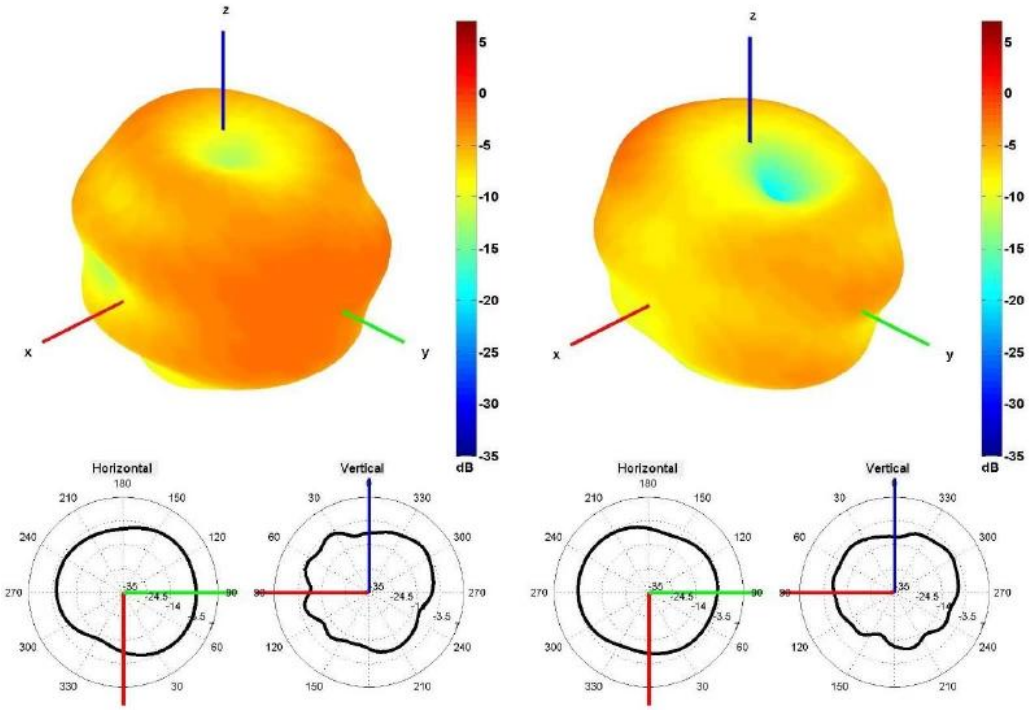


Coefficient de corrélation de l'enveloppe câble 3 et 4

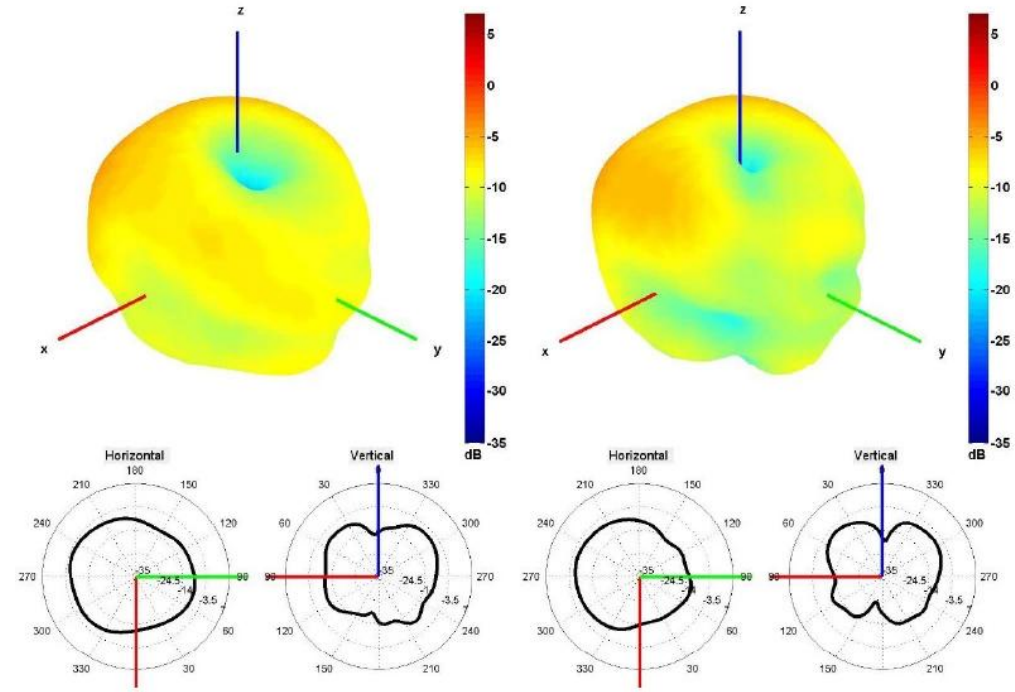


Radiation pattern reference

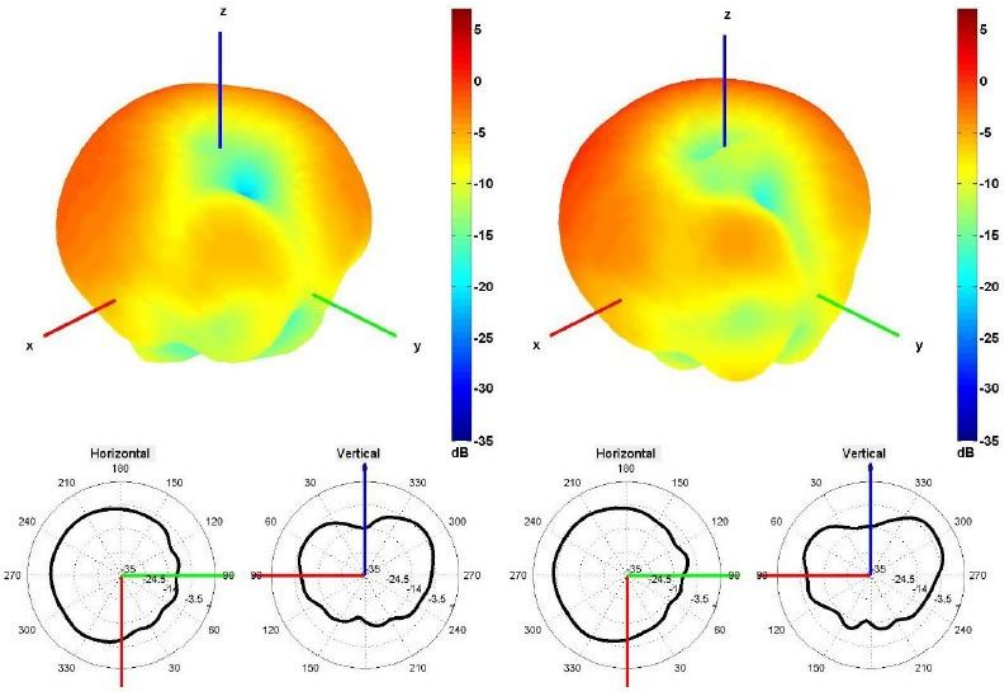
Câble 1 : 2G/3G/4G/5G - IoT/LPWAN



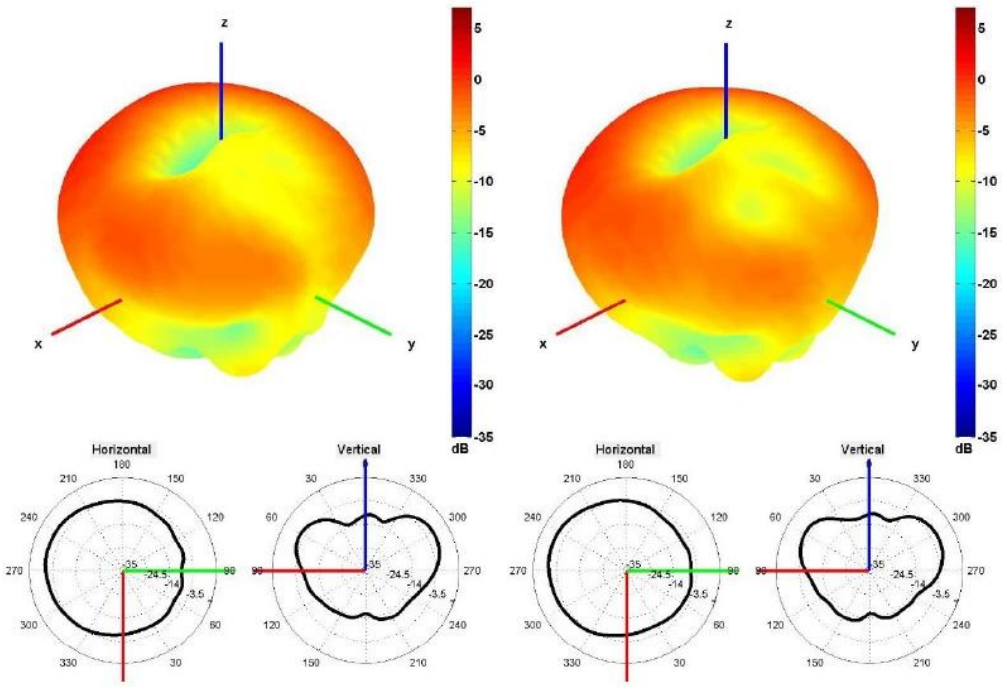
650 and 750 MHz Radiation pattern



