



## Antenne combinée 4x[5G 4G-LTE 3G/2G LPWA] GPS/GNSS IP69 traversante | 4.7dBi / 28dB@2.7V

Référence GC-7184BGFc

Gain	4.7dBi / 28dB@2.7V
Connecteurs	SMA (M)
Dimensions (mm)	Ø 96 x H 130
T° de fonctionnement	-40°C à +85°C

### LA SOLUTION 5-EN-1 POUR LES APPLICATIONS 5G MIMO ET GPS/GNSS

L'antenne GC-7184BGFc combine 4 antennes 5G MIMO (plage de fréquences 617-5925 MHz), et 1 antenne GNSS/GPS pour des expériences mobiles à large bande plus rapides et précises.

#### CÂBLES 1 À 4 : ANTENNES 5G MIMO

Quatre antennes conçues pour les appareils qui fonctionnent dans toutes les normes 5G, 4G-LTE, FirstNet, CBRS, LPWA, CAT-X, CAT-Mx, CAT-NBx, NB-IoT, 3G et 2G.

#### CÂBLE 5 : GNSS

Antenne dédiée aux applications de navigation de précision qui fonctionnent selon les normes GPS et GLONASS. Conçue avec un diagramme de rayonnement hémisphérique et une polarisation circulaire à droite, elle rayonne sur tous les plans et maximise la connectivité. Elle peut maintenir un gain actif de 23 dB @ 3V et un facteur de bruit de 1,2 dans le récepteur. Le post-filtre SAW bloque les fréquences inadéquates avec une réjection hors bande de ~32 dB sur les bandes 1575-1602 MHz.

### INSTALLATION / ENVIRONNEMENT

Le boîtier est fabriqué en acrylonitrile styrène acrylate (ASA), stable aux UV et connu pour ses propriétés de résistance thermique. La base est en alliage d'aluminium pour une durabilité maximale. Indépendante du plan de masse, l'antenne GC-7184BGFc profite d'une technologie de montage à vis qui permet une installation facile et un puissant verrouillage sur son emplacement de montage.

Les indices d'étanchéité IP67 et IP69 offrent à cette antenne compacte une protection maximale contre la poussière et la pénétration de l'eau, tandis que l'indice IK09 ajoute un niveau supplémentaire de sécurité anti-vandalisme, avec une résistance élevée aux chocs.



## CARACTÉRISTIQUES

### Câble 1 : 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		
PERTE DE RETOUR (DB)	~-5,5	~-12,2	~-15,2	~-14,2
VSWR	~3,7:1	~2,0:1	~1,5:1	~1,6:1
EFFICACITÉ (%)	~31,0	~41,6	~41,6	~36,9
GAIN DE CRÊTE (DBI)	~1,3	~3,4	~4,7	~4,0
GAIN MOYEN (DB)	~-5,1	~-3,9	~-3,8	~-4,4



**Câble 2 : 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		
PERTE DE RETOUR (DB)	~-5,6	~-12,7	~-15,3	~-16,0
VSWR	~3,7:1	~1,9:1	~1,5:1	~1,5:1
EFFICACITÉ (%)	~31,2	~41,4	~42,4	~33,1
GAIN DE CRÊTE (DBI)	~1,2	~3,6	~4,6	~3,2
GAIN MOYEN (DB)	~-5,1	~-3,9	~-3,8	~-4,8



**Câble 3 : 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		
PERTE DE RETOUR (DB)	~-5,4	~-12,9	~-16,7	~-12,4
VSWR	~3,7:1	~1,8:1	~1,4:1	~1,8:1
EFFICACITÉ (%)	~31,5	~41,6	~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



**Câble 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		
PERTE DE RETOUR (DB)	~-5.7	~-12,8	~-16,8	~-15,4
VSWR	~3,5:1	~1.8:1	~1,5:1	~1,5:1
EFFICACITÉ (%)	~31,2	~41,8	~42,5	~35,0
GAIN DE CRÊTE (DBI)	~1.6	~3,4	~4,6	~3,9
GAIN MOYEN (DB)	~-5.1	~-3,9	~-3.8	~-4.6

**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 et 4

IMPÉDANCE (OHMS)	50
POLARISATION	Linéaire
RAYONNEMENT	Omnidirectionnel
MAX. PUISSANCE D'ENTRÉE (W)	35
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)

#### Câble 5 : GPS/QZSS/Galileo/GLONASS

STANDARD	GPS/QZSS/Galileo	GLONASS
BANDE(S) (MHZ)	1575	1602
FRÉQUENCE(S) (MHZ)	1575,42	1598-1610
PERTE DE RETOUR (DB)	<=-14	
VSWR	<=1.5:1	
IMPÉDANCE	50	
RAYONNEMENT	Hémisphérique	
POLARISATION	RHCP	
FILTRE SAW	Post-filtre	
GAIN ACTIF (DB)	23 @ 3 V, 24 @ 5 V	
FACTEUR DE BRUIT (DB)	1.2	
TENSION (V)	2,7 - 5,5	
CONSOMMATION DE COURANT (MA)	15 - 25	
CONSOMMATION ÉLECTRIQUE (MW)	40,5 - 137,5	
REJET HORS BANDE (DBC)	~32	
CONNECTEUR	SMA-Mâle standard (autres connecteurs disponibles)	
LONGUEUR DE CÂBLE	300 cm standard (toute longueur de câble disponible)	
TYPE DE CÂBLE	Norme(s) LL100 (autres câbles disponibles)	



## SPÉCIFICATIONS

TYPE DE MONTAGE	Traversant / Montage vis
DIMENSIONS (MM)	Ø 96× H 130
COUPLE DE SERRAGE MAX.(NM)	15 Nm
MATÉRIAU RADÔME	ASA
COULEUR RADÔME	Blanc ou noir
BASE D'ANTENNE	Alliage d'aluminium
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

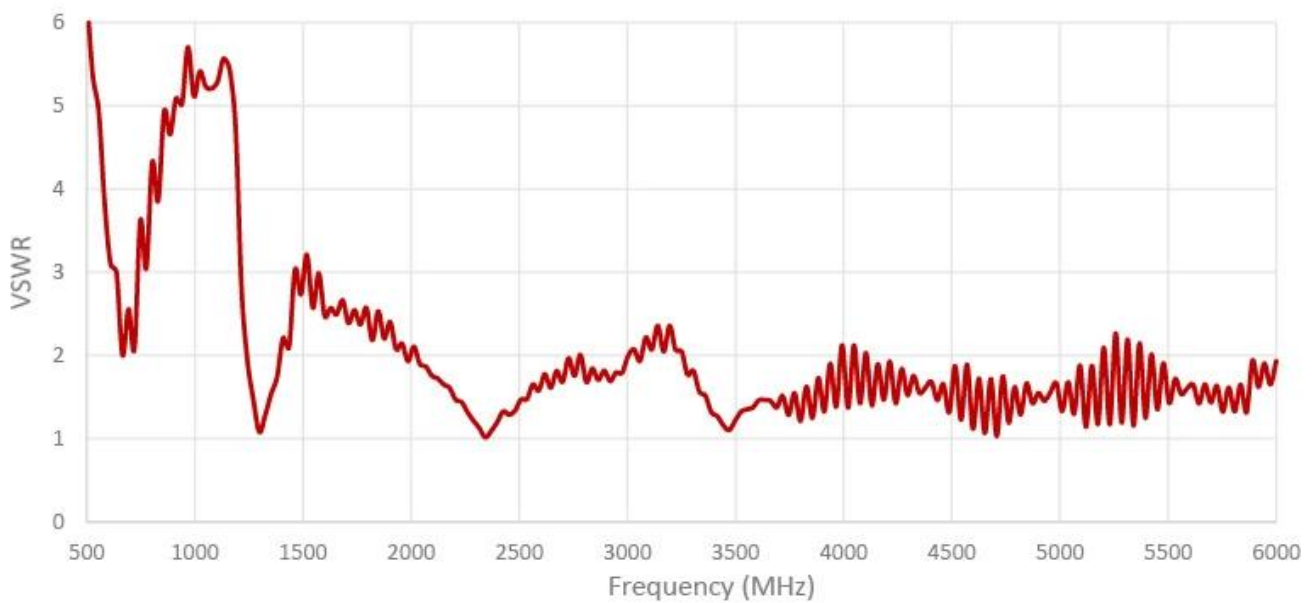
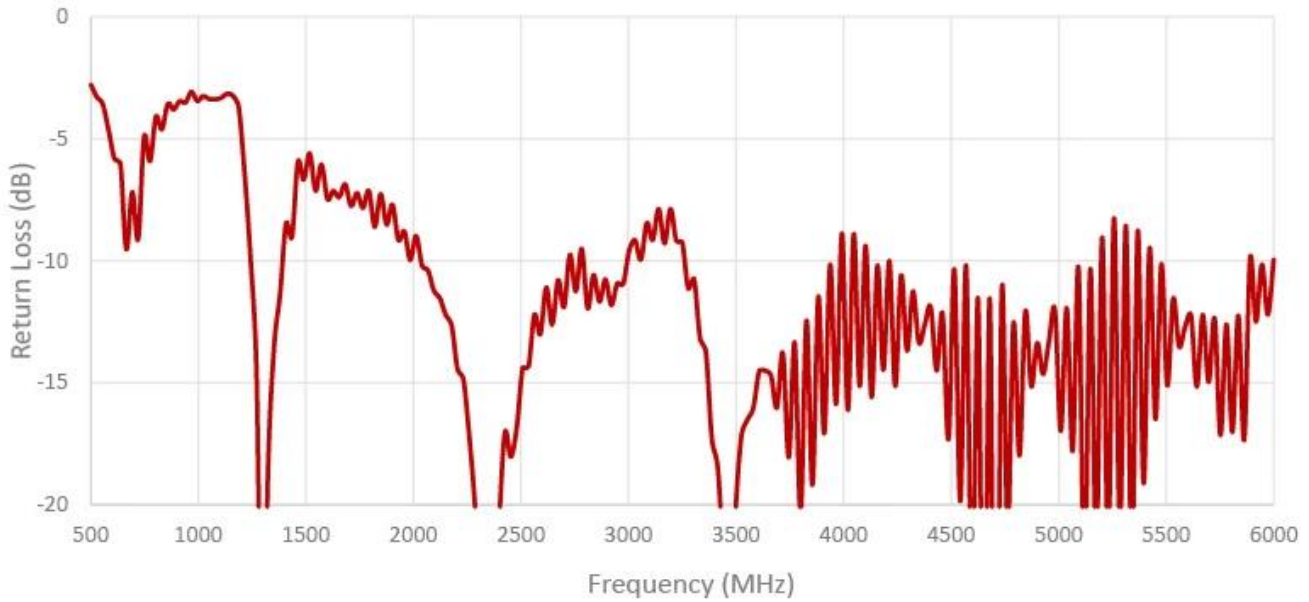
Cette gamme d'antenne est fabriquée sans matières dangereuses tout en maintenant une conformité totale avec REACH et RoHS.

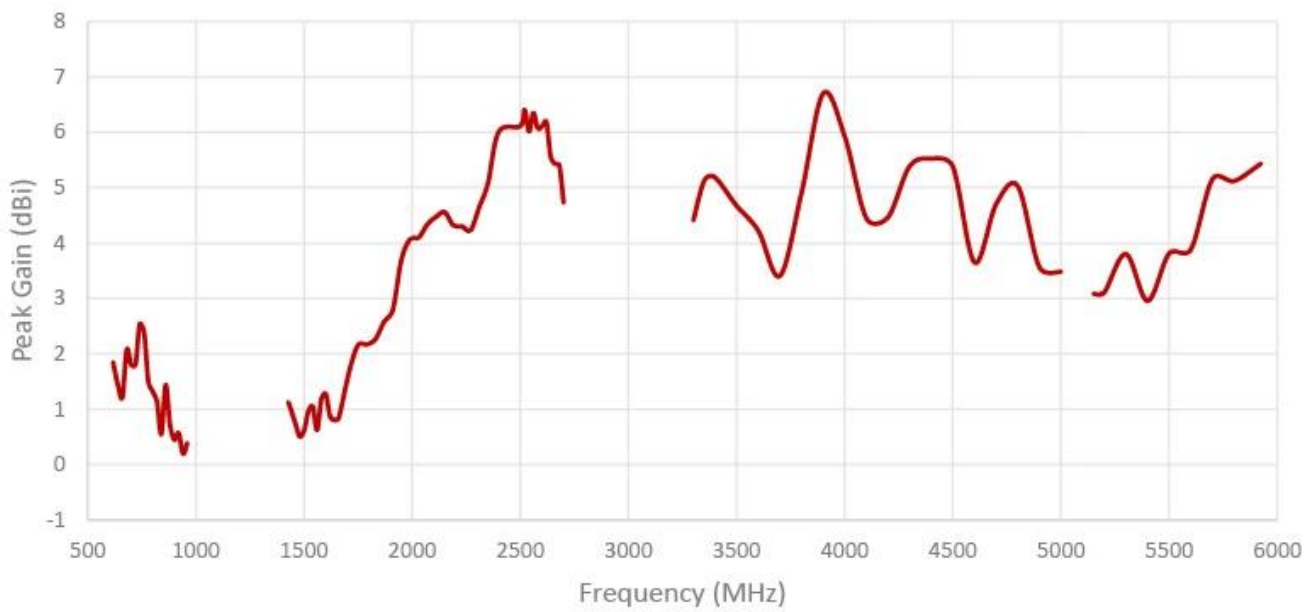
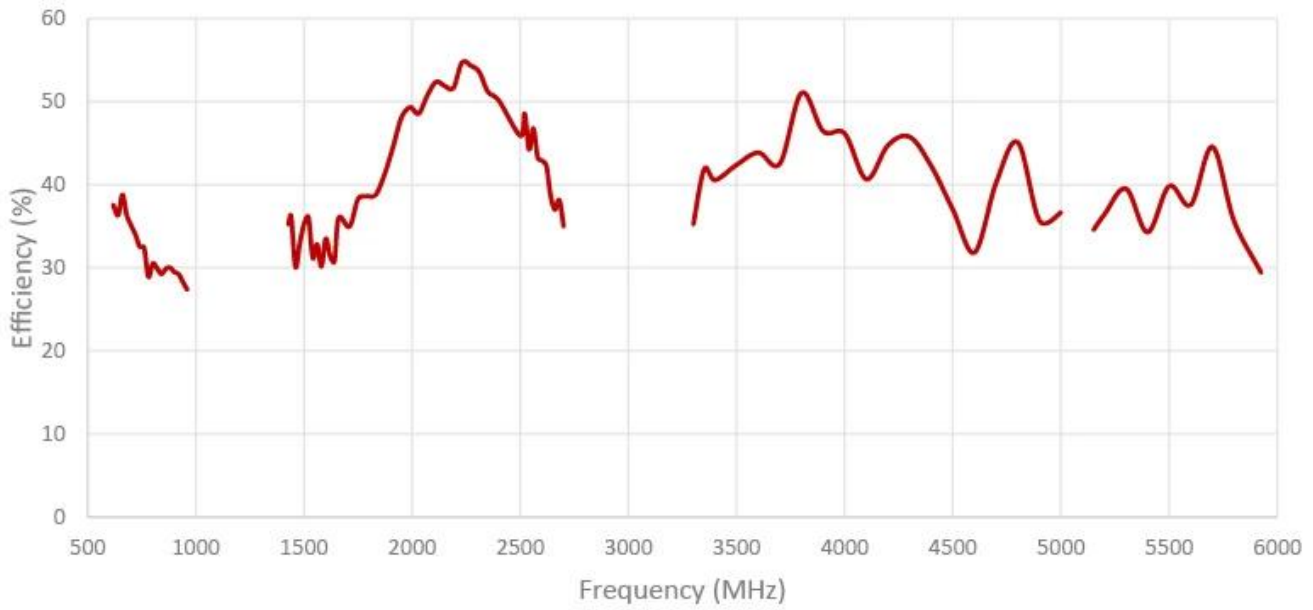