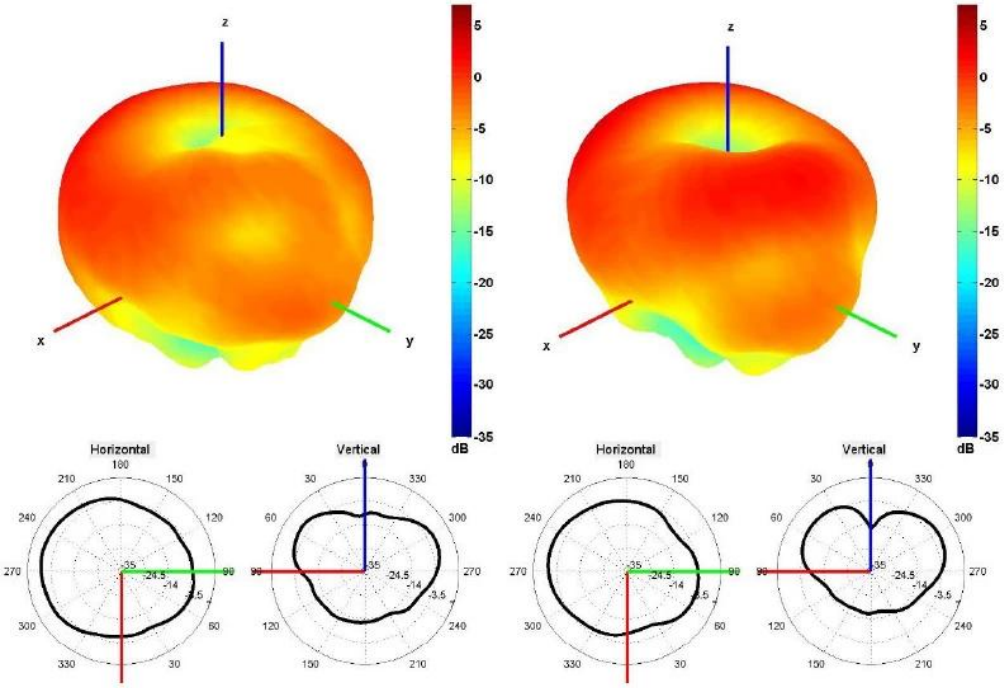
850 and 940 MHz Radiation pattern



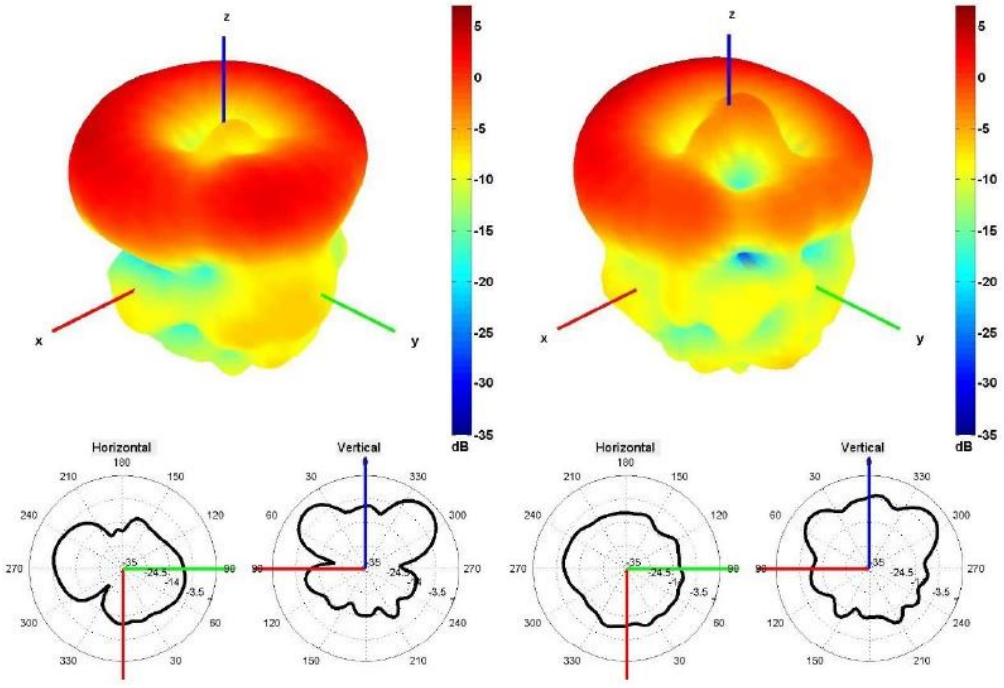
1500 and 1600 MHz Radiation pattern



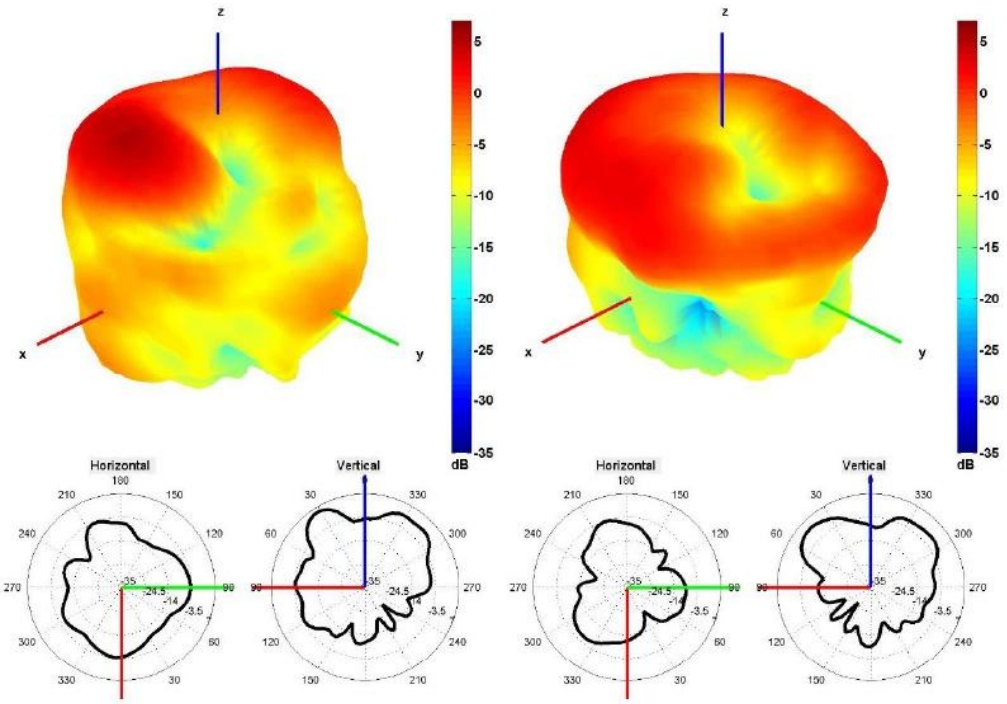
1750 and 1850 MHz Radiation pattern



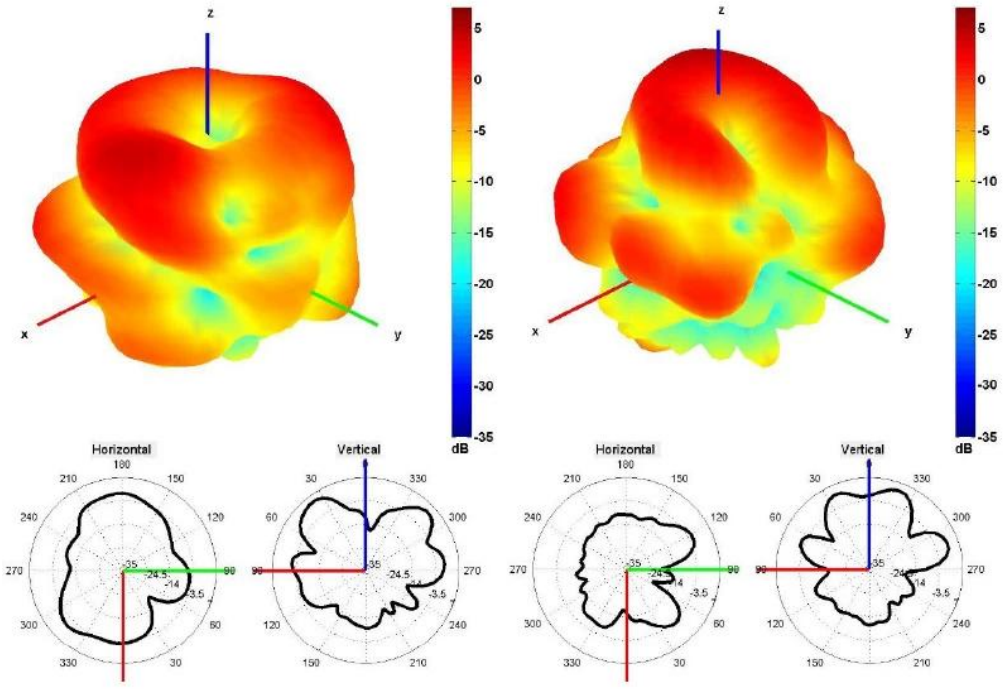
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern