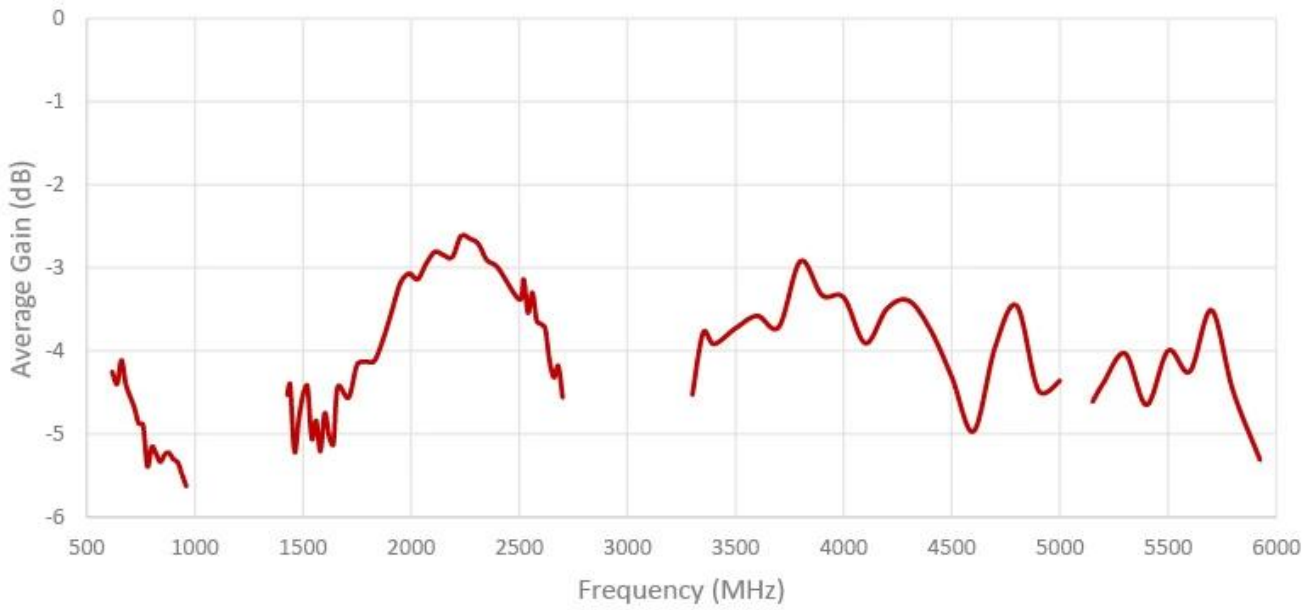


## MESURES

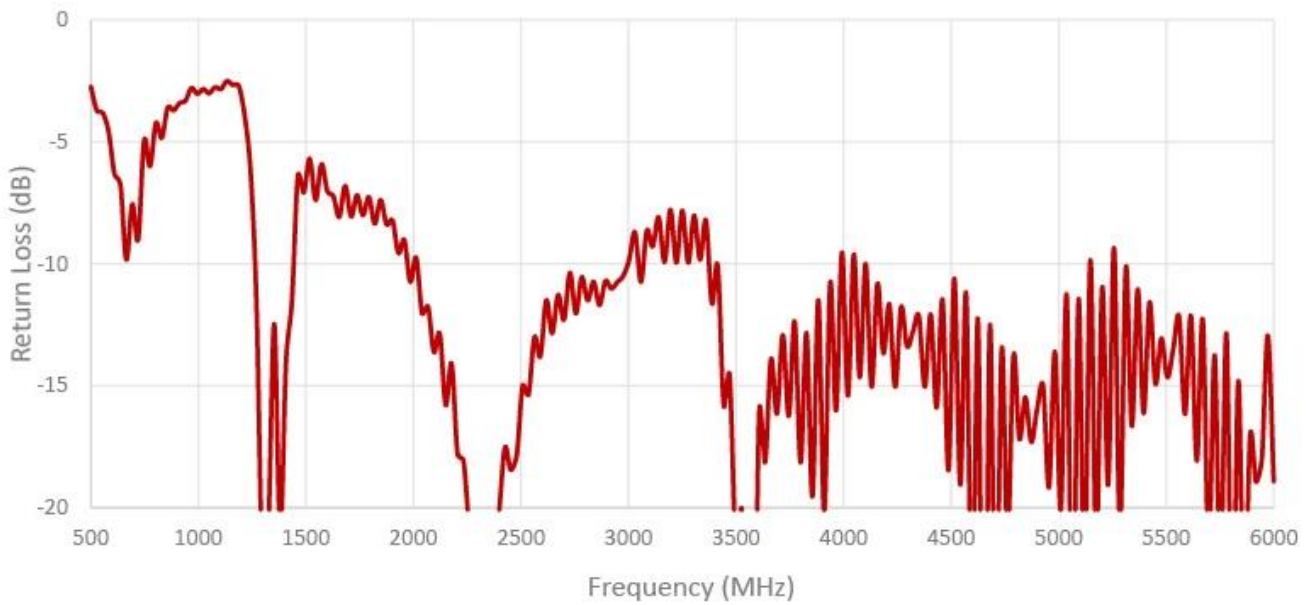
Câble 1 : 2G/3G/4G/5G - IoT/LPWAN

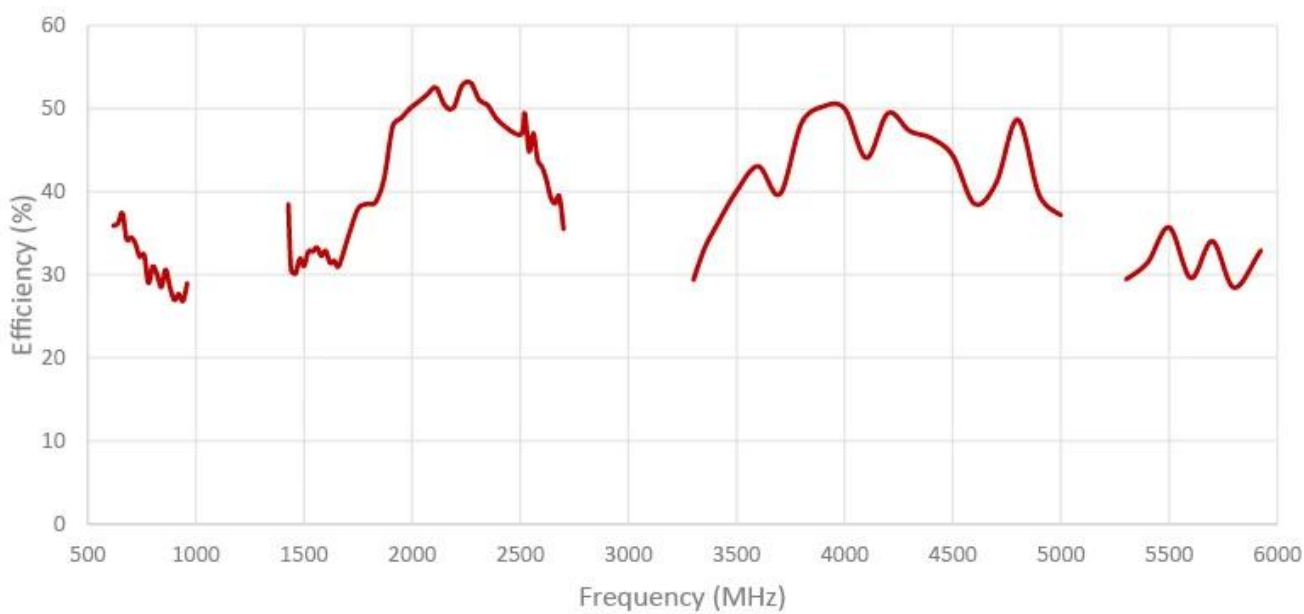
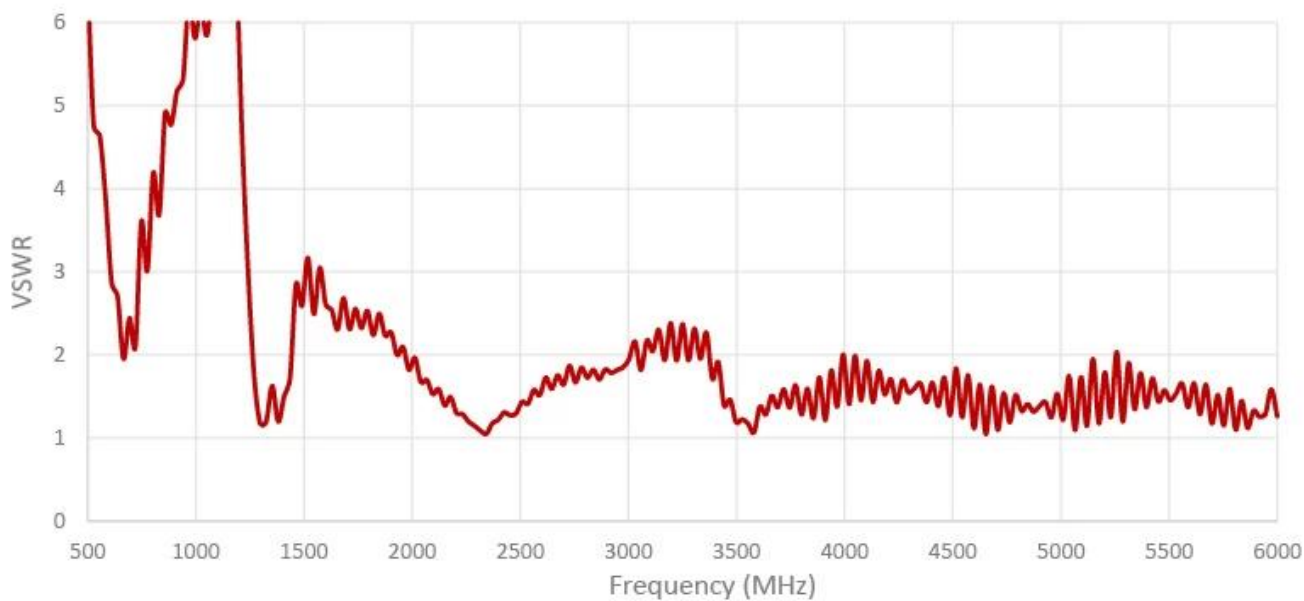


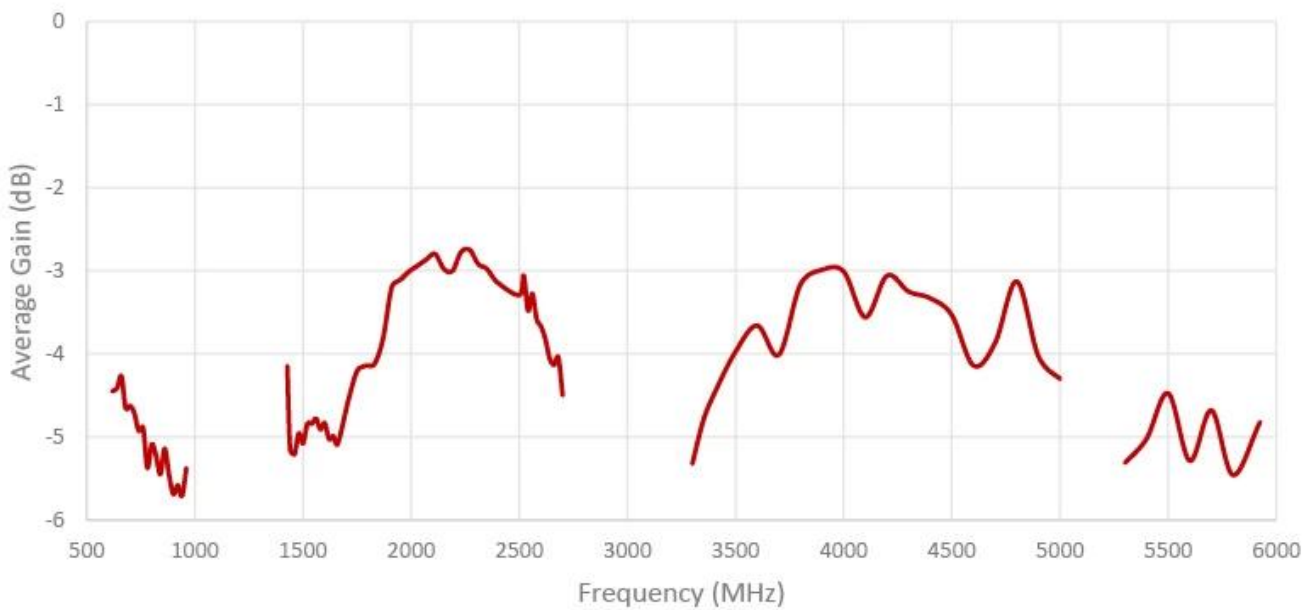
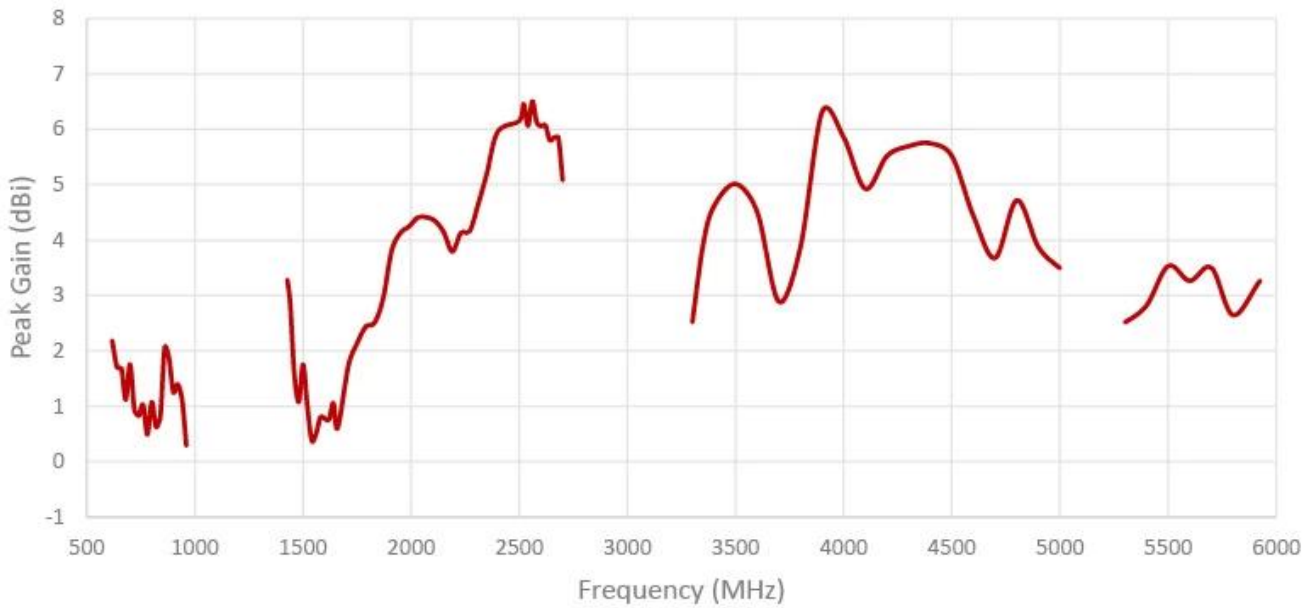




Câble 2 : 2G/3G/4G/5G - IoT/LPWAN

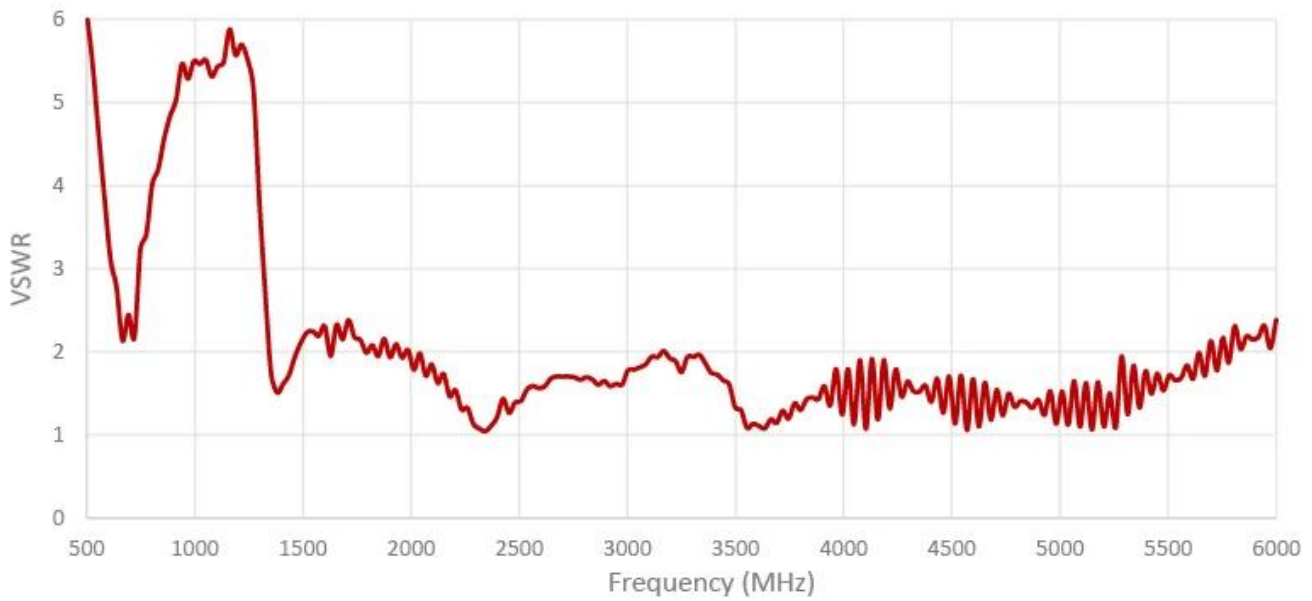
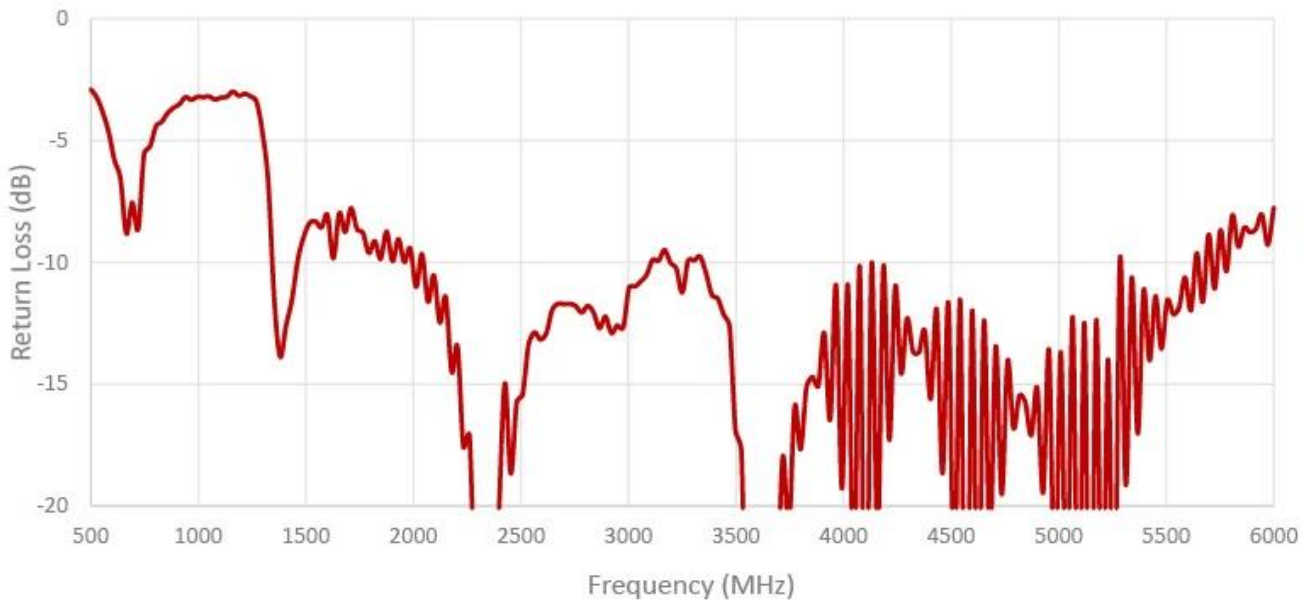


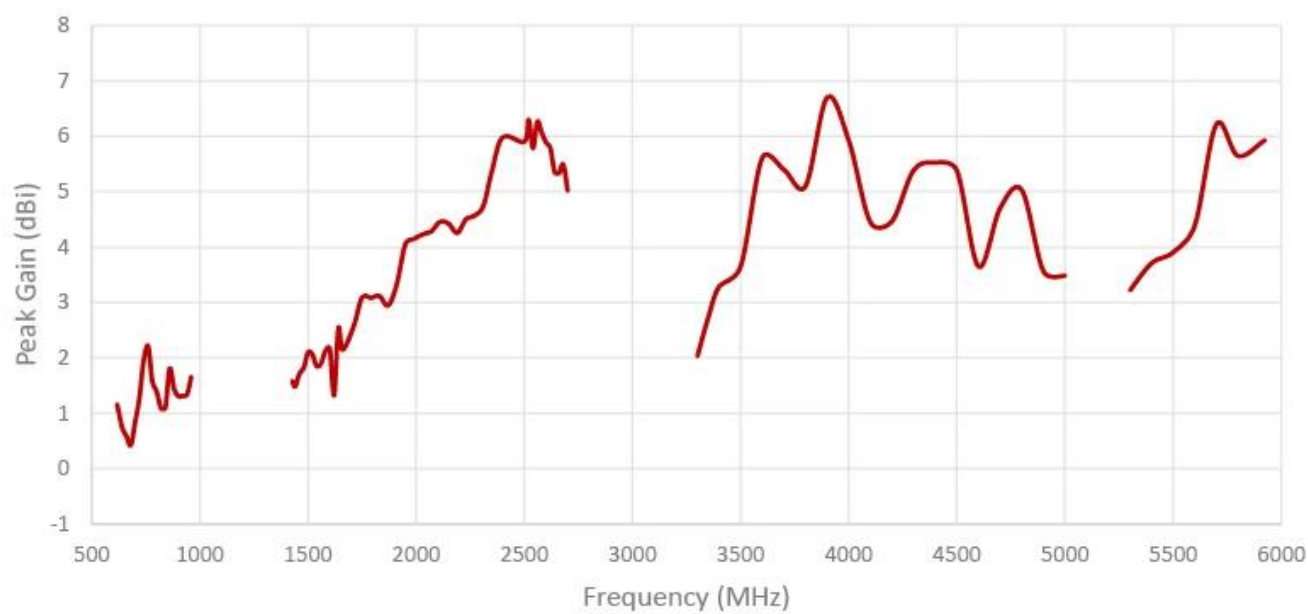
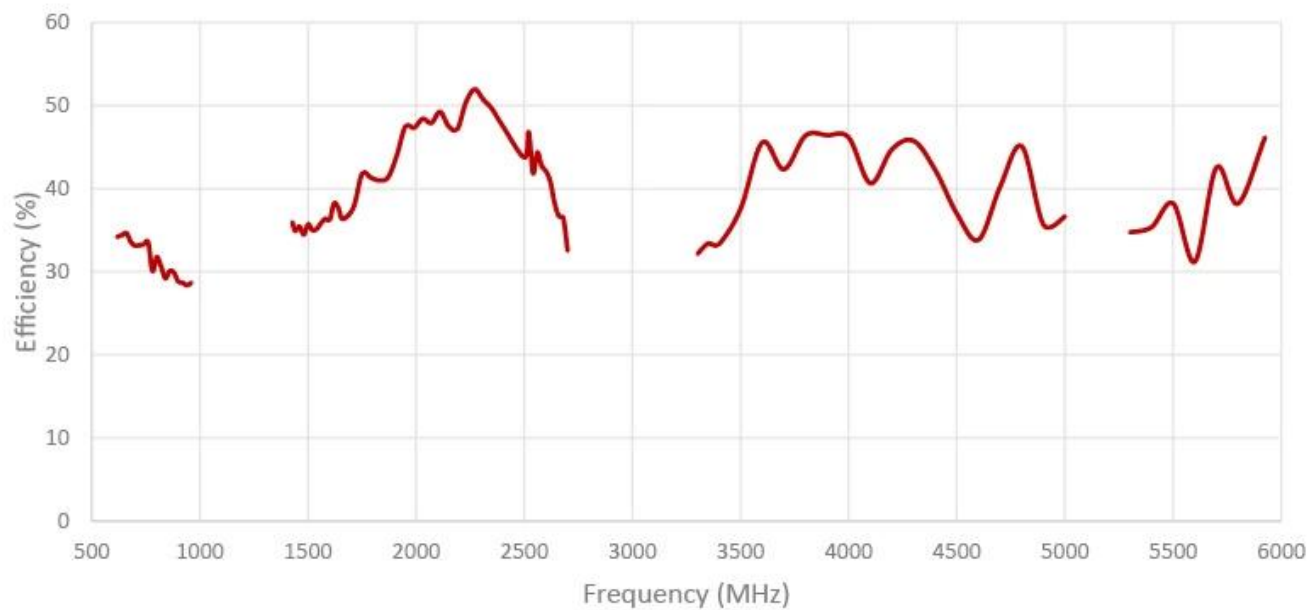