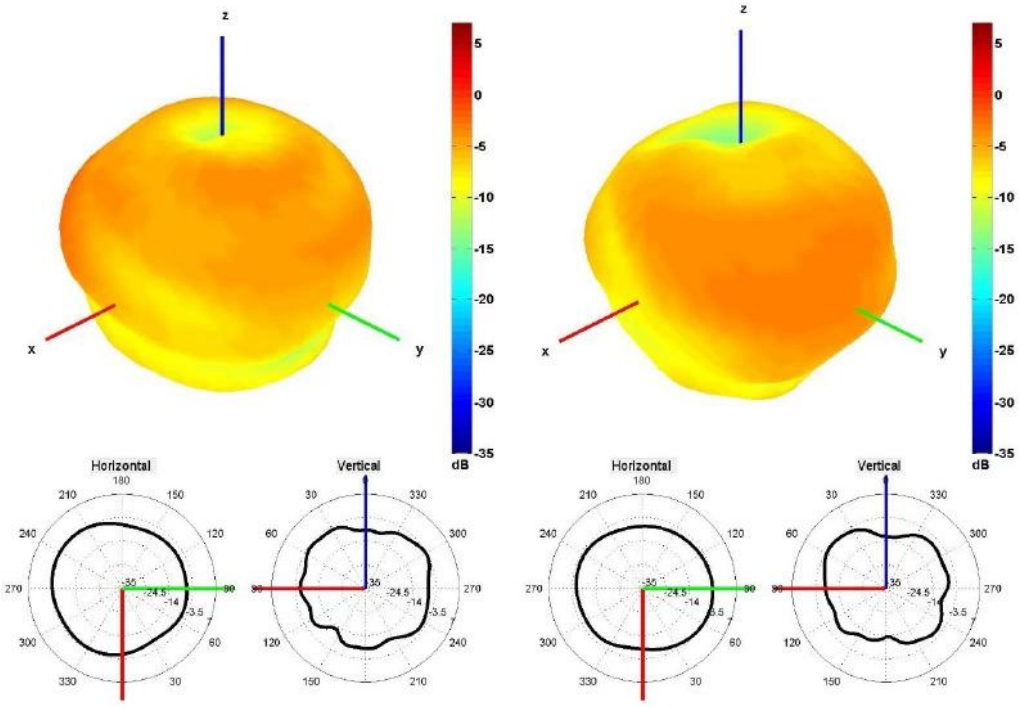


3350 and 3600 MHz Radiation pattern

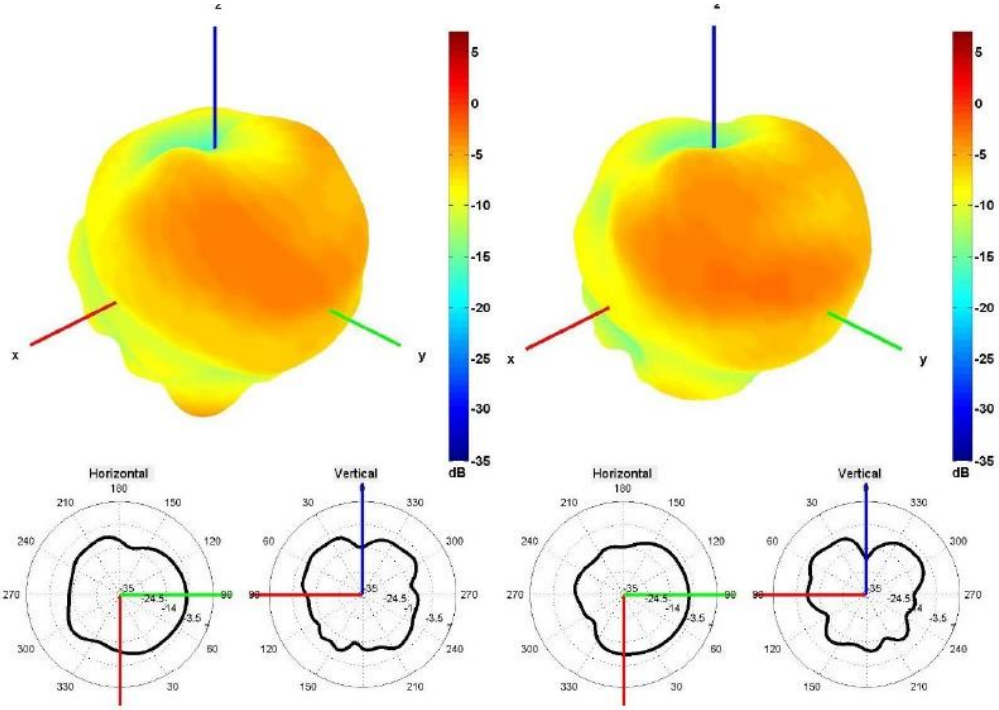


4500 and 5500 MHz Radiation pattern

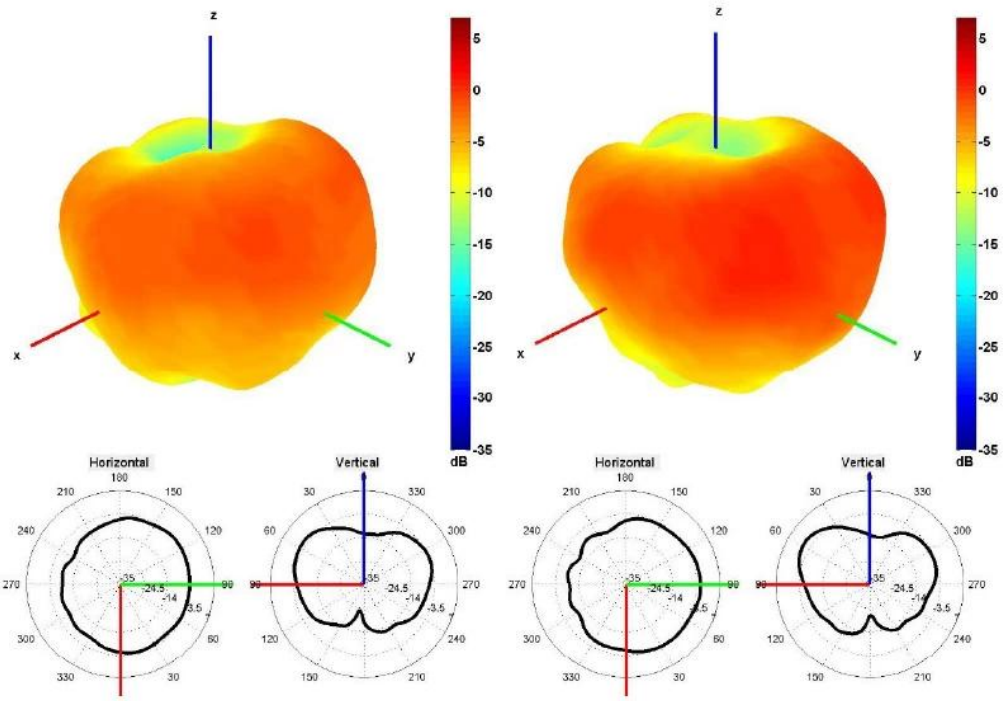
Câble 2 : 2G/3G/4G/5G - IoT/LPWAN



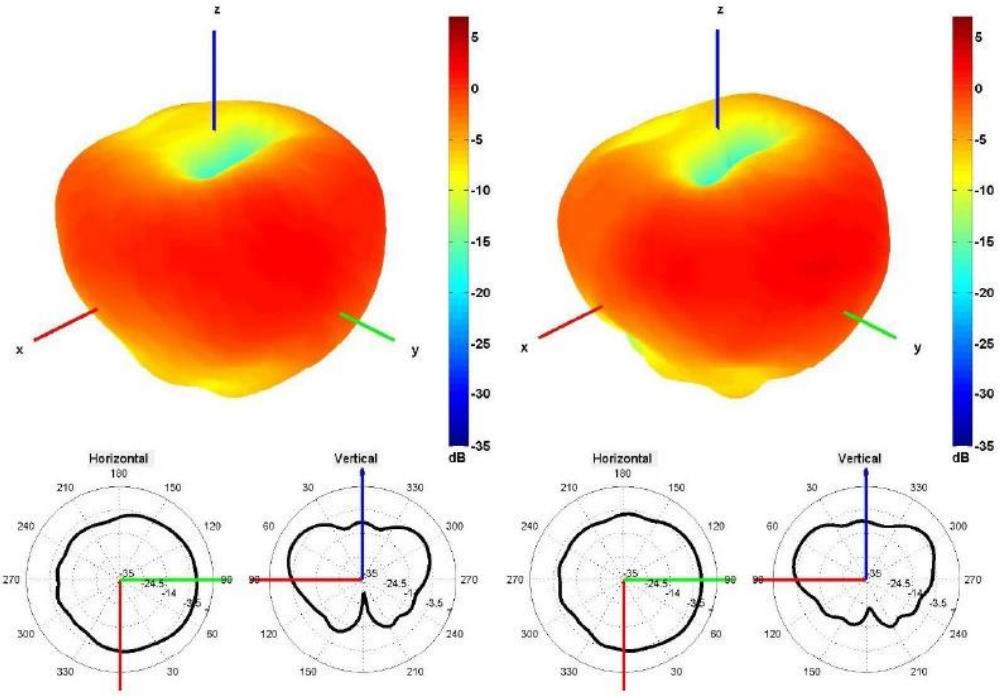
650 and 750 MHz Radiation pattern



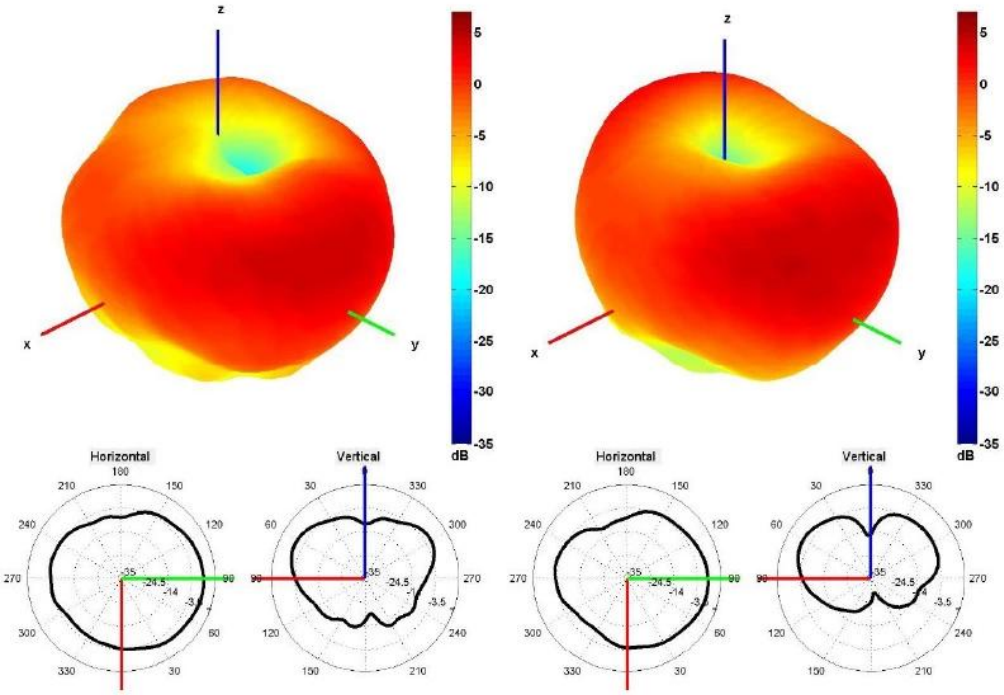
850 and 940 MHz Radiation pattern



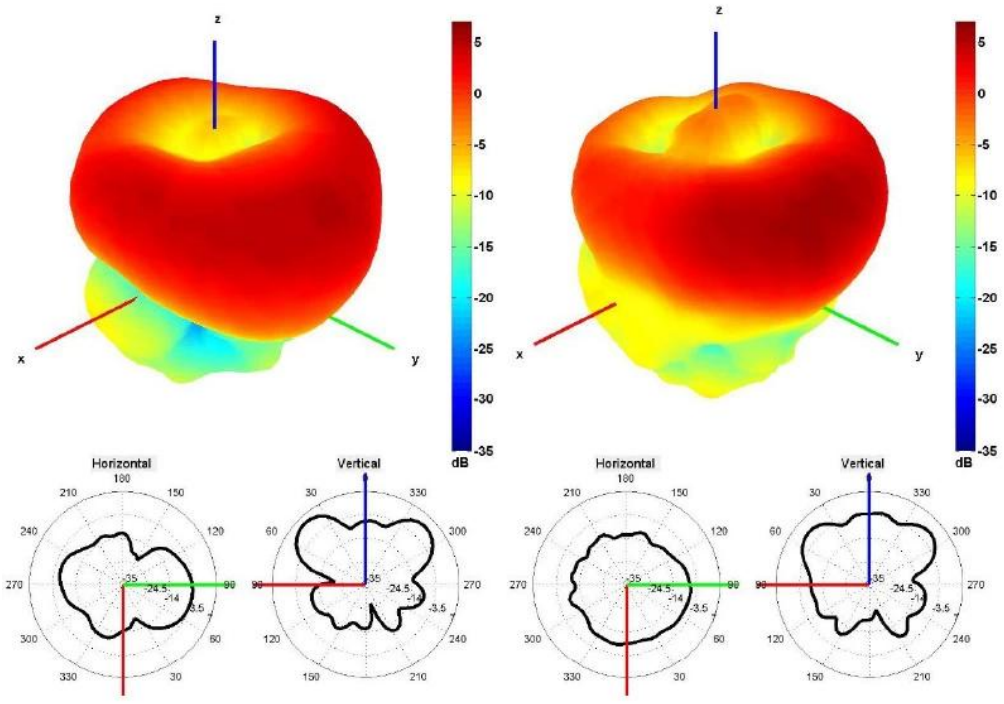
1500 and 1600 MHz Radiation pattern



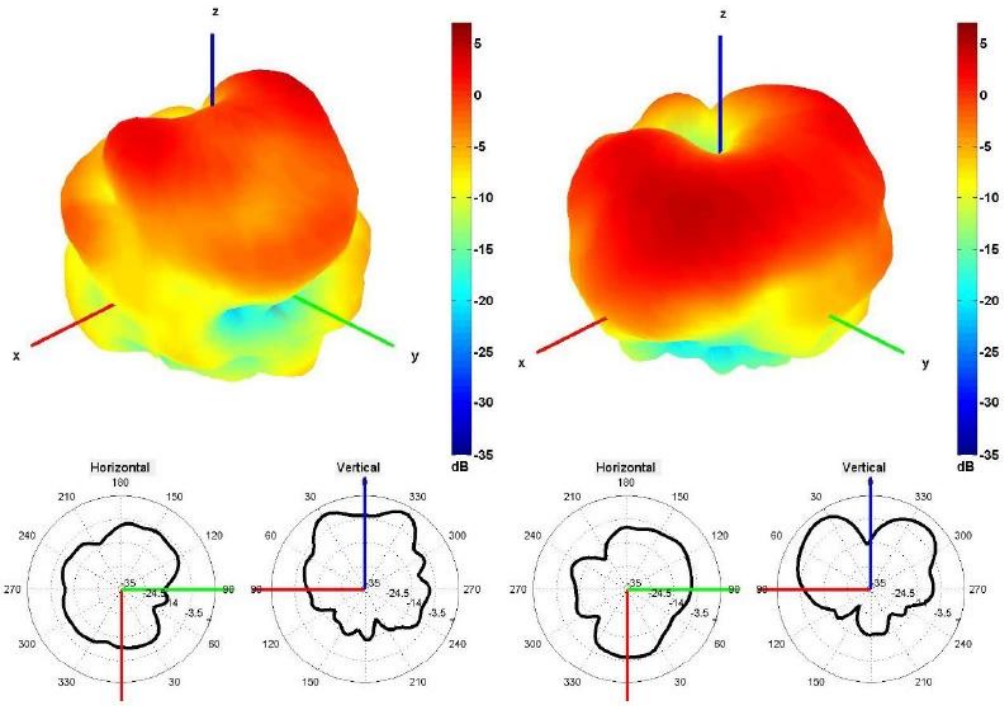
1750 and 1850 MHz Radiation pattern



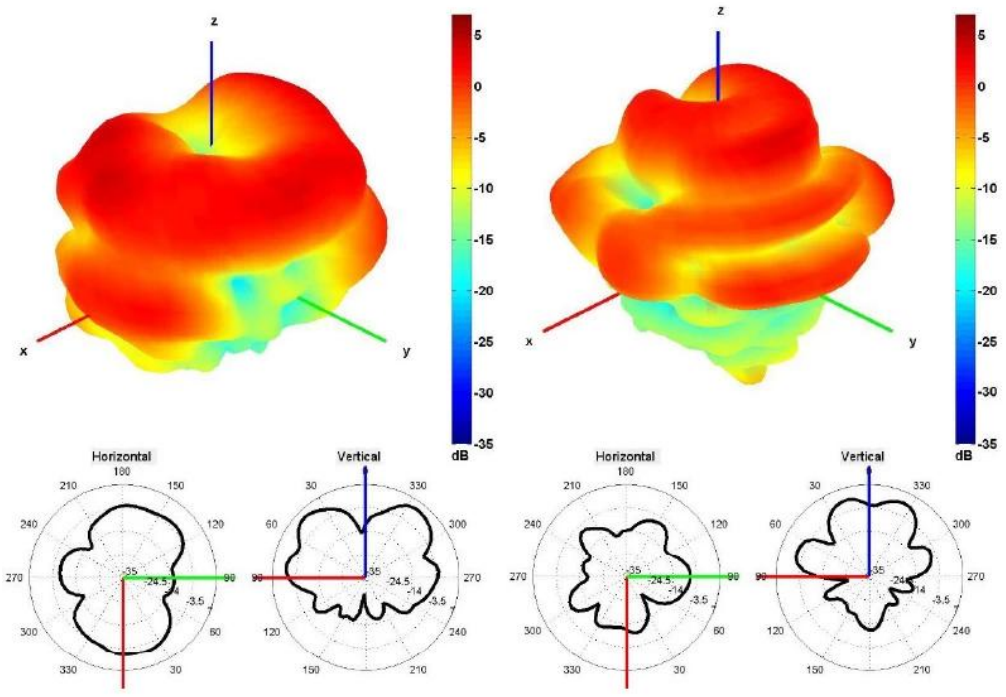
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern

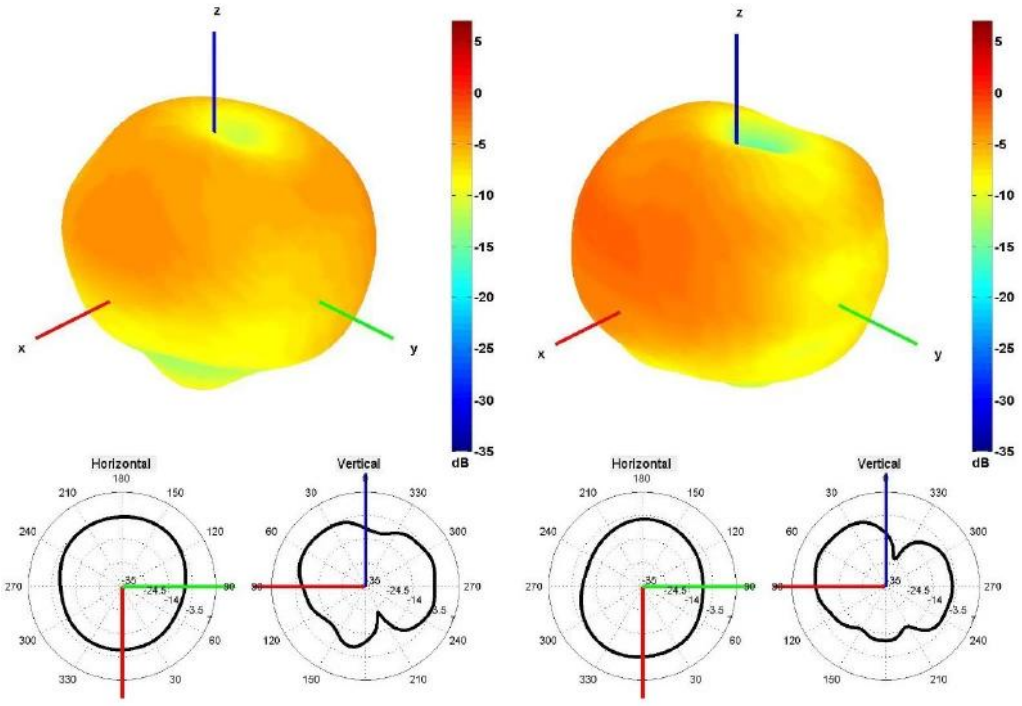


3350 and 3600 MHz Radiation pattern

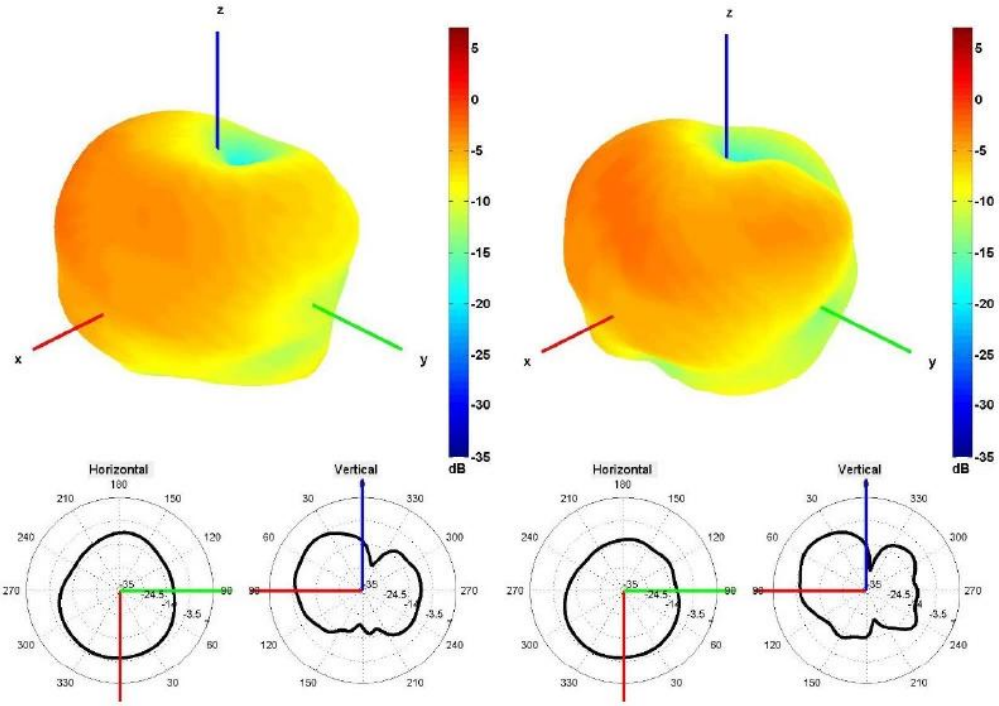


4500 and 5500 MHz Radiation pattern

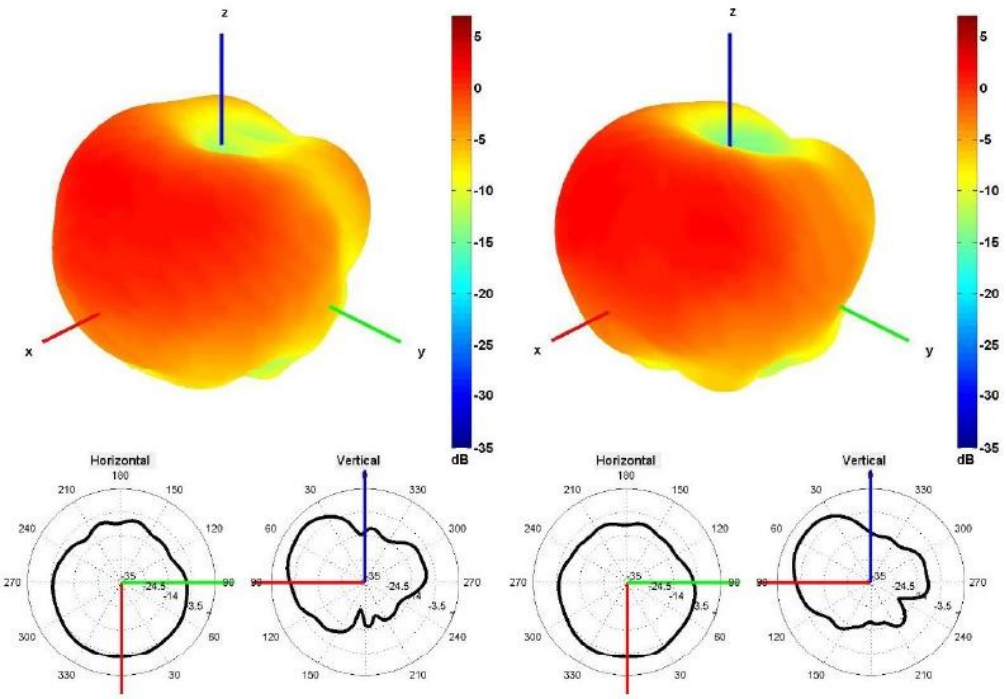
Câble 3 : 2G/3G/4G/5G - IoT/LPWAN



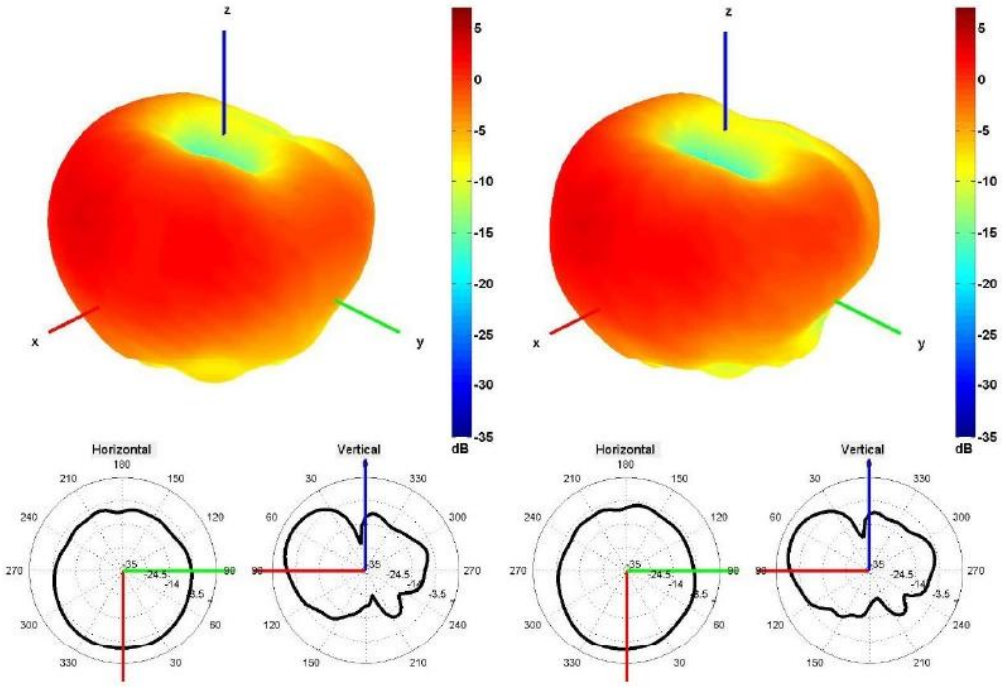
650 and 750 MHz Radiation pattern



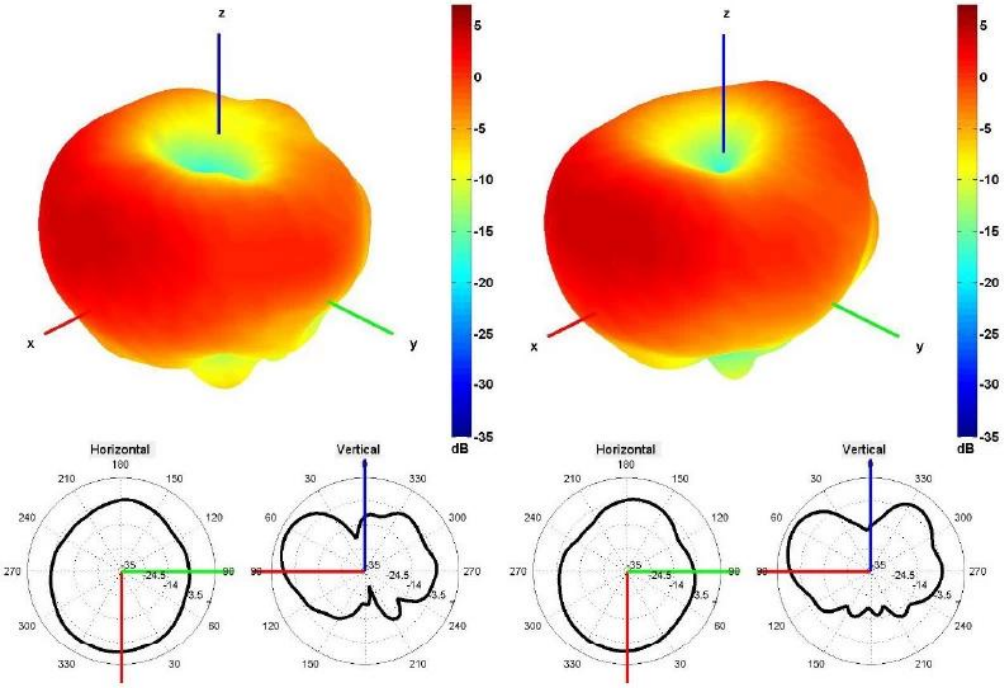
850 and 940 MHz Radiation pattern



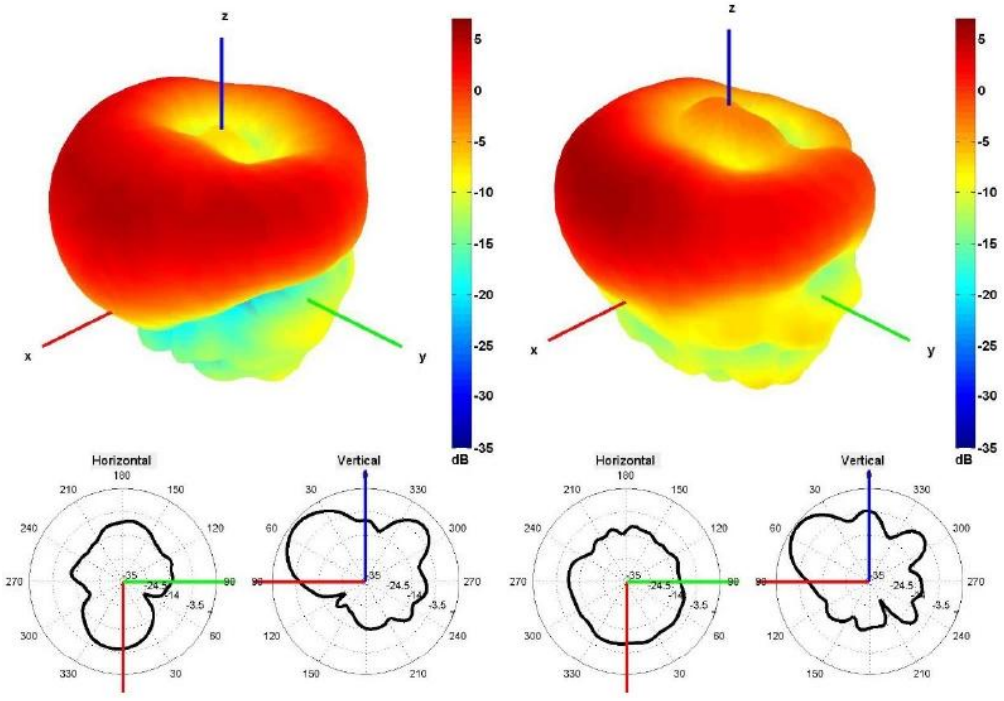