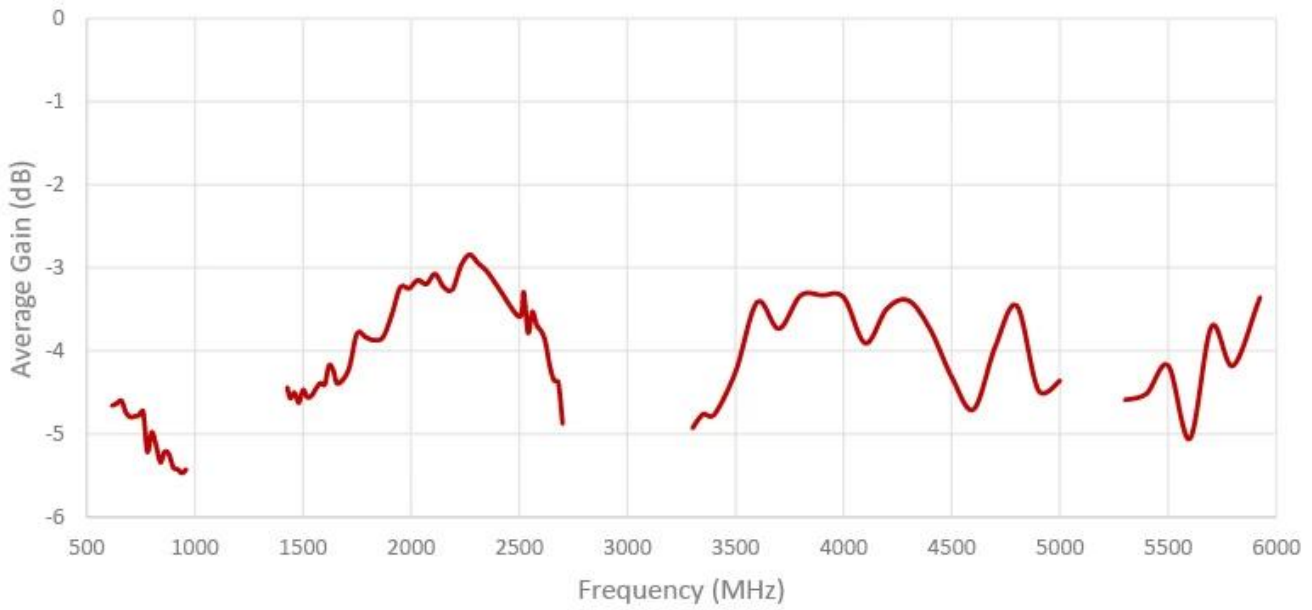




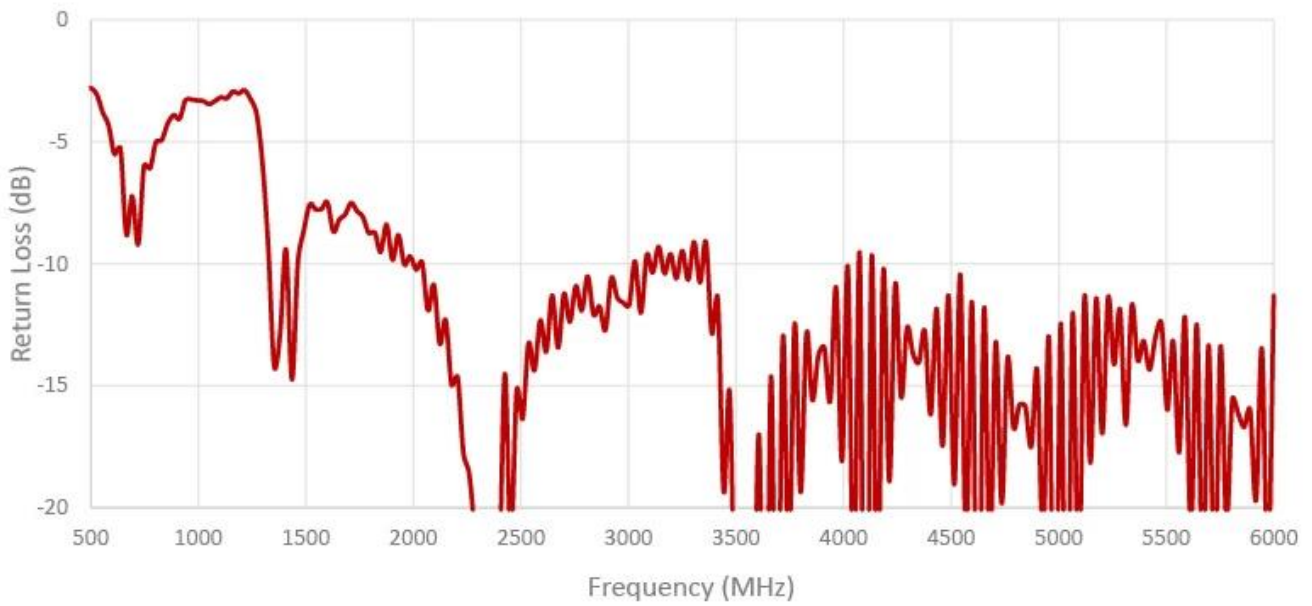
Câble 3 : 2G/3G/4G/5G - IoT/LPWAN

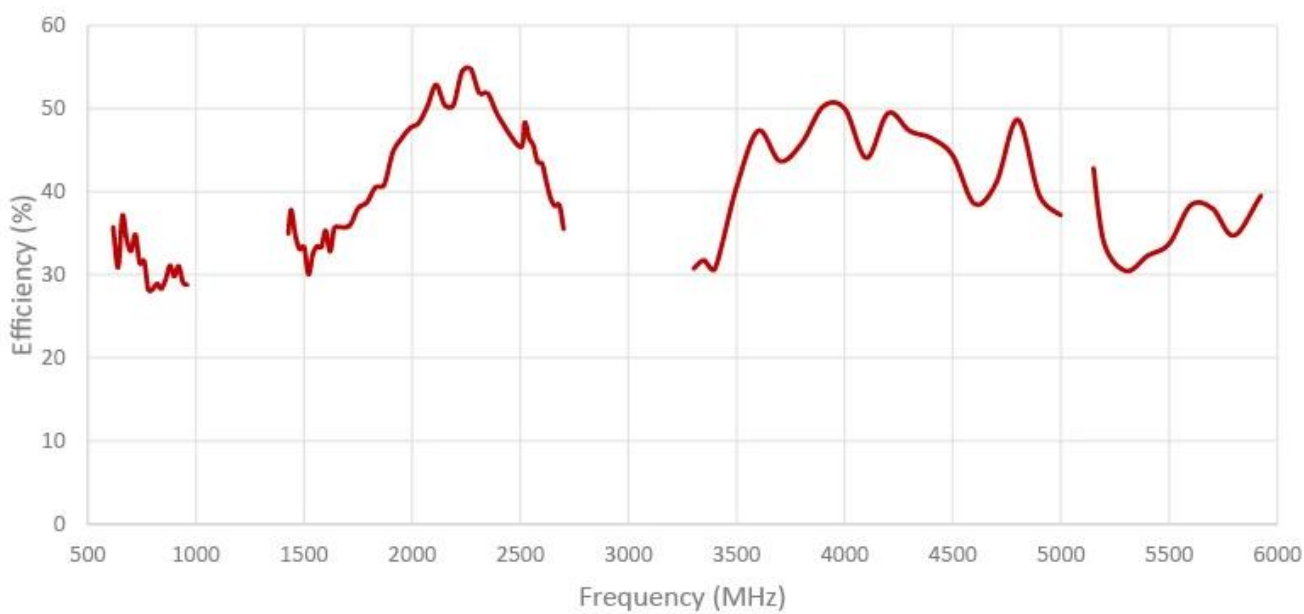
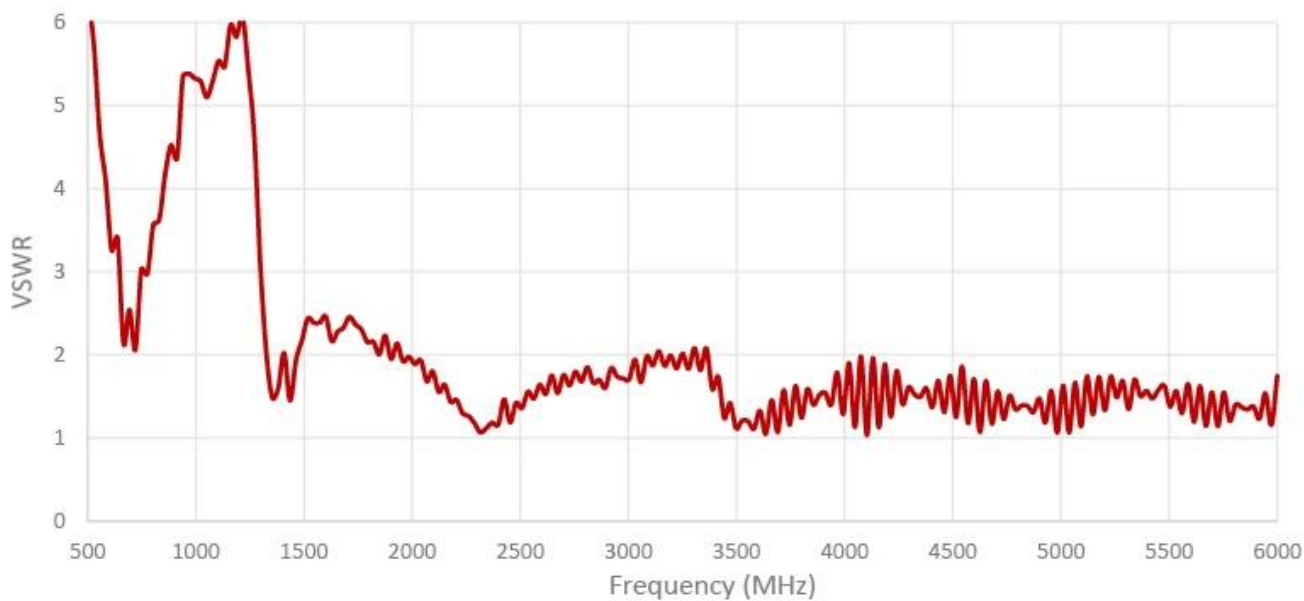


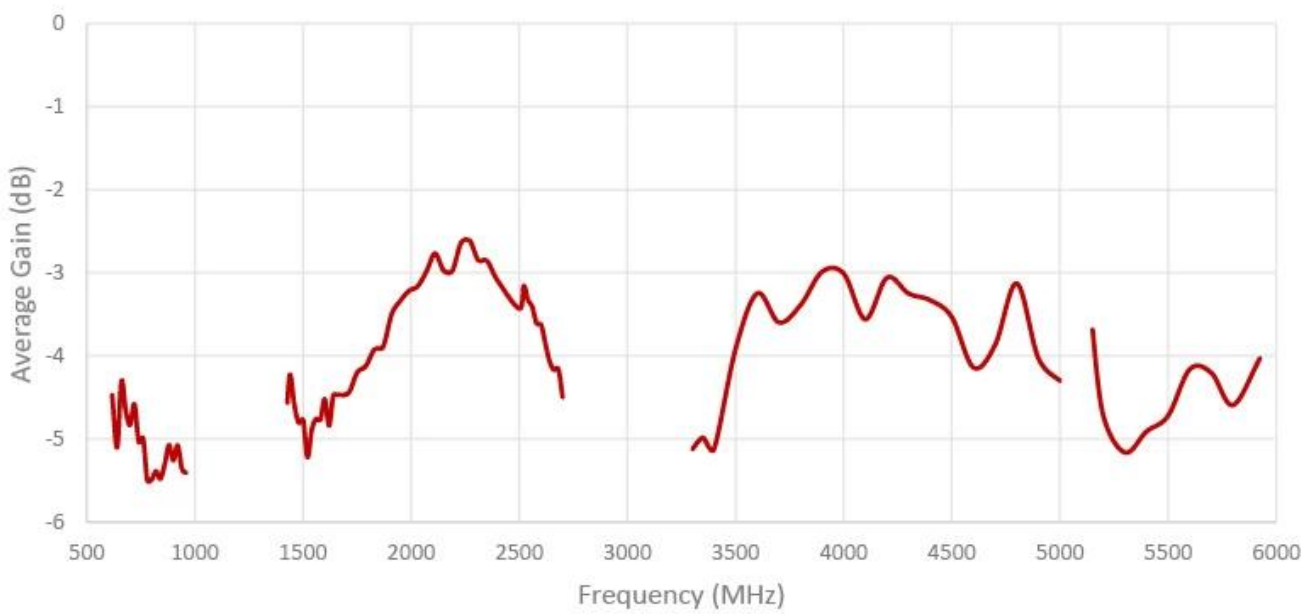
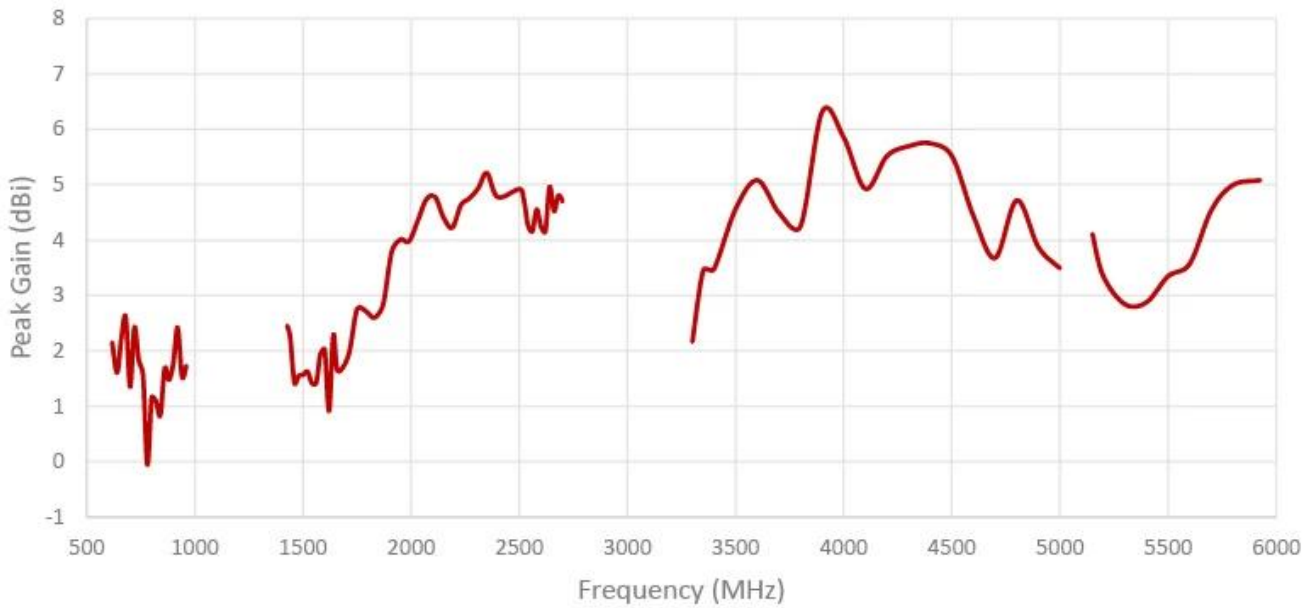




Câble 4 : 2G/3G/4G/5G - IoT/LPWAN

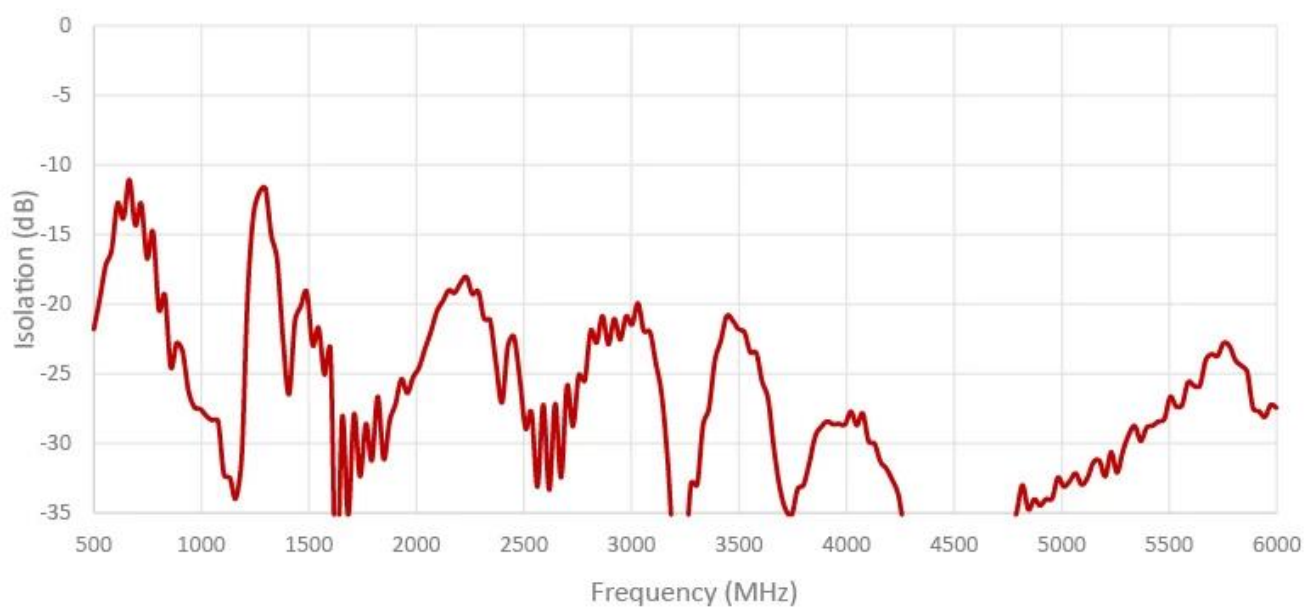




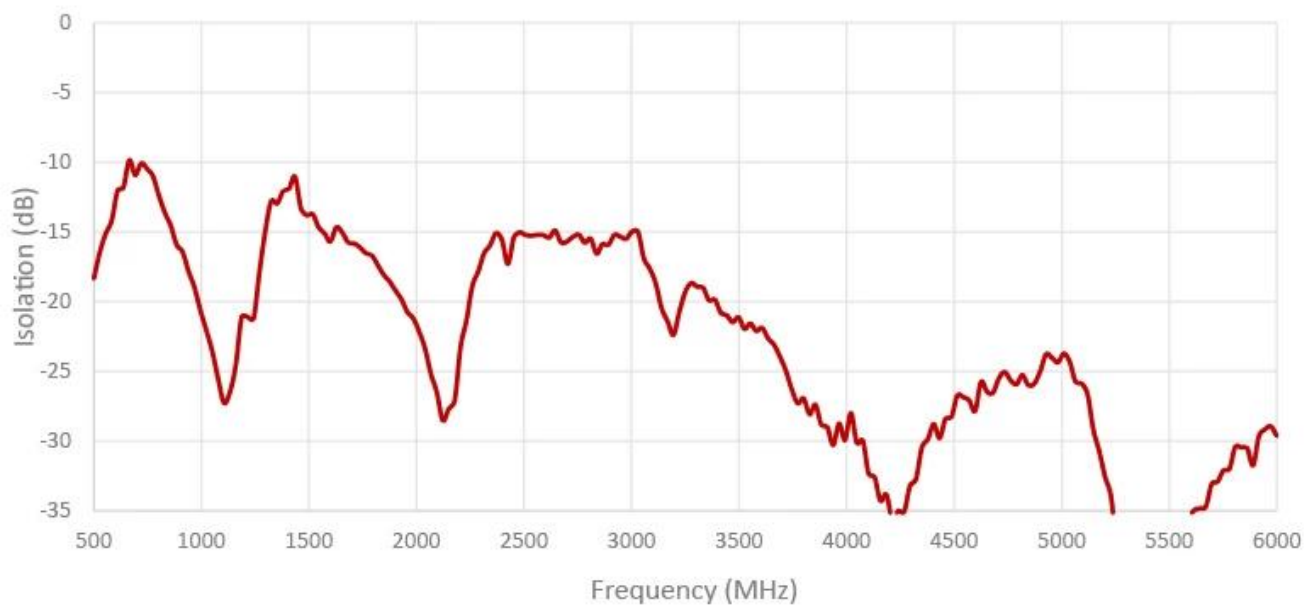




Isolation câble 1 et 2

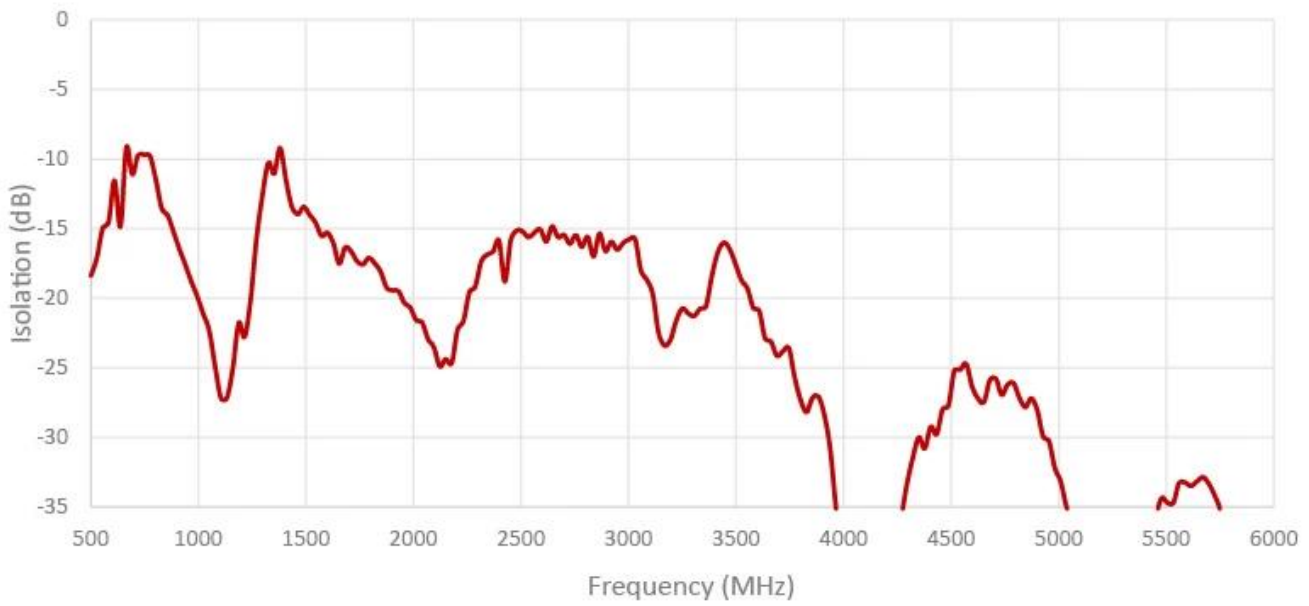


Isolation câble 1 et 3

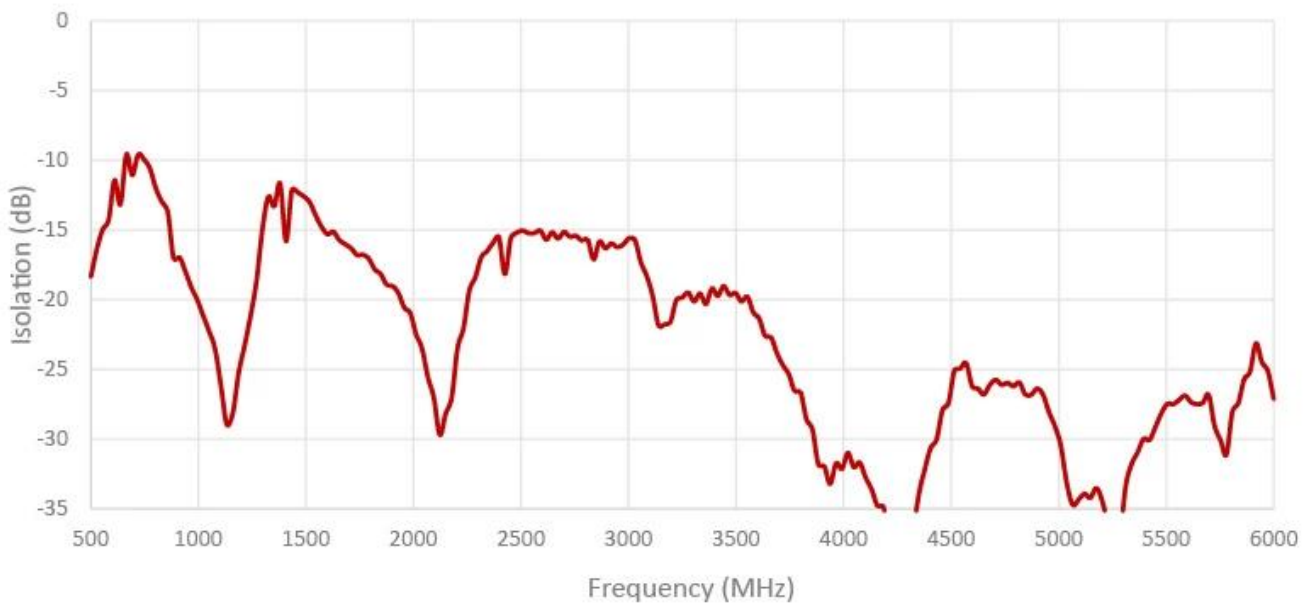




Isolation câble 1 et 4

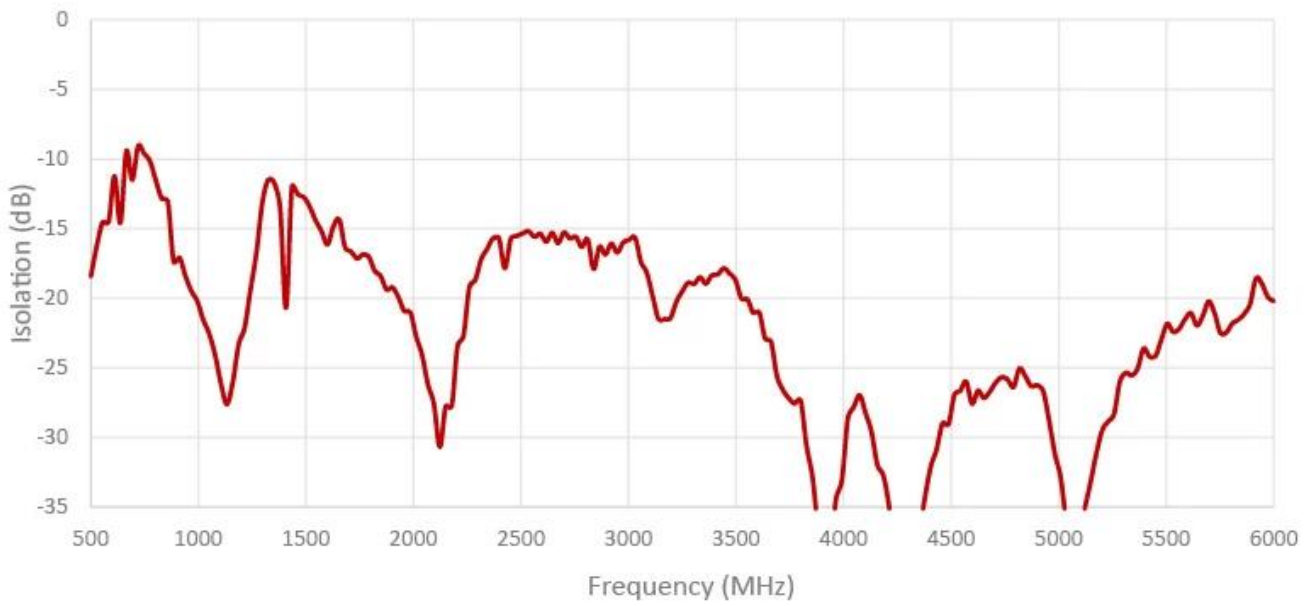


Isolation câble 2 et 3

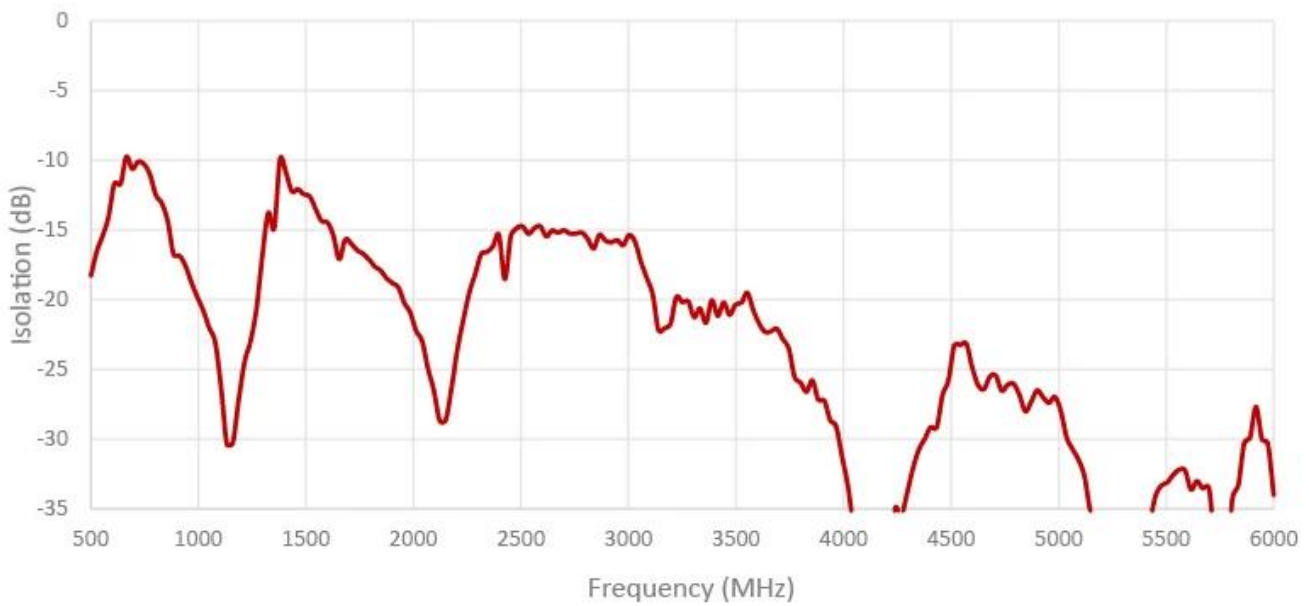




Isolation câble 2 et 4

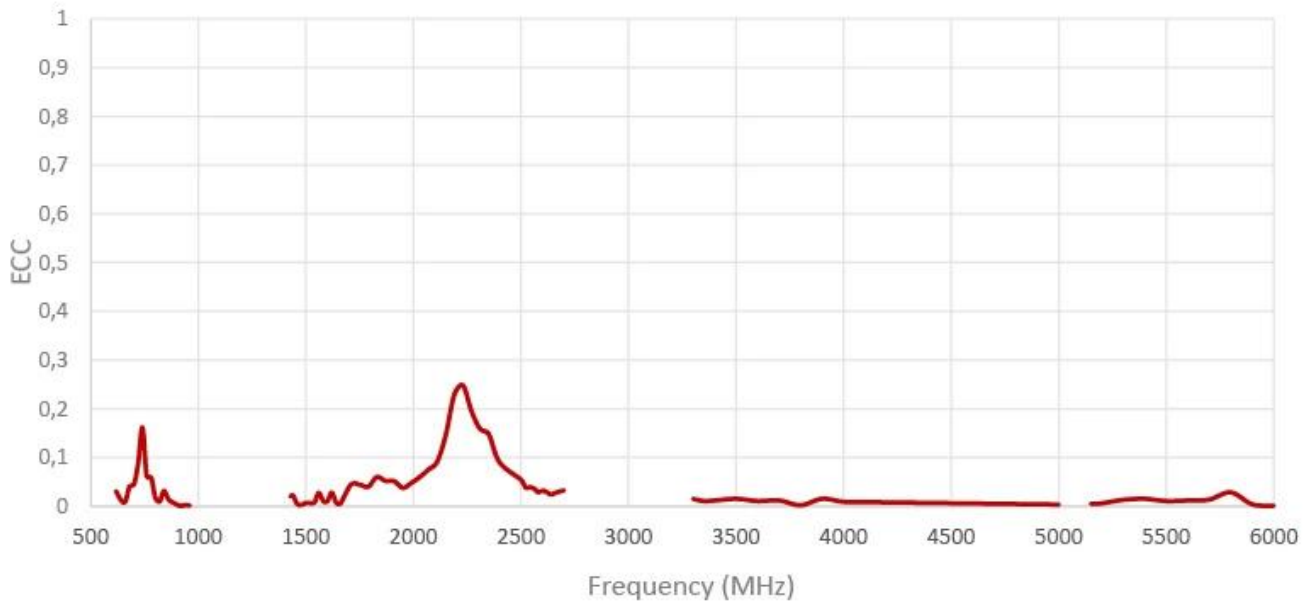


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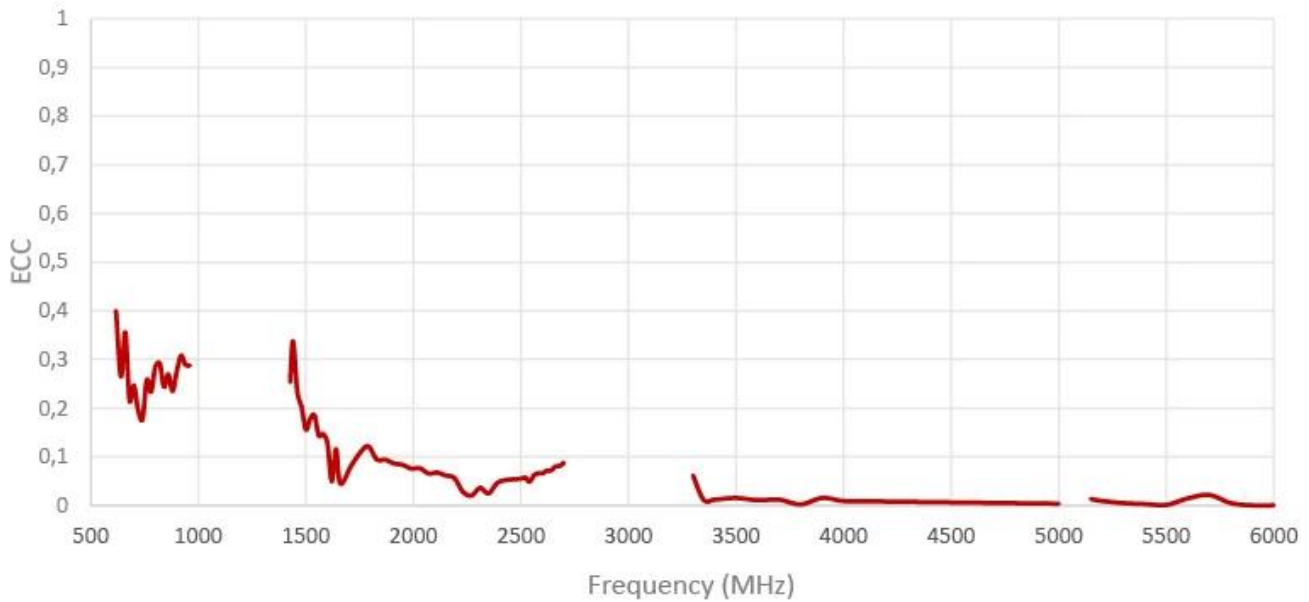