1500 and 1600 MHz Radiation pattern



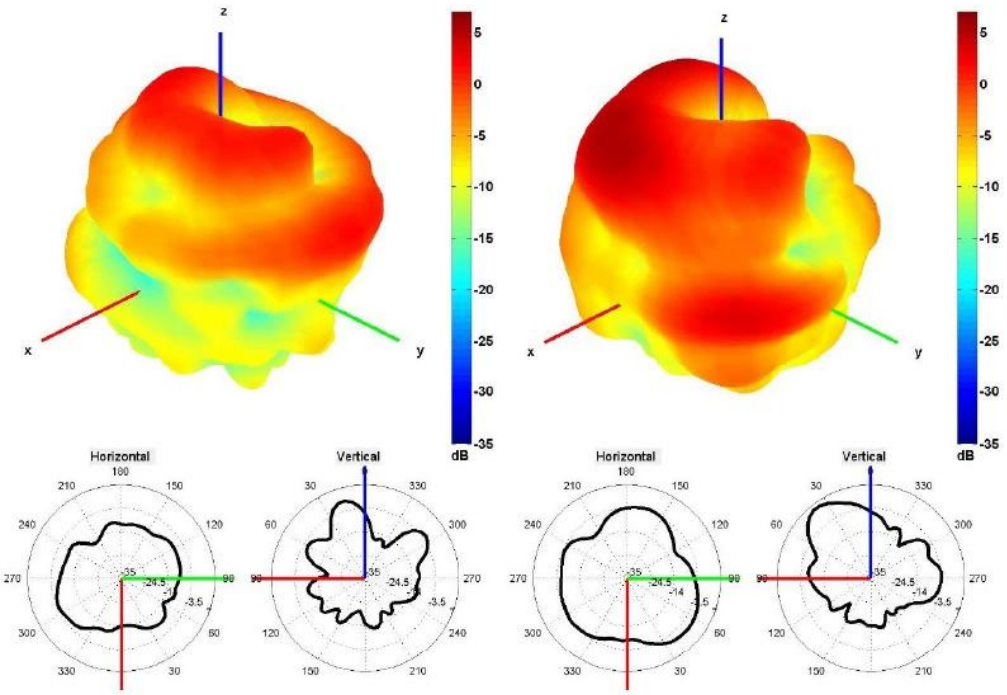
1750 and 1850 MHz Radiation pattern



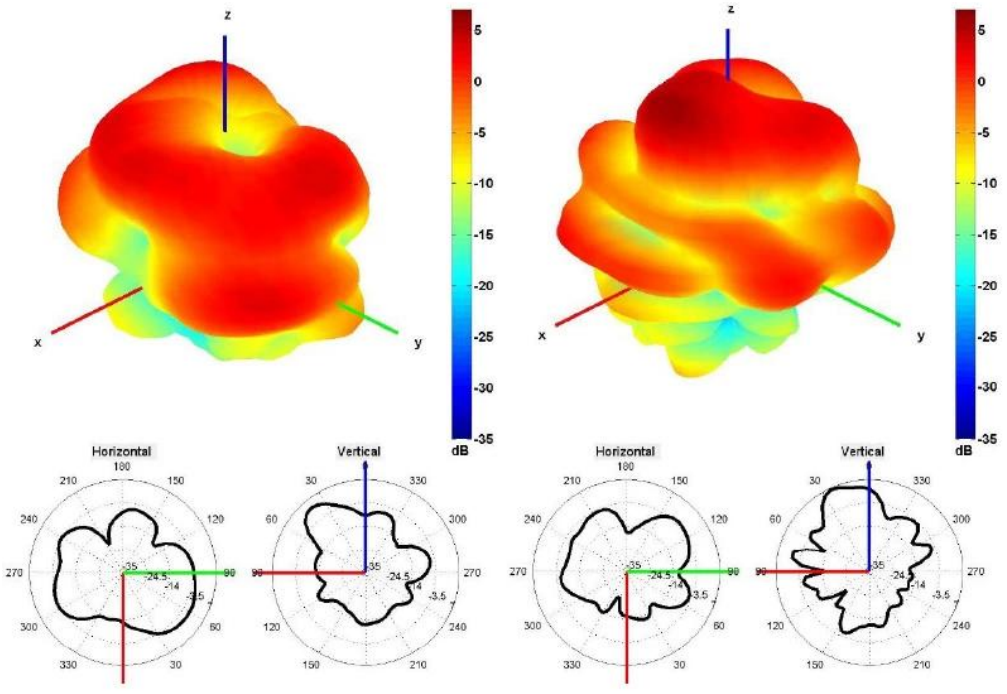
1950 and 2100 MHz Radiation pattern



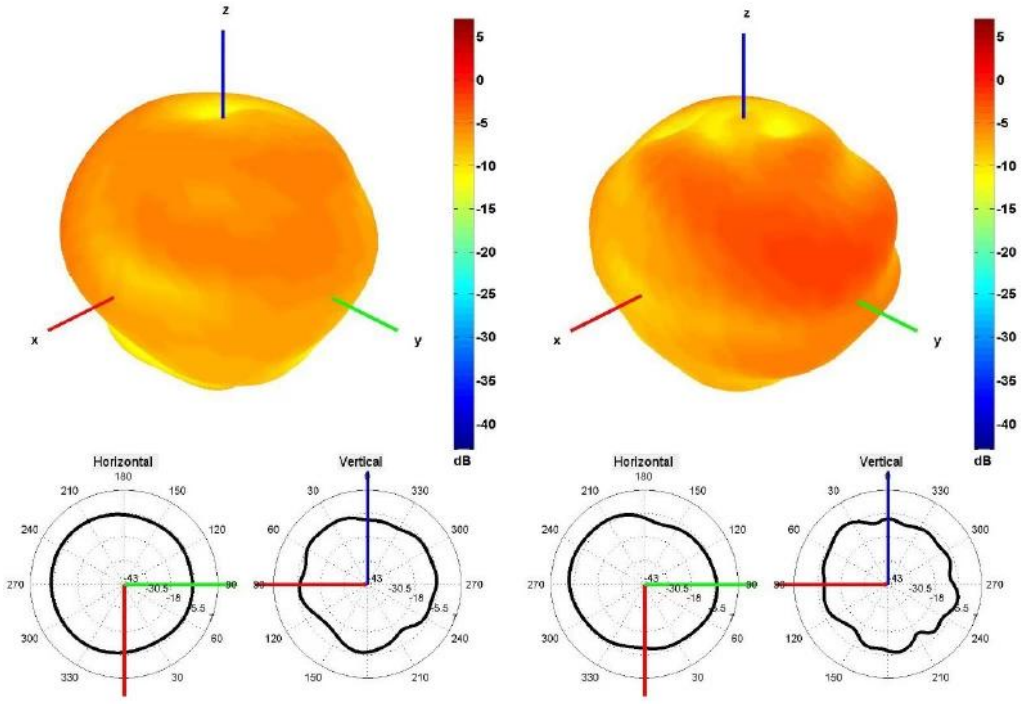
2350 and 2600 MHz Radiation pattern



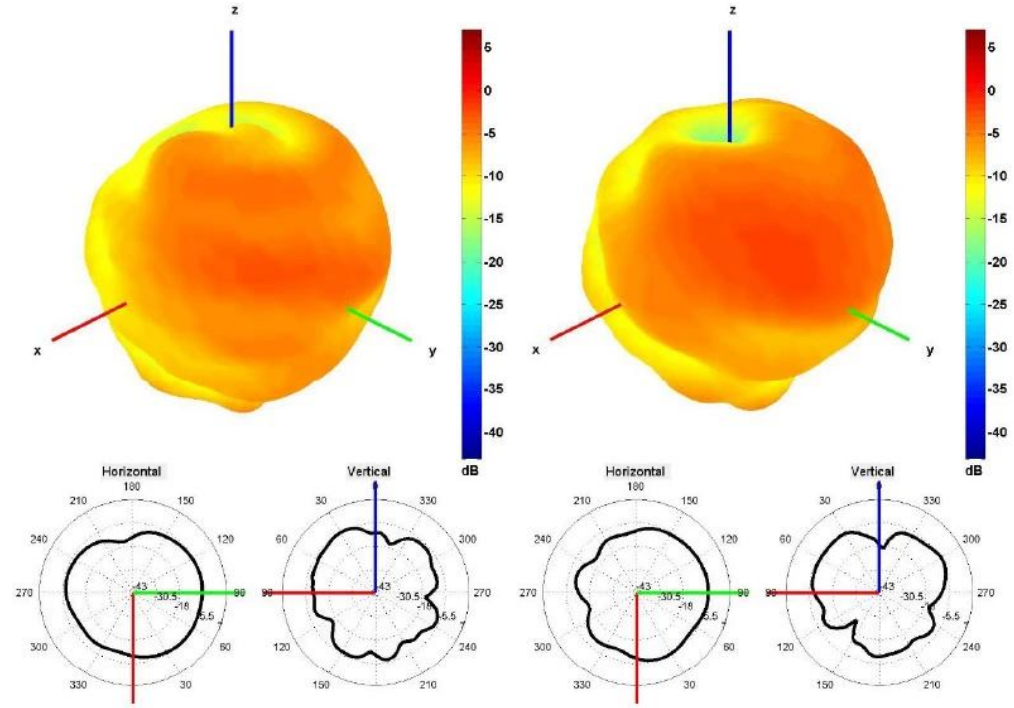
3350 and 3600 MHz Radiation pattern



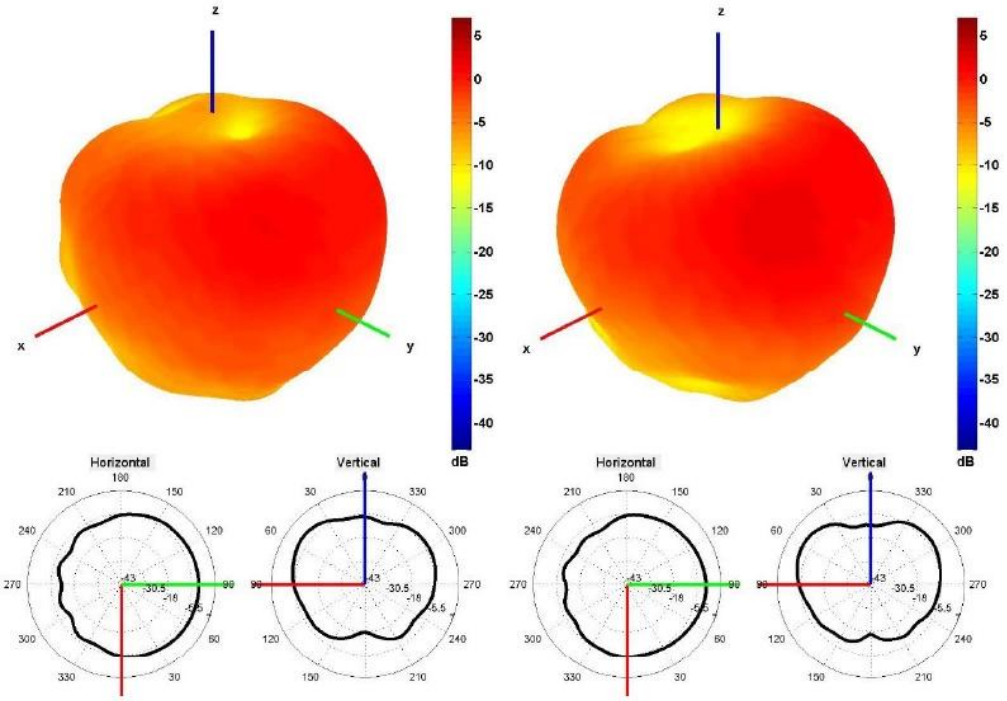
4500 and 5500 MHz Radiation pattern