Coefficient de corrélation de l'enveloppe câble 1 et 2

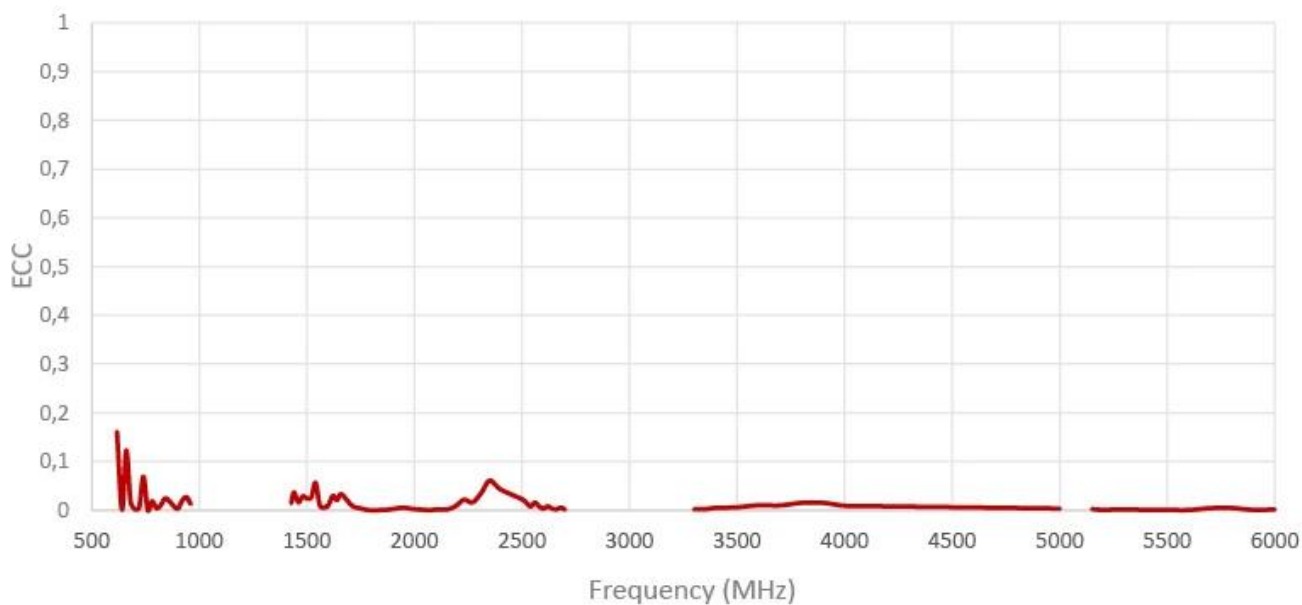


Coefficient de corrélation de l'enveloppe câble 1 et 3

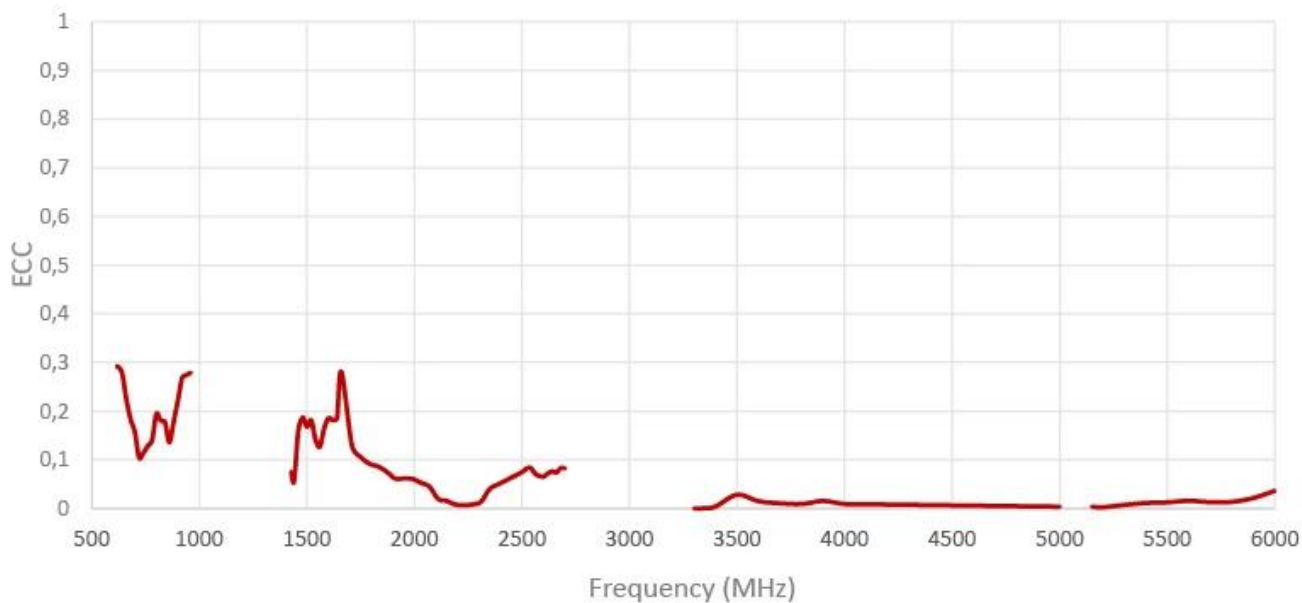




## Coefficient de corrélation de l'enveloppe câble 1 et 4

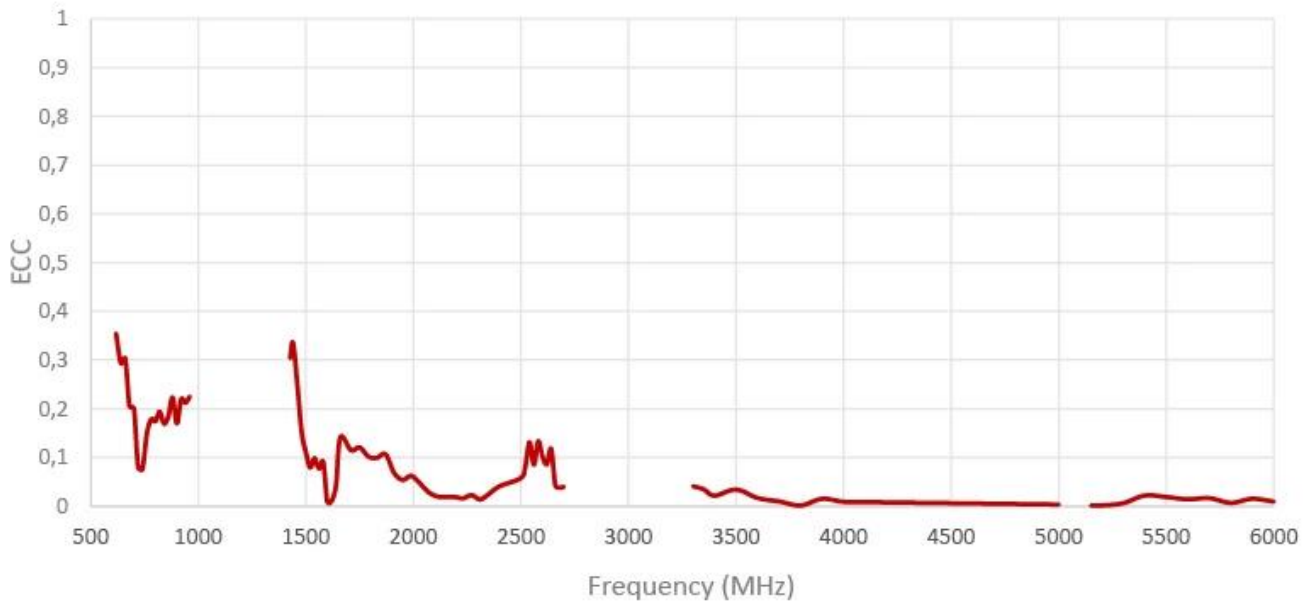


## Coefficient de corrélation de l'enveloppe câble 2 et 3

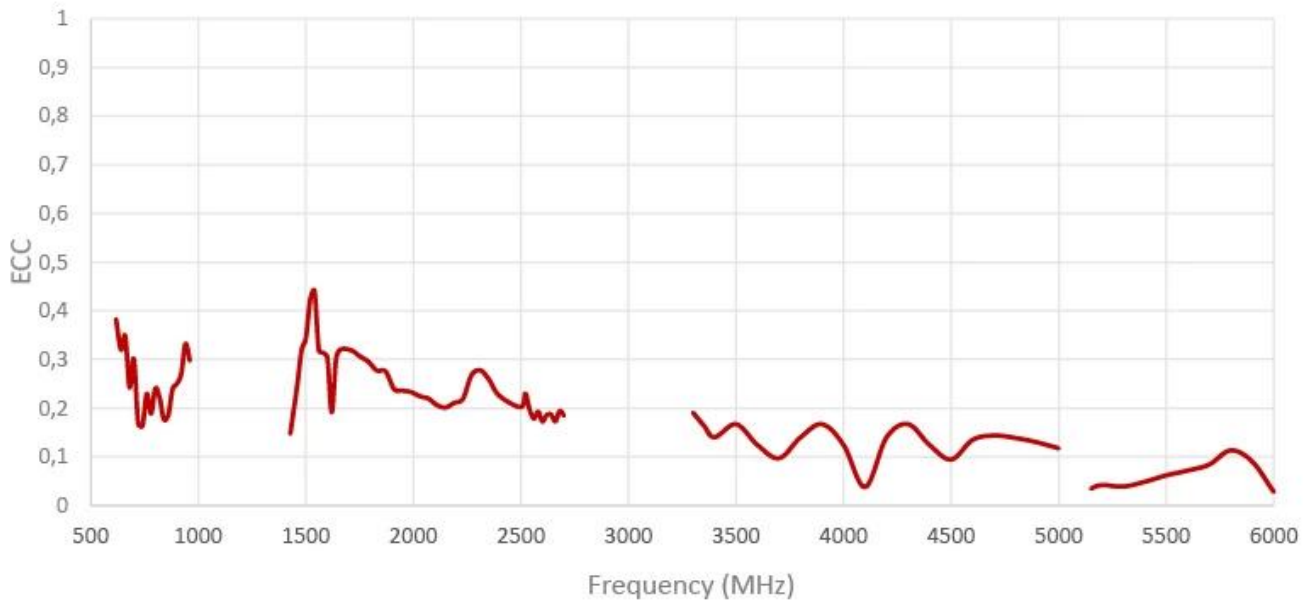




Coefficient de corrélation de l'enveloppe câble 2 et 4



Coefficient de corrélation de l'enveloppe câble 3 et 4

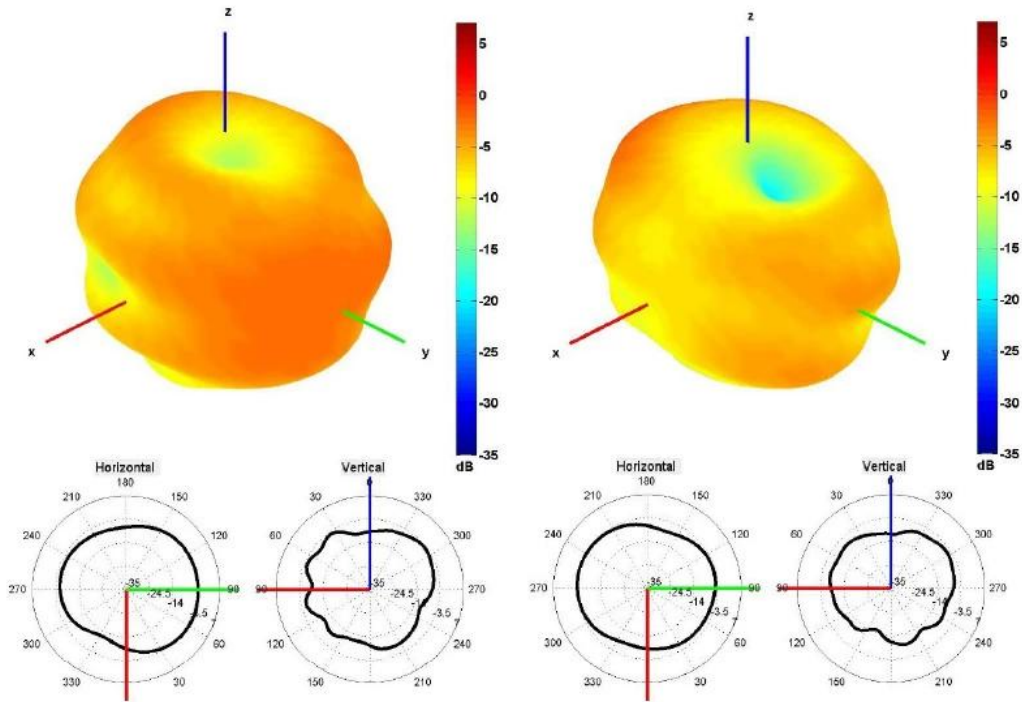




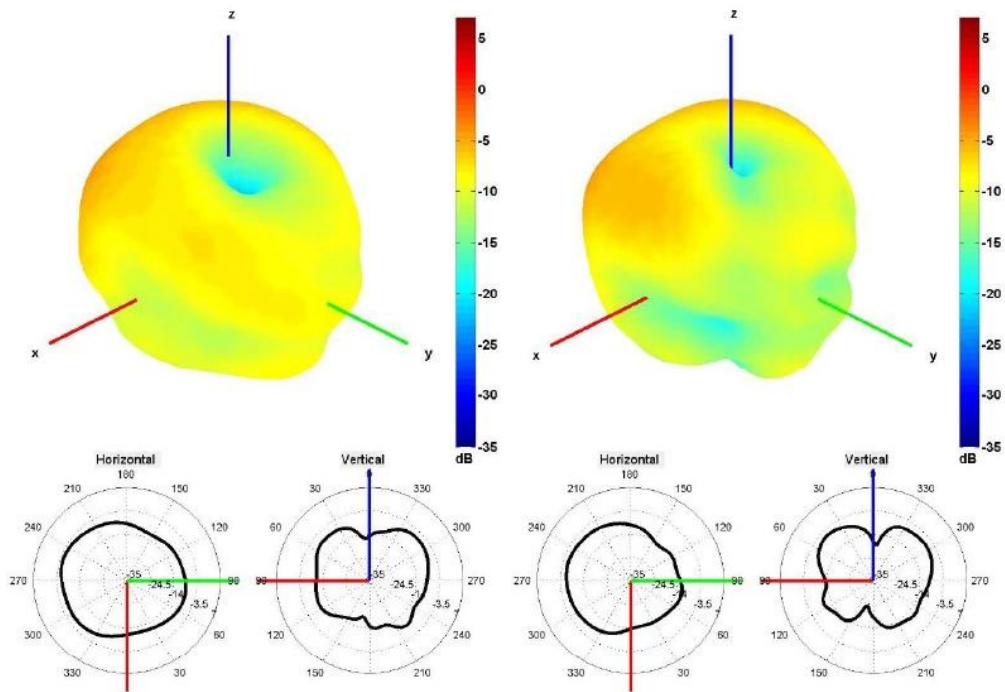
Radiation pattern reference



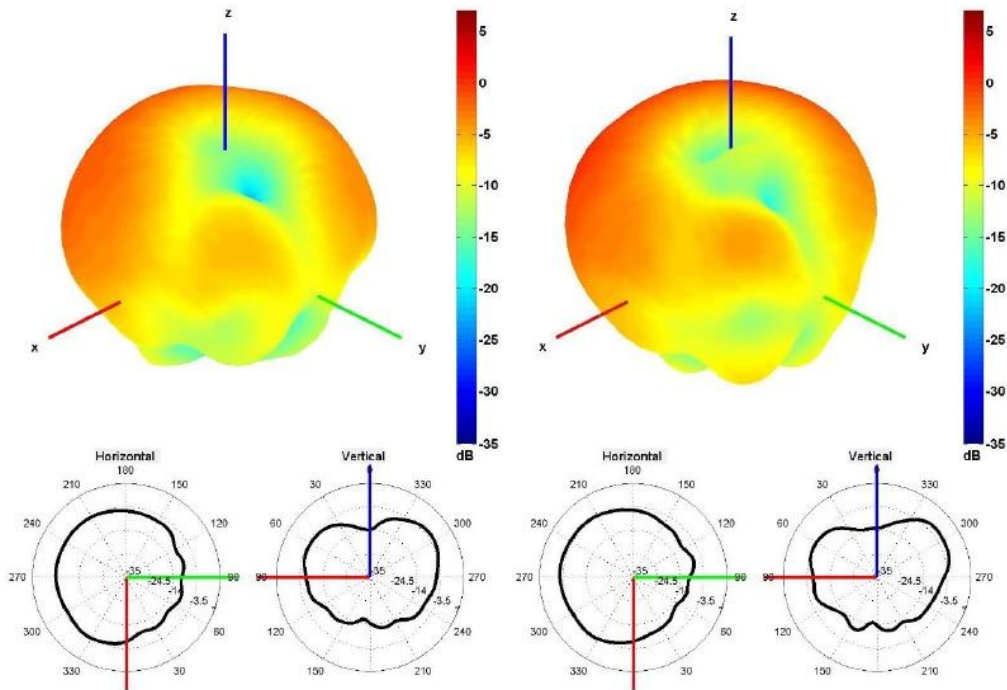
Câble 1 : 2G/3G/4G/5G - IoT/LPWAN



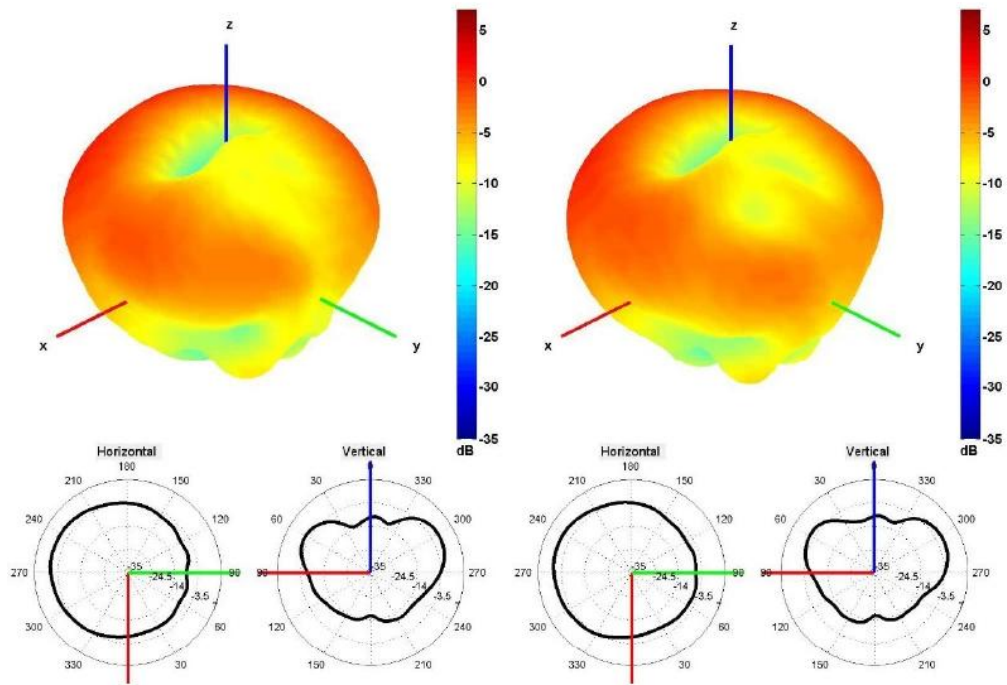
650 and 750 MHz Radiation pattern



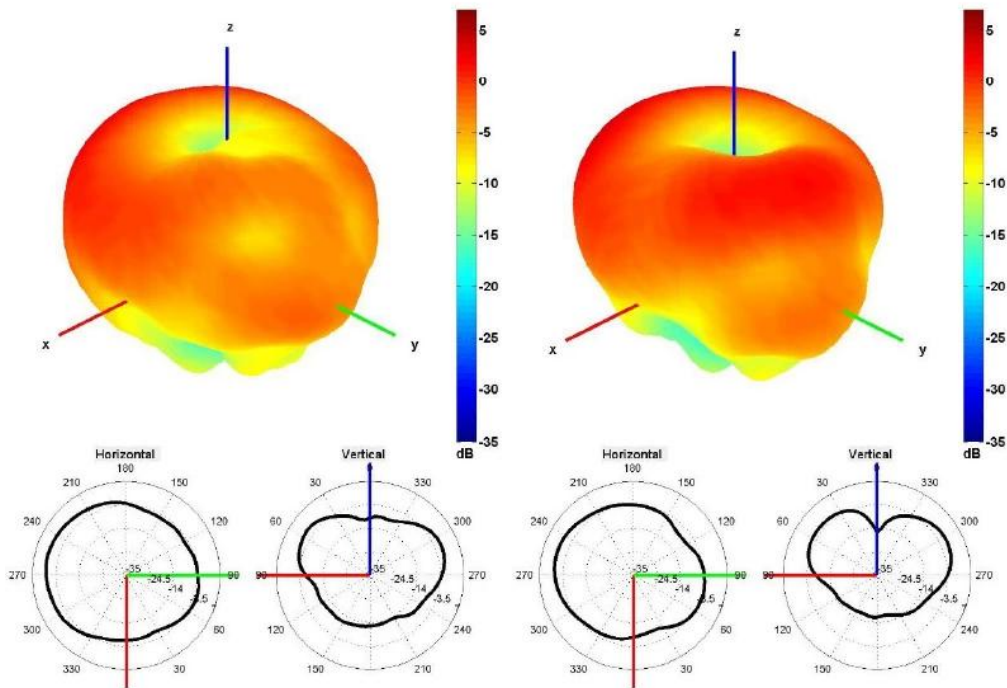
850 and 940 MHz Radiation pattern



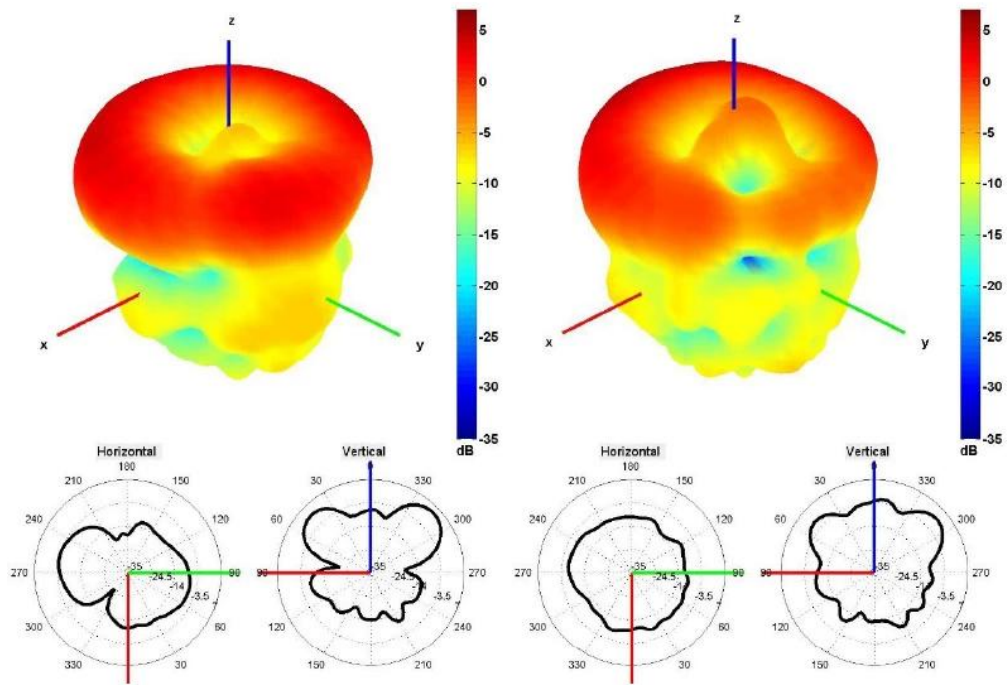
1500 and 1600 MHz Radiation pattern



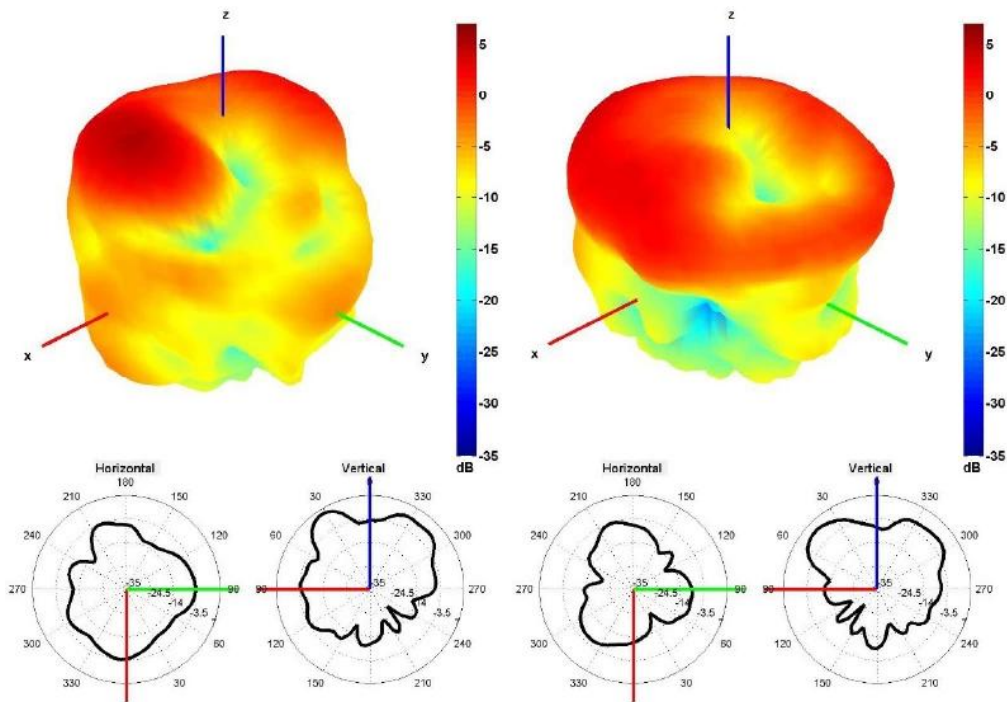
1750 and 1850 MHz Radiation pattern



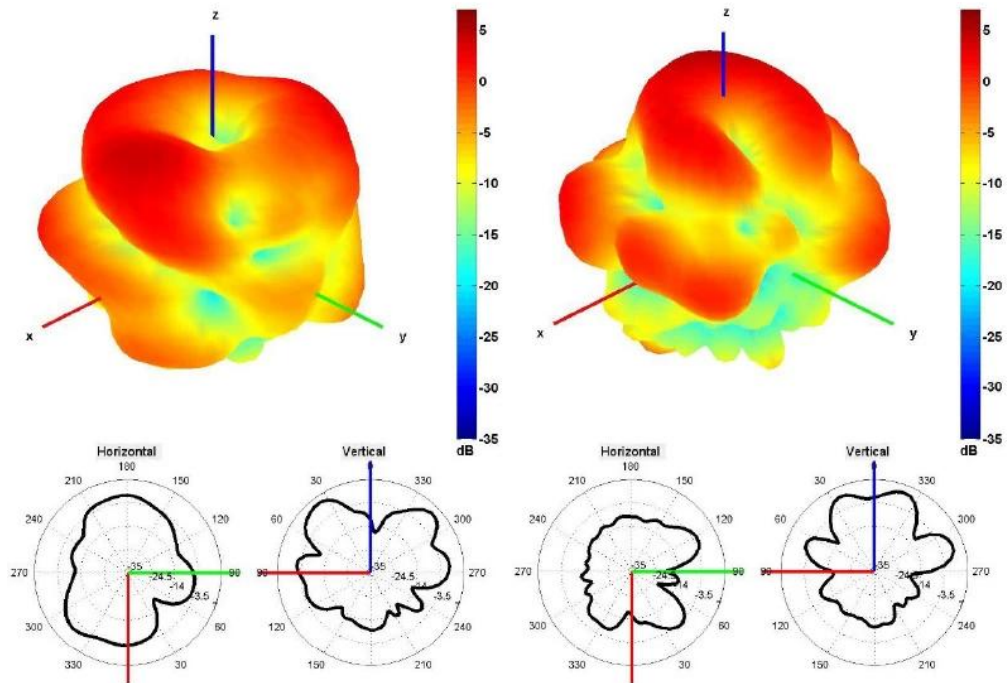
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern



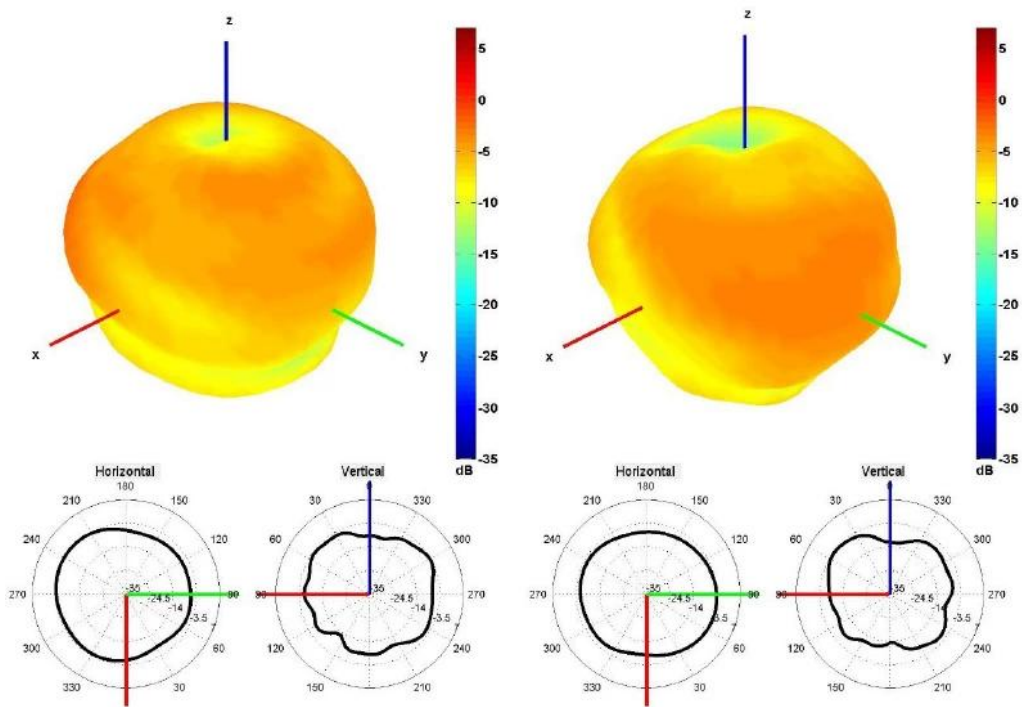
3350 and 3600 MHz Radiation pattern



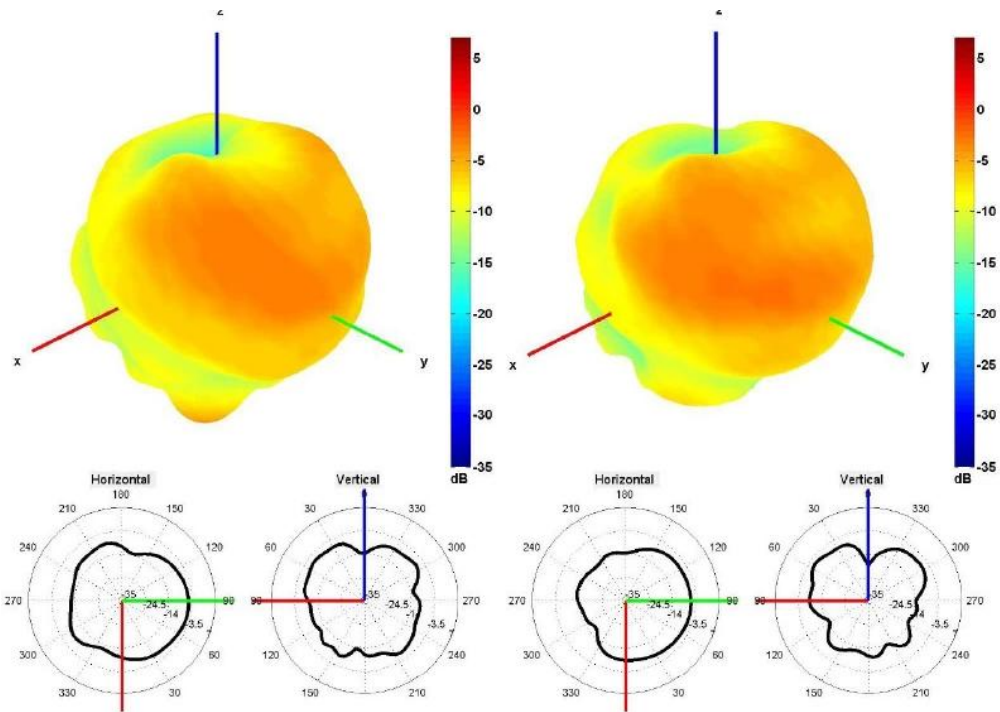
4500 and 5500 MHz Radiation pattern



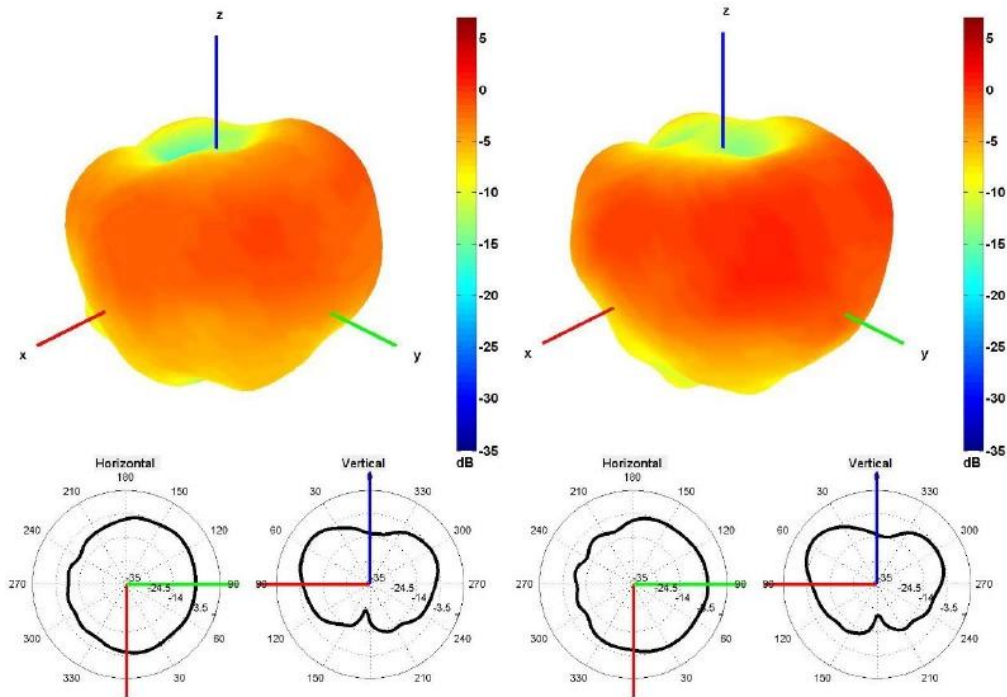
## Câble 2 : 2G/3G/4G/5G - IoT/LPWAN



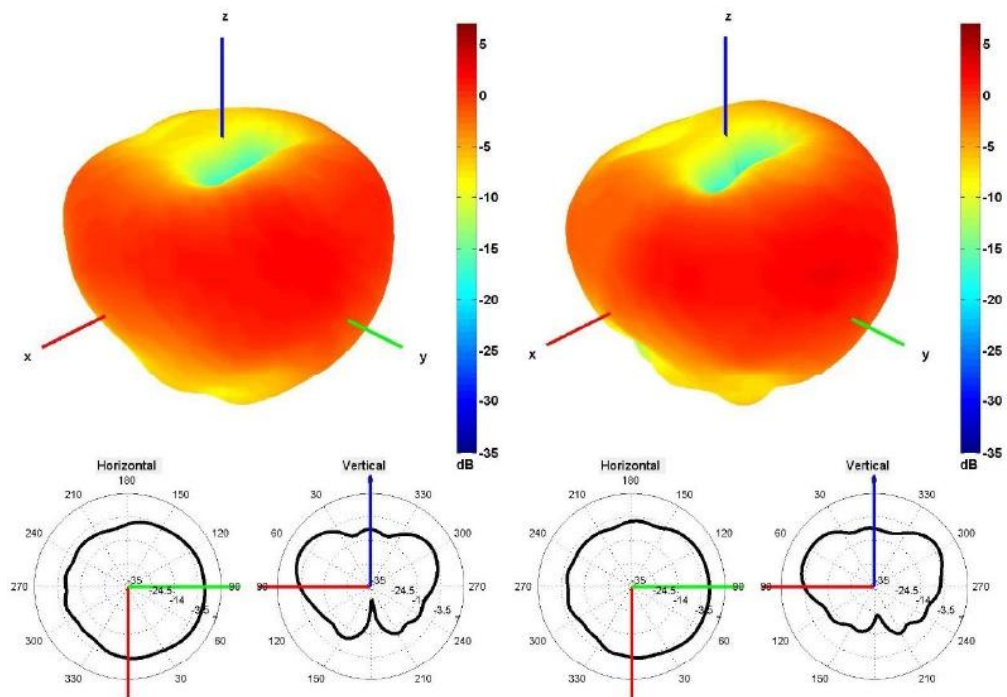
650 and 750 MHz Radiation pattern



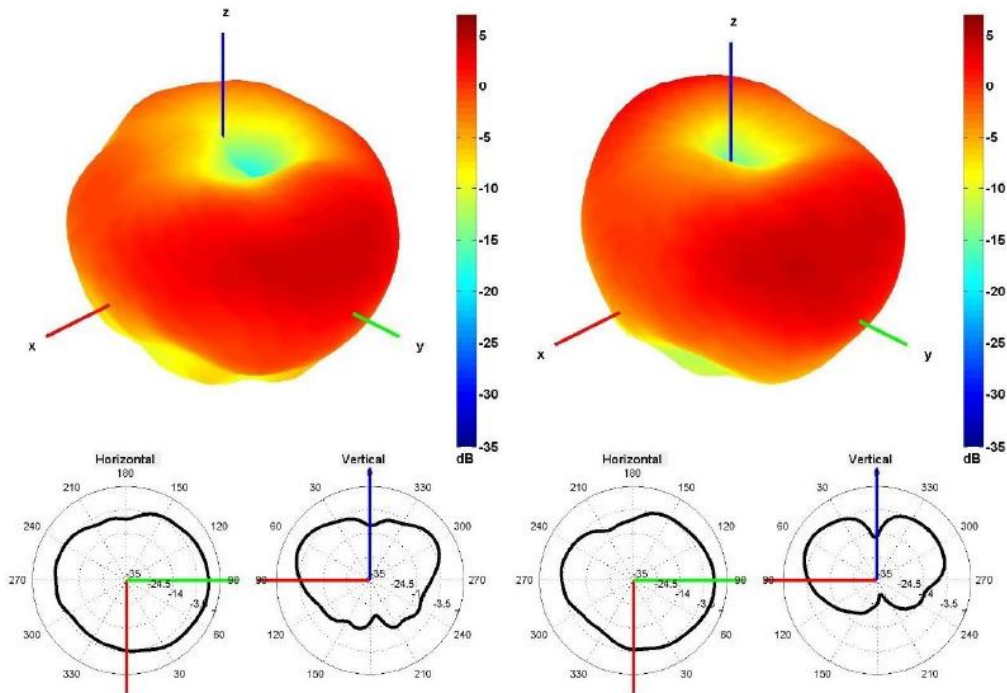
850 and 940 MHz Radiation pattern



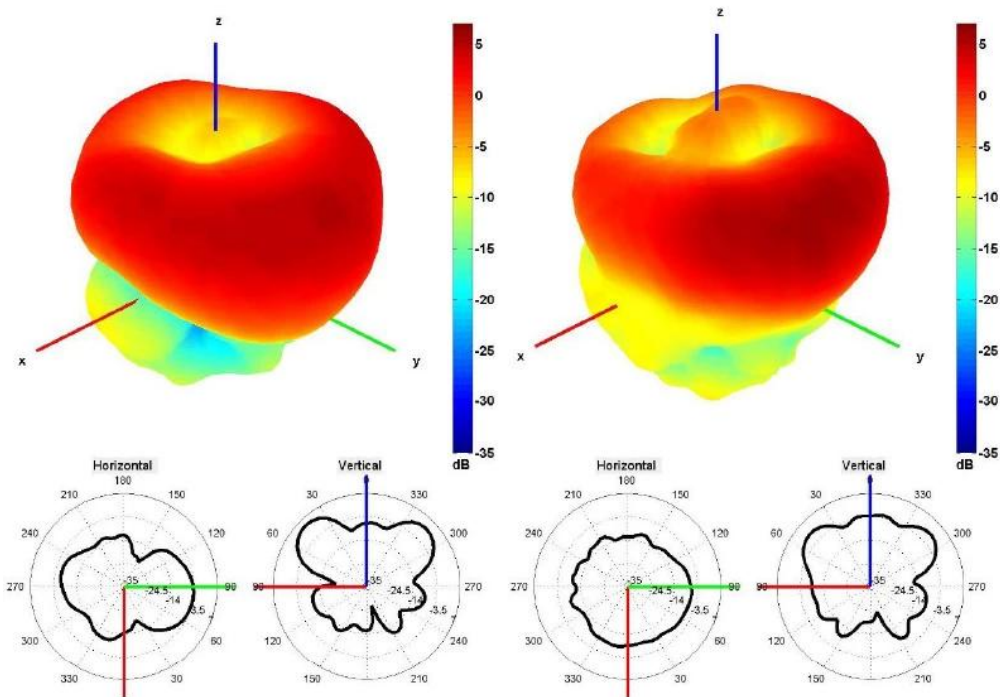
1500 and 1600 MHz Radiation pattern



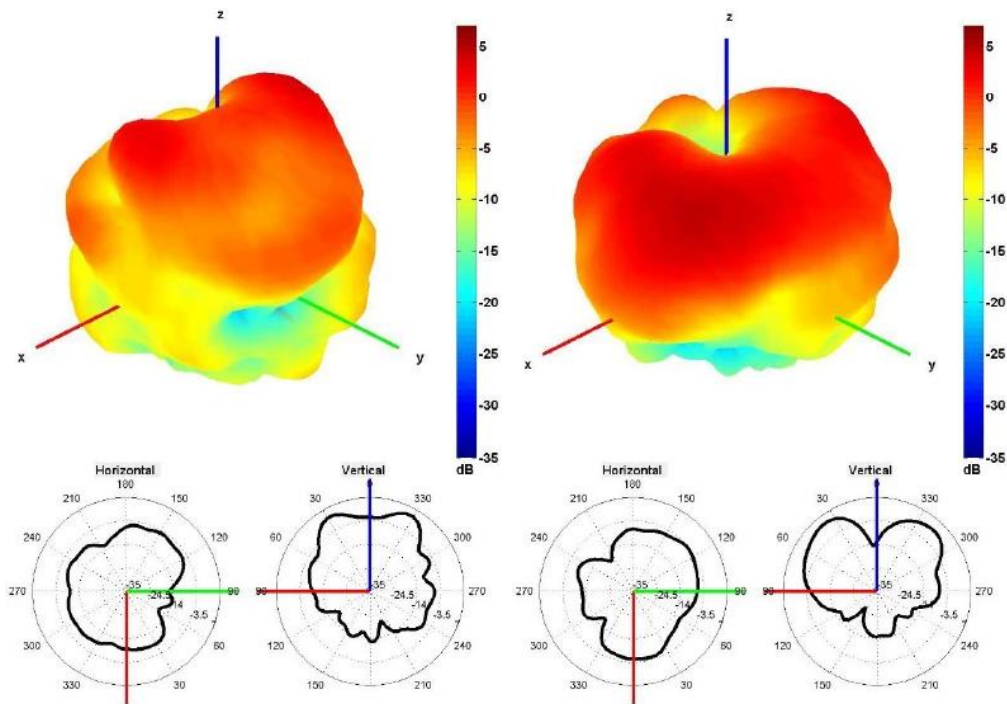
1750 and 1850 MHz Radiation pattern



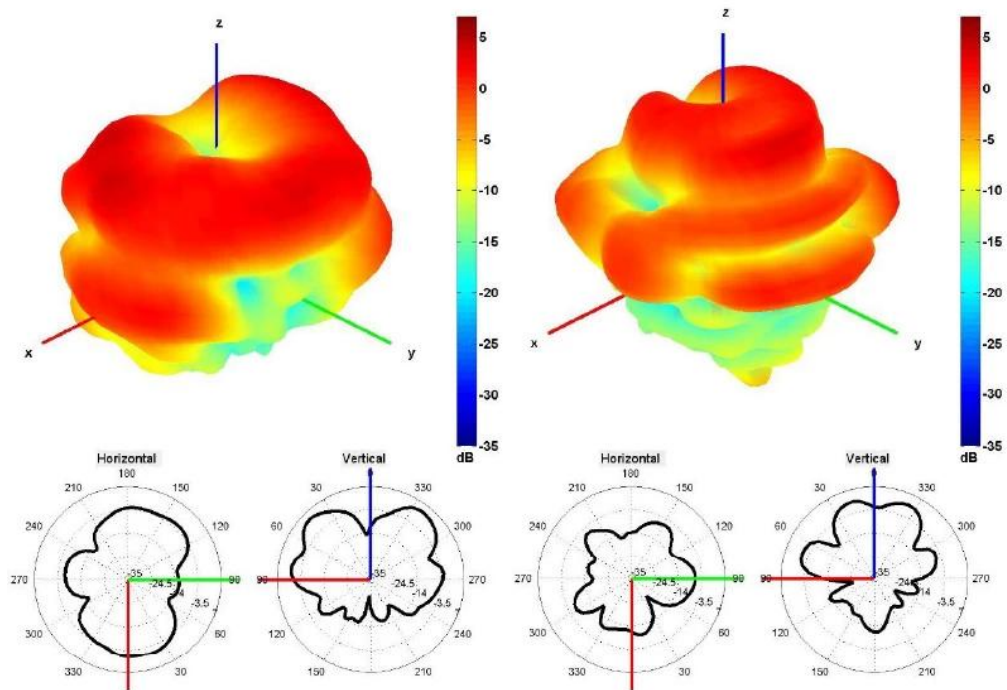
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern