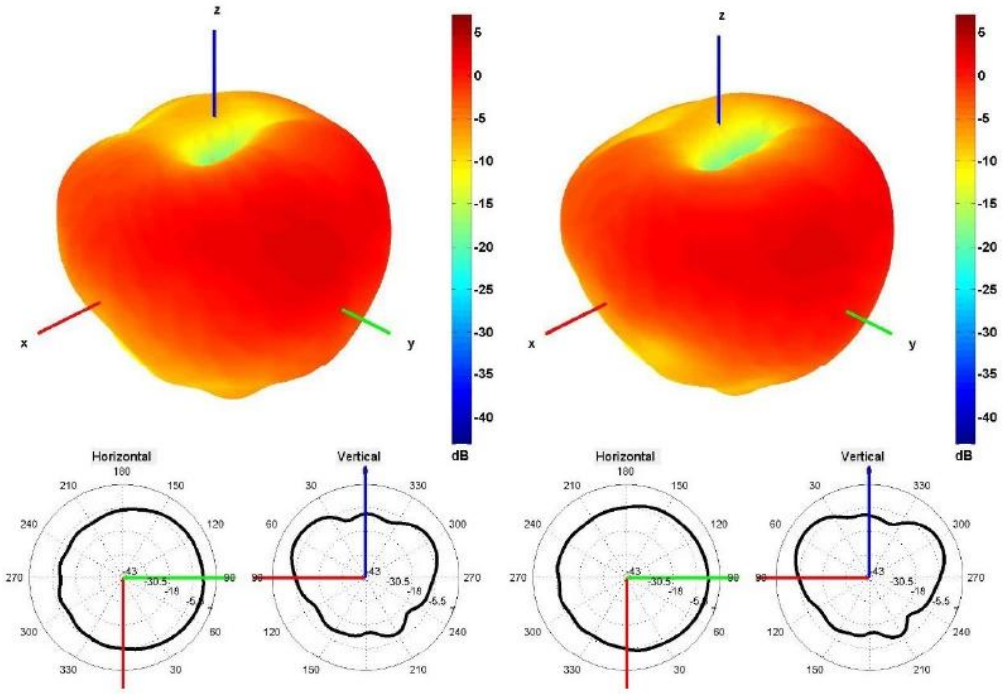
650 and 750 MHz Radiation pattern



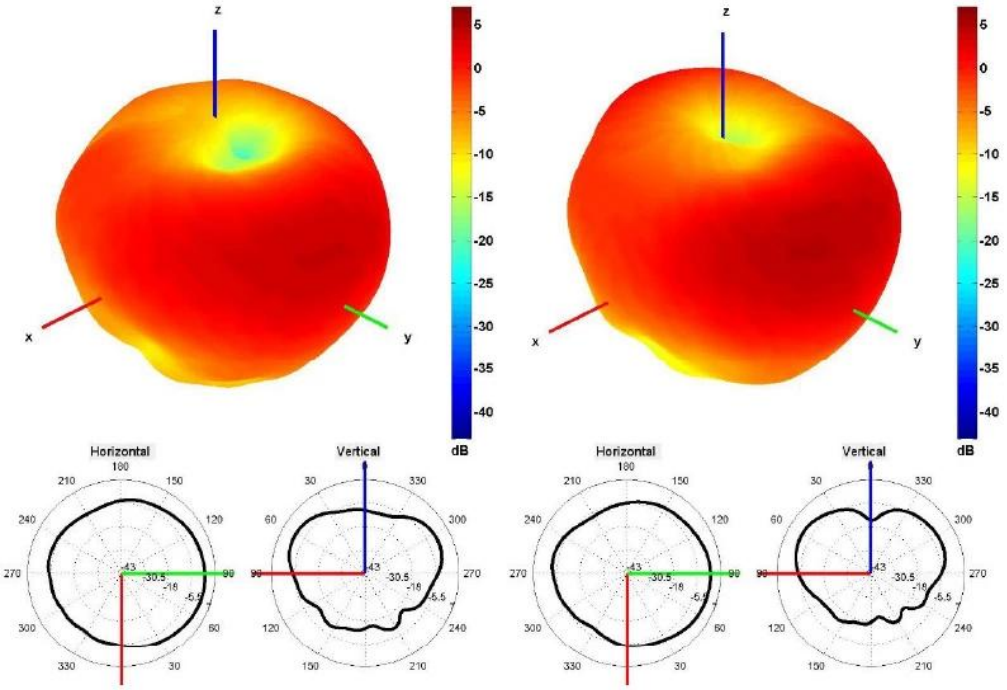
850 and 940 MHz Radiation pattern



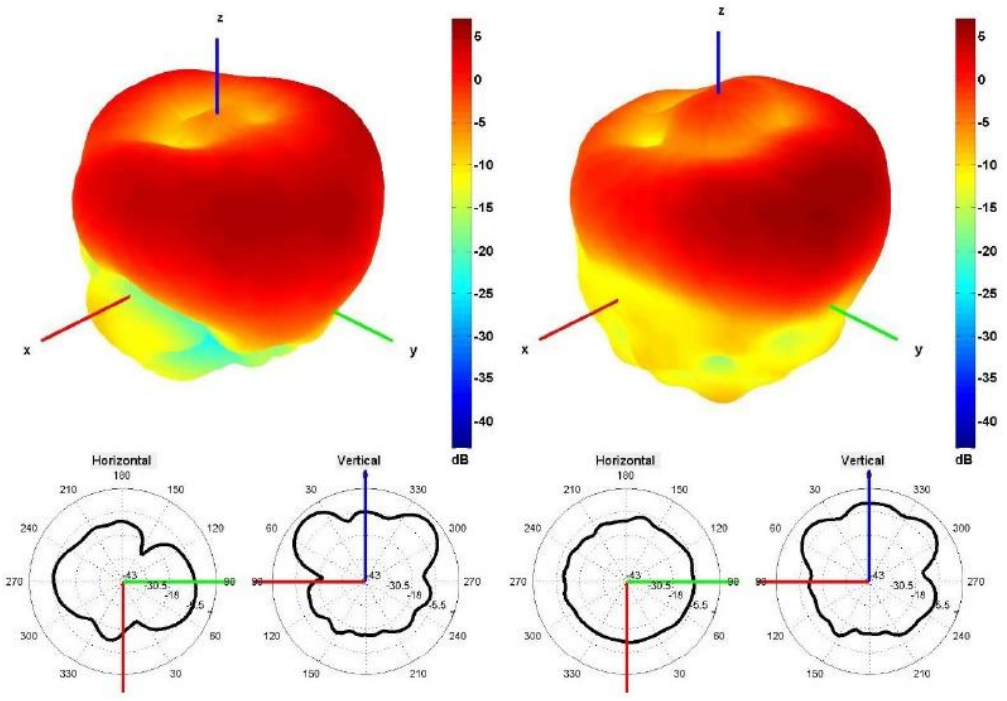
1500 and 1600 MHz Radiation pattern



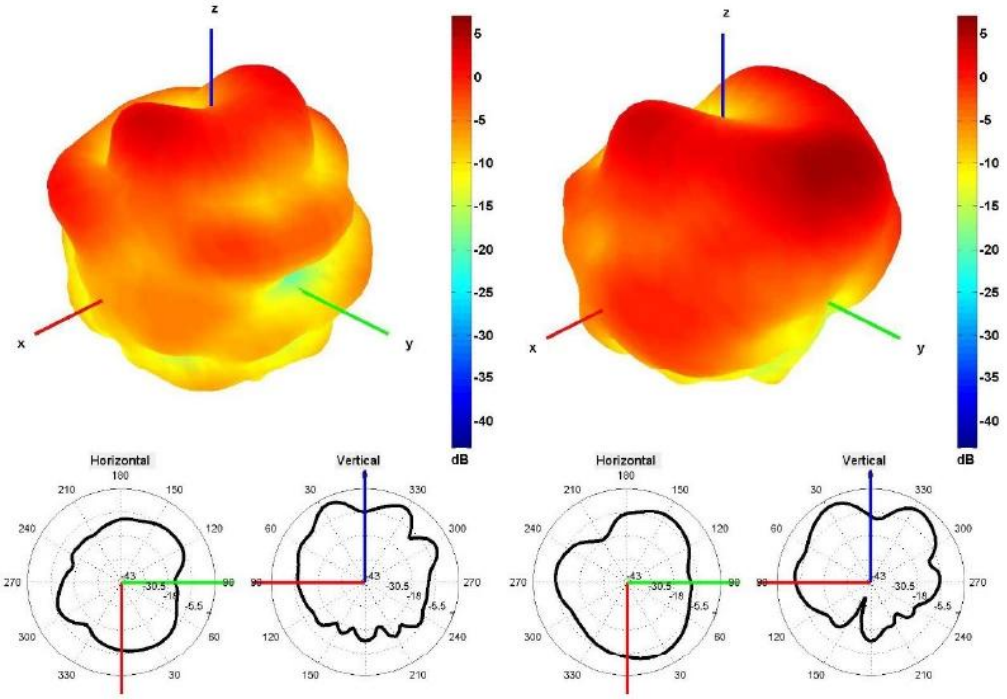
1750 and 1850 MHz Radiation pattern



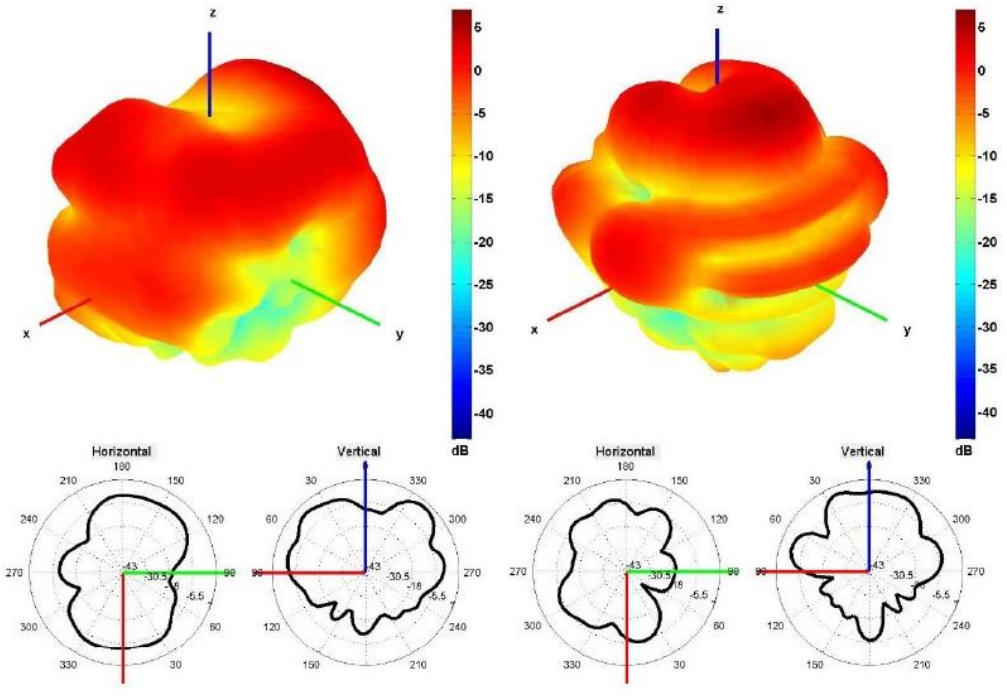
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern