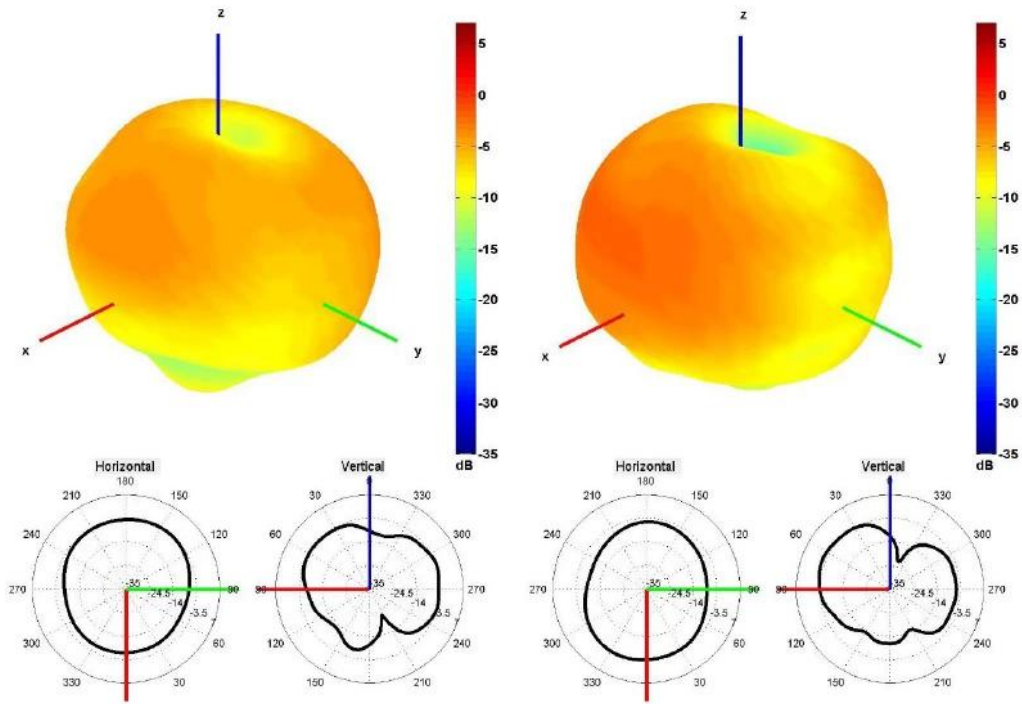
3350 and 3600 MHz Radiation pattern



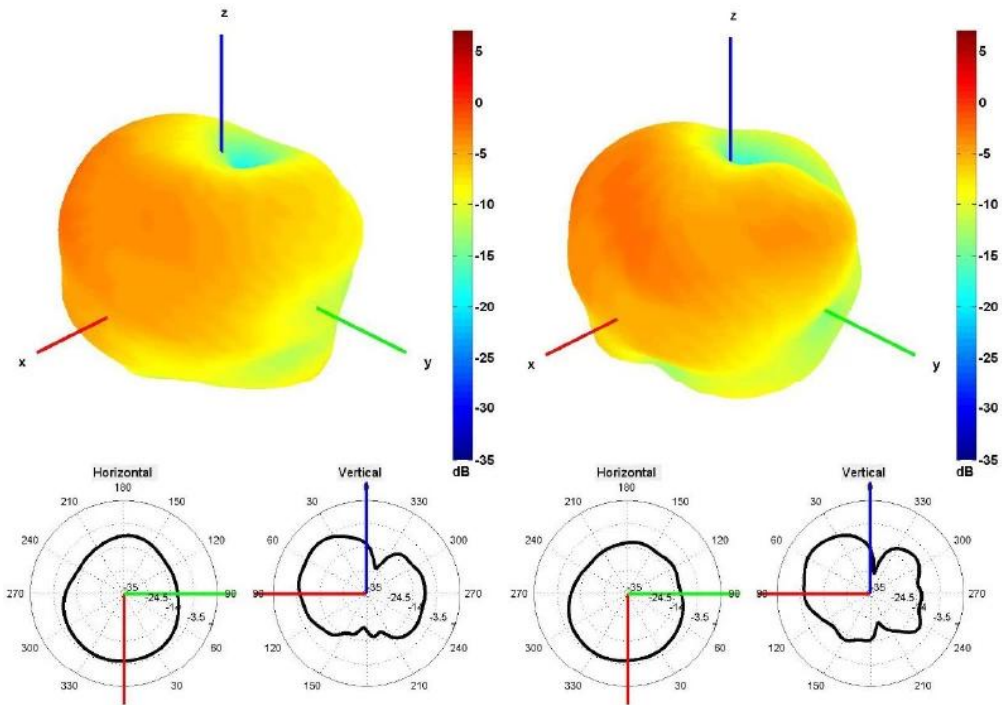
4500 and 5500 MHz Radiation pattern



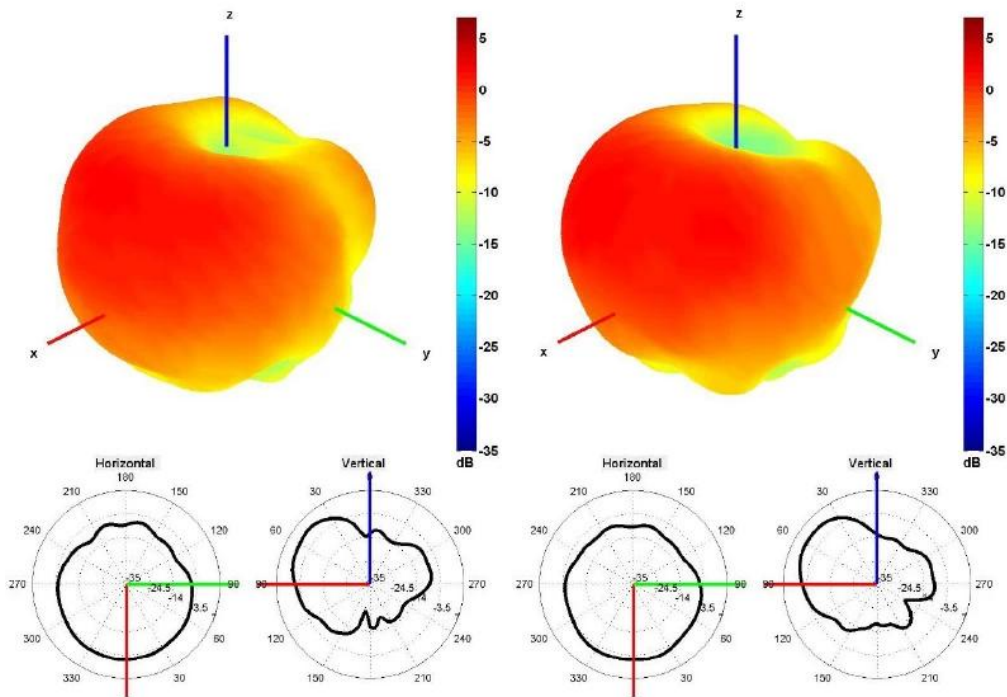
## Câble 3 : 2G/3G/4G/5G - IoT/LPWAN



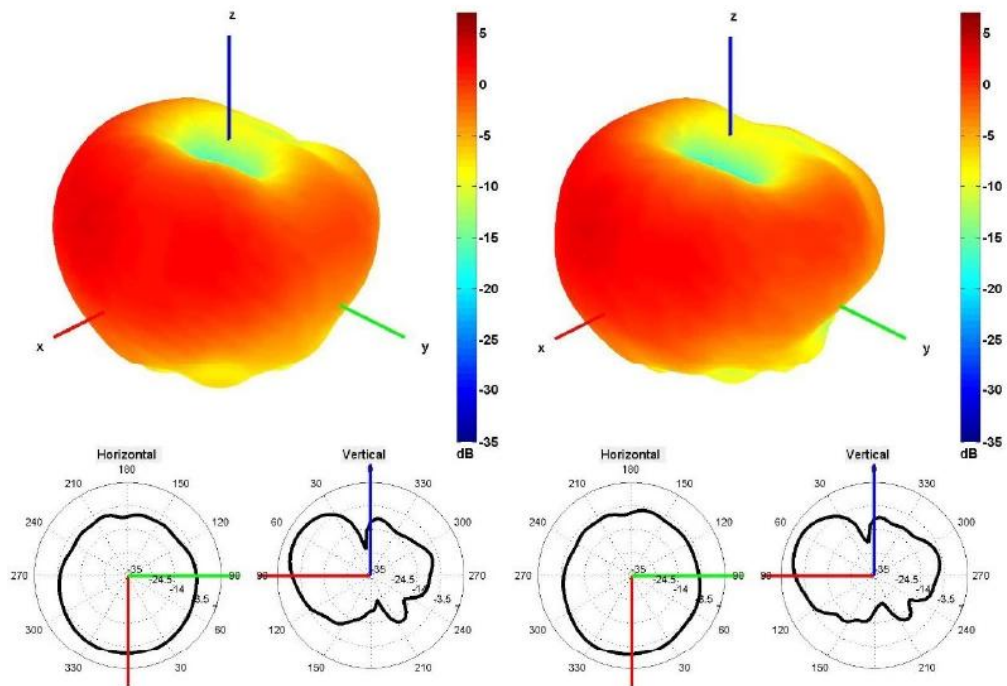
650 and 750 MHz Radiation pattern



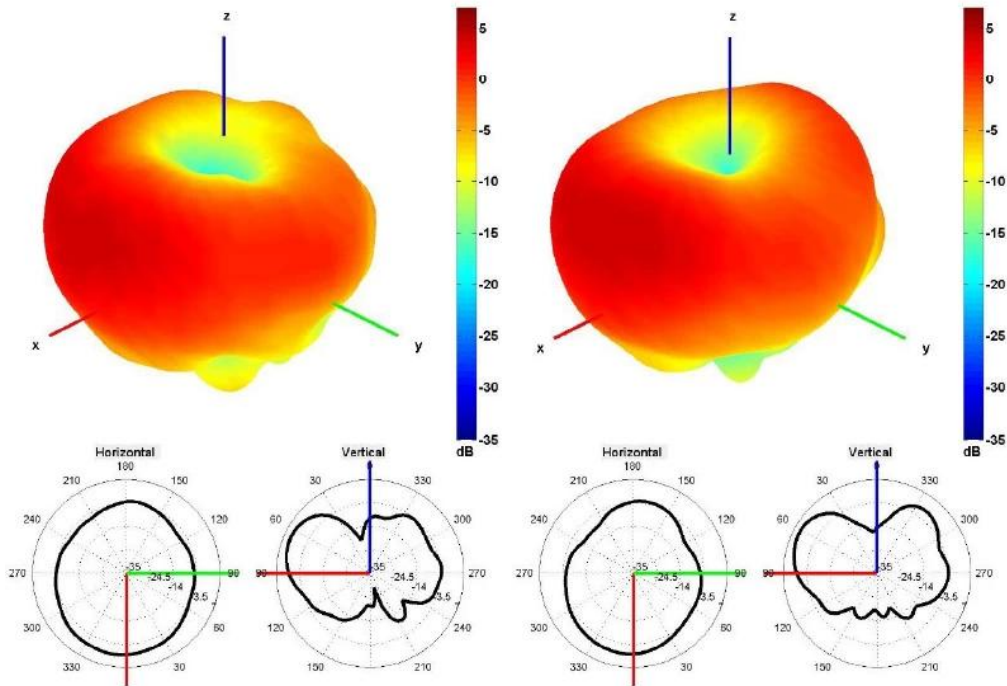
850 and 940 MHz Radiation pattern



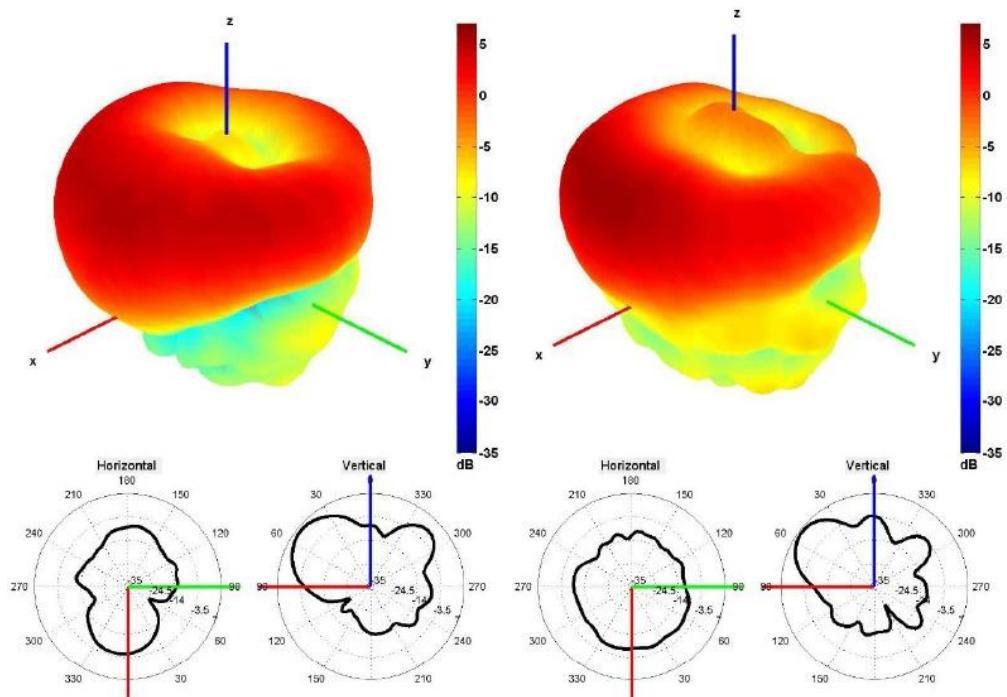
1500 and 1600 MHz Radiation pattern



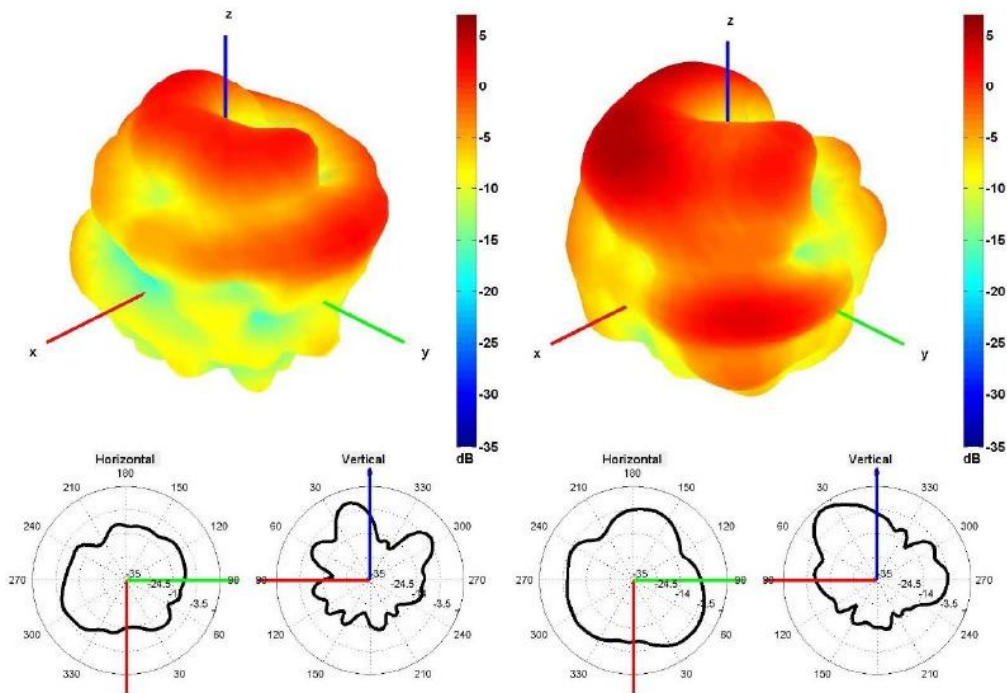
1750 and 1850 MHz Radiation pattern



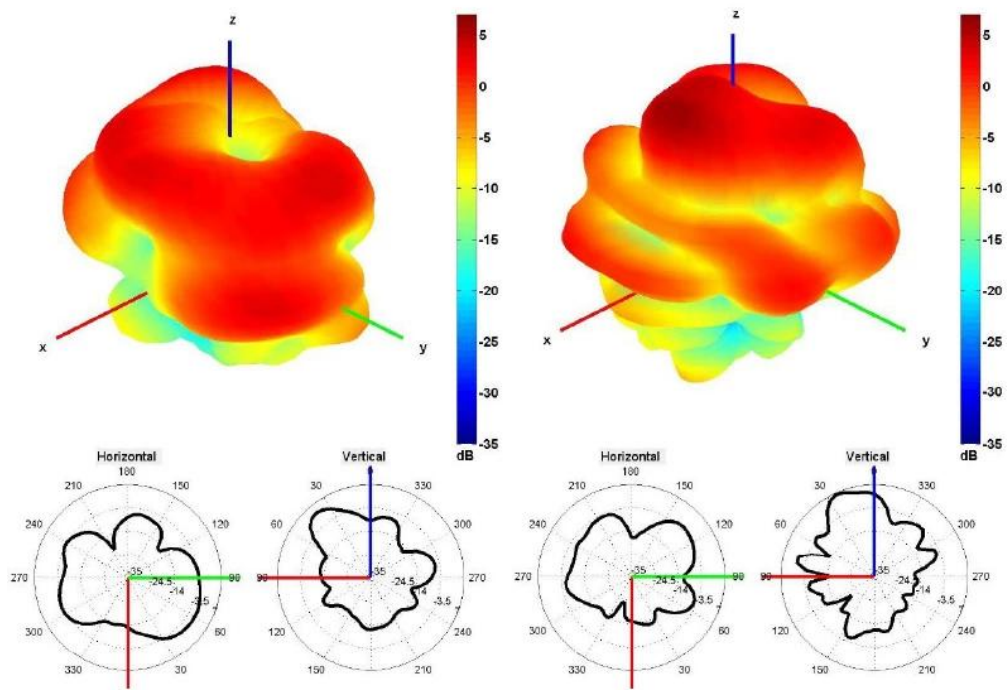
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern