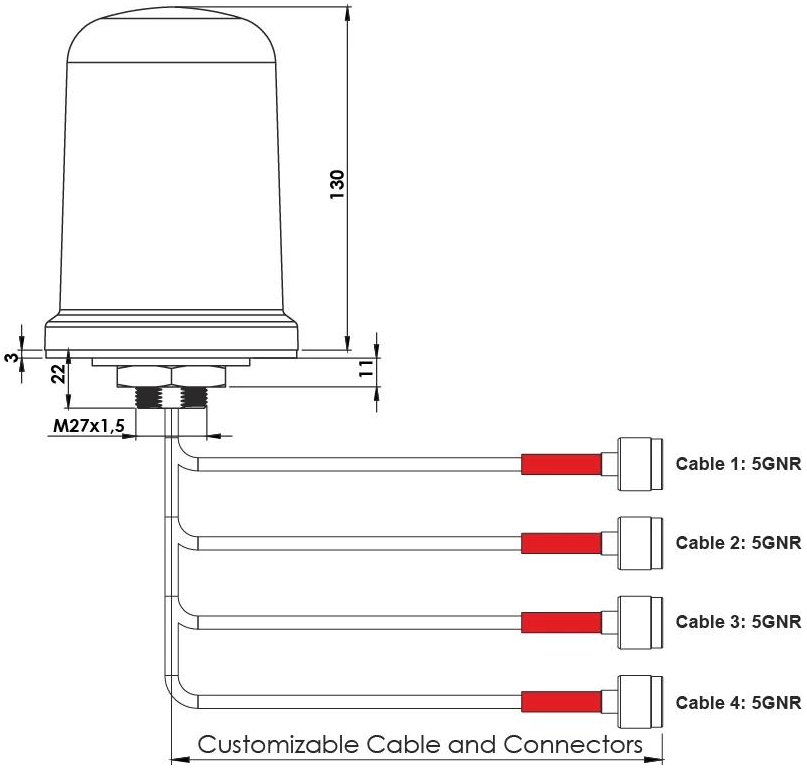


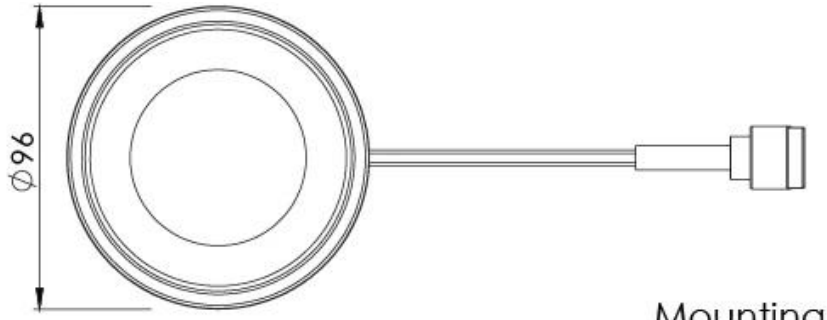
3350 and 3600 MHz Radiation pattern

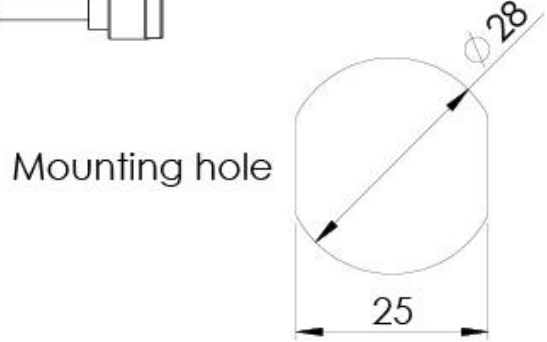


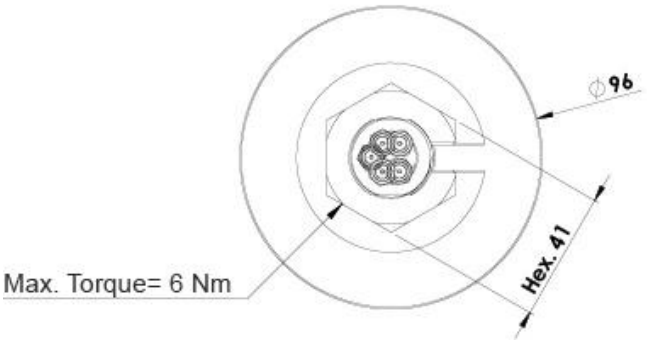
4500 and 5500 MHz Radiation pattern

SCHÉMAS


130
3
22
11
M27x1,5
Cable 1: 5GNR
Cable 2: 5GNR
Cable 3: 5GNR
Cable 4: 5GNR
Customizable Cable and Connectors


ϕ96


Mounting hole
ϕ28
25


ϕ96
Hex. 41
Max. Torque= 6 Nm