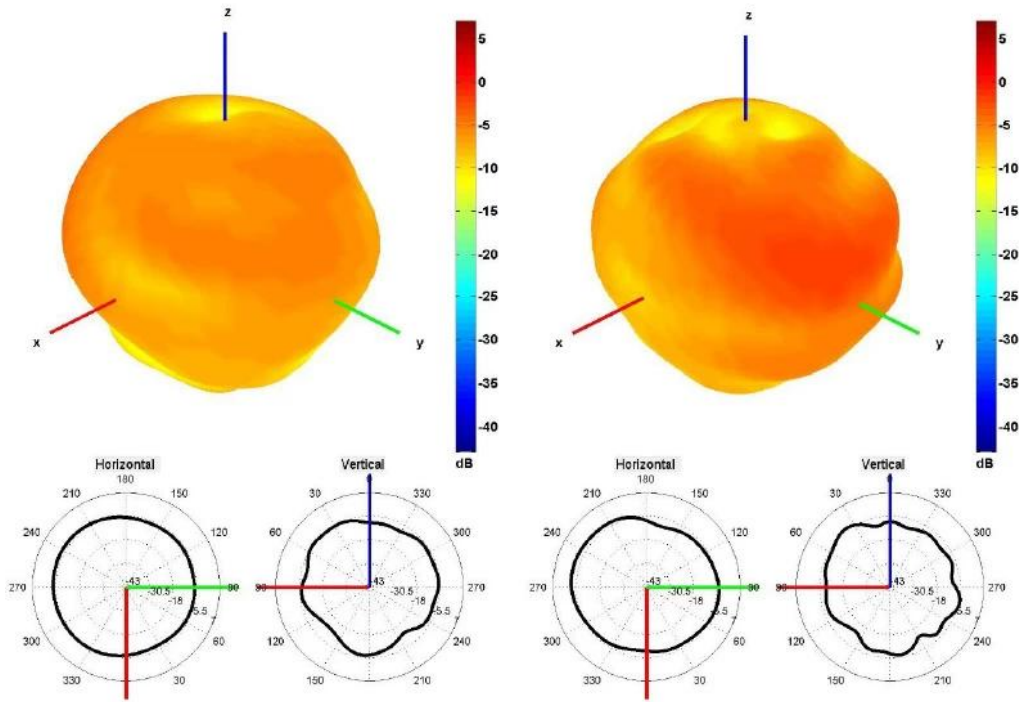
3350 and 3600 MHz Radiation pattern



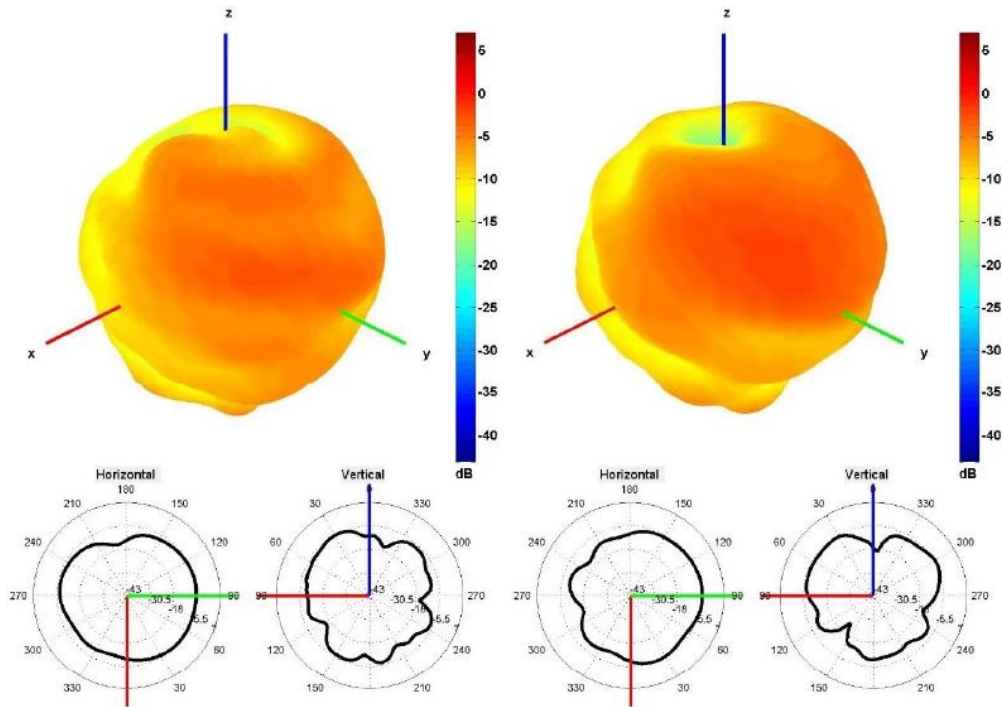
4500 and 5500 MHz Radiation pattern



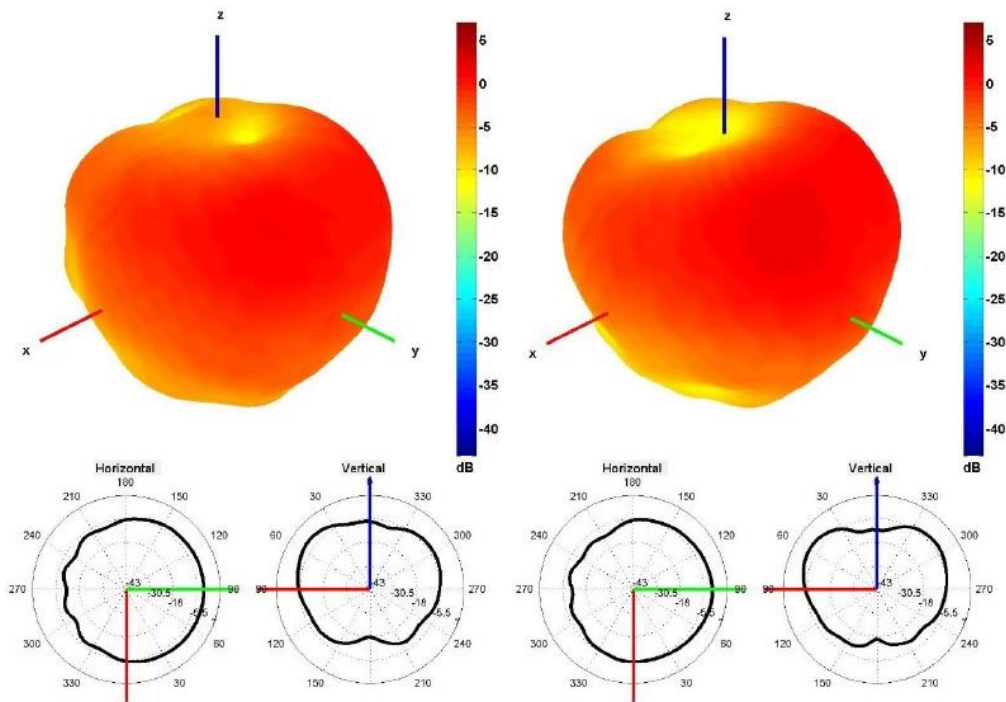
## Câble 4 : 2G/3G/4G/5G - IoT/LPWAN



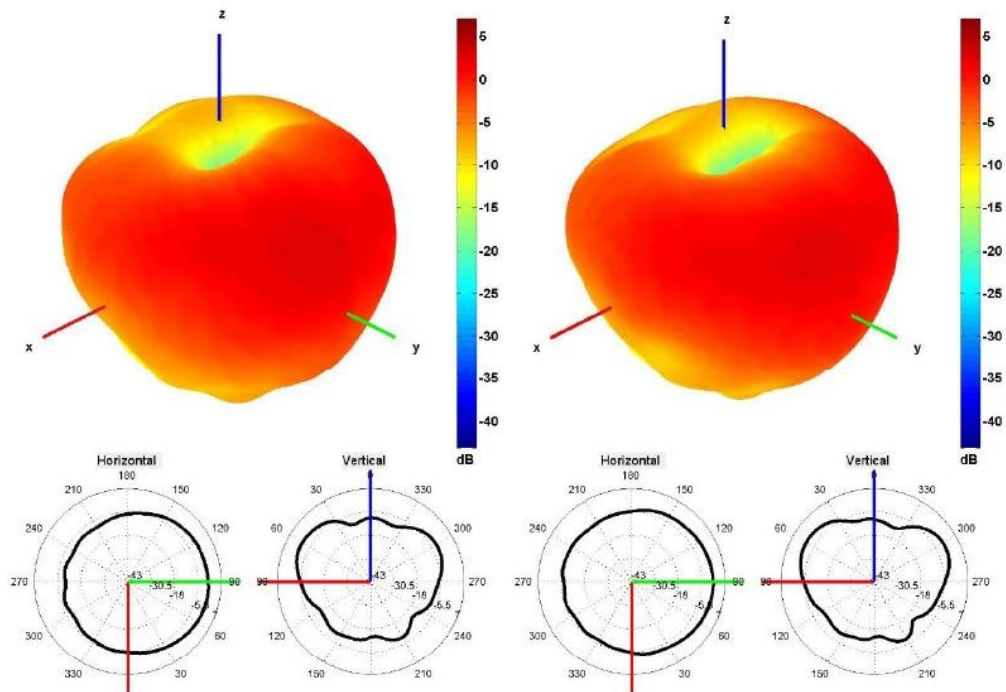
650 and 750 MHz Radiation pattern



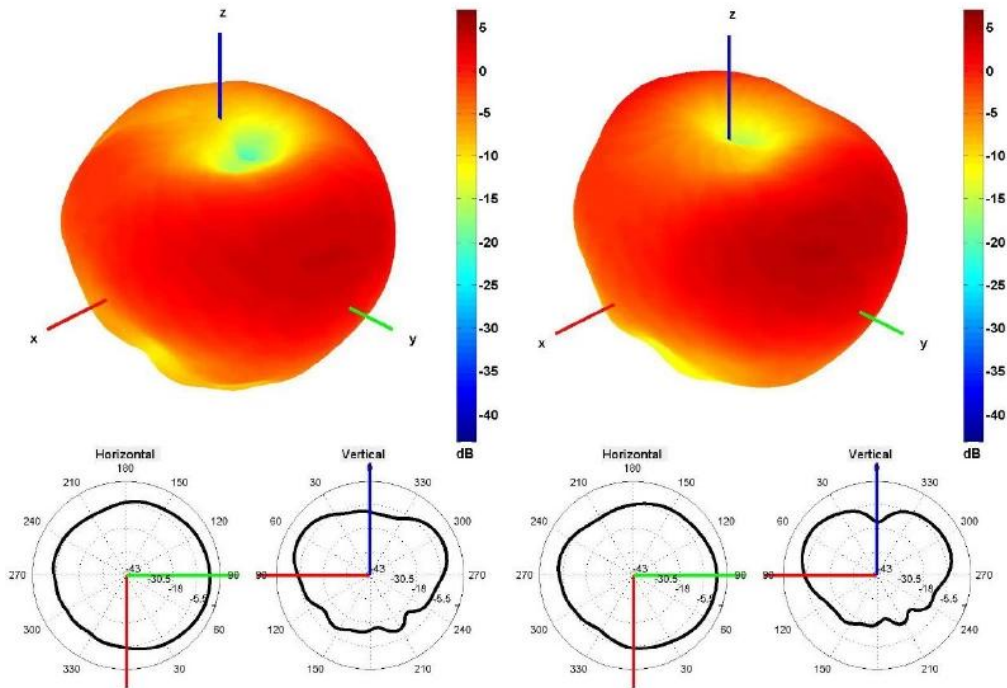
850 and 940 MHz Radiation pattern



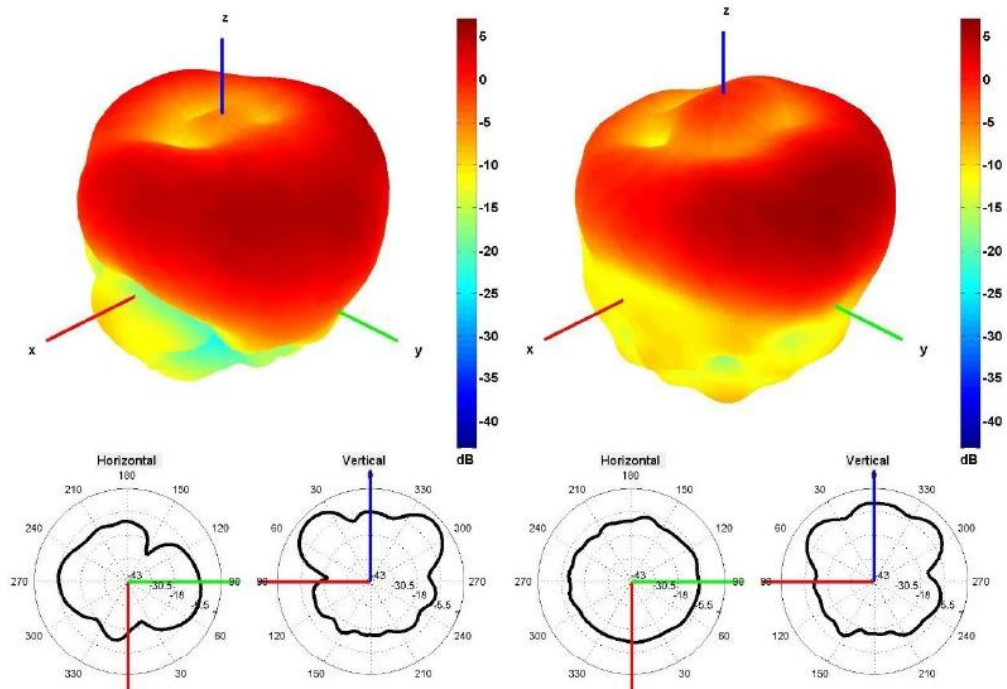
1500 and 1600 MHz Radiation pattern



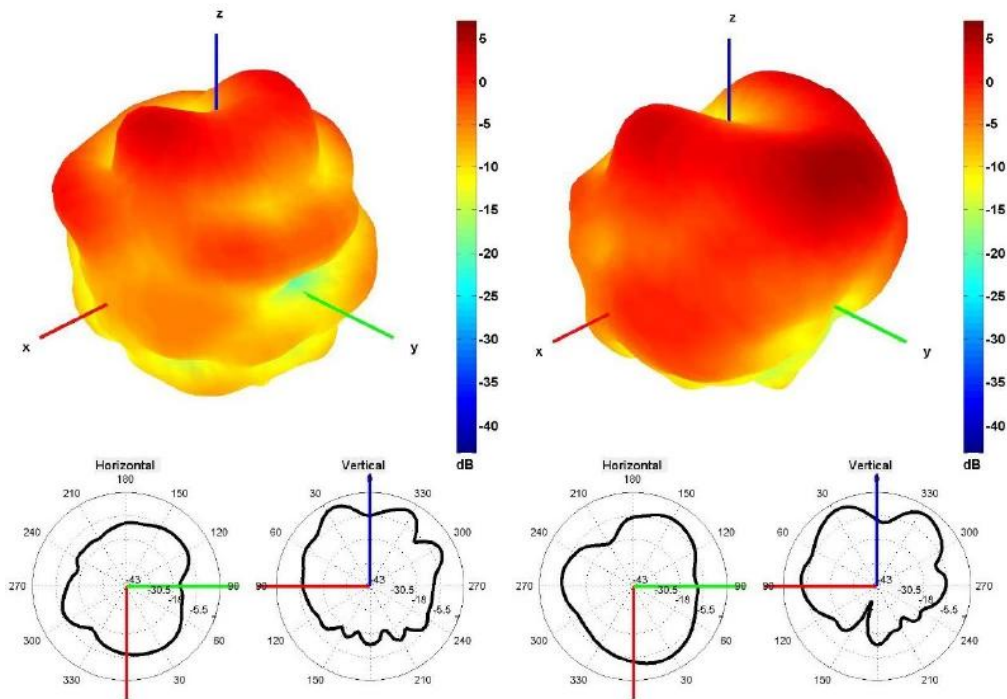
1750 and 1850 MHz Radiation pattern



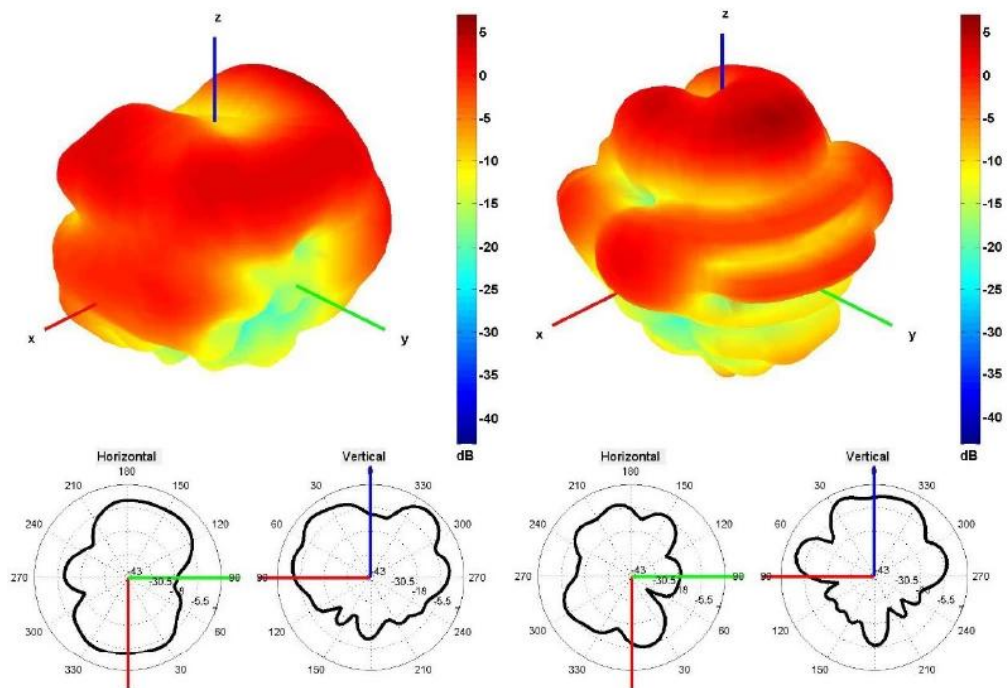
1950 and 2100 MHz Radiation pattern



2350 and 2600 MHz Radiation pattern



3350 and 3600 MHz Radiation pattern



4500 and 5500 MHz Radiation pattern



## SCHÉMAS

