



Antenne combinée 4×[5G/4G-LTE LPWA] MIMO 4×[2.4/5/6GHz WiFi 6E WIFI 7] GPS/GNSS adhésive IP67/IP69 | 6dBi / 28@2,7V

Référence GC-4H86PGFf

Gain	0.9 à 6.0dBi
Connecteur	SMA (M) / SMA (M-RP)
Dimensions (mm)	198 × 127 × 15,7
T° de fonctionnement	-40°C à +85°C

L'antenne ultra-large bande GC-4H86PGFf offre un gain et une efficacité élevés pour toutes les bandes GSM, LPWA, ISM (2,4 / 5,0 / 6,0 GHz - WiFi 6E / WIFI 7) ainsi qu'une connectivité GPS/GNSS.

Câbles 1 à 4 : GSM / IoT

Quatre antennes conçues pour les normes 5G, 4G-LTE, FirstNet, CBRS, LPWA, CAT-X, CAT-Mx, CAT-NBx, NB-IoT, 3G, 2G SigFox et LoRa 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 : ISM 2.4, 5 et 6 GHz - Bluetooth, WiFi 6E, WiFi 7

Combinant longue et courte portée, ces antennes sont conçues pour les normes WiFi, Bluetooth, ZigBee, ISM. Elles permettent des canaux à large bande passante, une sécurité améliorée, moins d'interférences et une réduction de la congestion réseau.

Câbles 9 : GPS/GNSS

Cette antenne fonctionne pour les normes GPS, GLONASS, BeiDou, Galileo et QZSS. Elle peut maintenir un gain actif de 28 dB @ 2,7V avec une réjection hors limite de ~43 dBc.

Conçue avec une protection contre les décharges électrostatiques (ESD) jusqu'à 6KV, elle est équipée d'un pré-filtre SAW bloquant les fréquences inadéquates dans la limite de 1575-1602 MHz.

INSTALLATION

Fabriqué avec un matériau ASA stable aux UV, le boîtier mesure 198 × 127 × 15,7 mm et profite d'une certification IP67/IP69 offrant une protection élevée contre la poussière, l'eau et l'humidité.

Indépendante du plan de masse l'antenne GC-4H86PGFf se fixe grâce à son puissant adhésif haute qualité sur tout type de surface.

Livrée en standard avec des connecteurs SMA-Mâle (câbles 1,2,3,4,9), SMA-Mâle-RP (câble 5,6,7,8) et des câbles D302 (GSM/ISM) et LL100 (GNSS) de 300cm de long chacun, elle reste entièrement personnalisable sur demande.



CARACTÉRISTIQUES

Câble 1 : 5G NR / 4G-LTE / FirstNet / CBRS / LPWA / 3G / 2G

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
FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
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)	~-13.2	~-15,7	~-12.6	~-11.6
VSWR	~1.6:1	~1.6:1	~1.7:1	~1,8:1
EFFICACITÉ (%)	~55.2	~46,9	~30,4	~26.3
GAIN DE CRÊTE (DBI)	~3.1	~4.5	~2.0	~0,9
GAIN MOYEN (DB)	~-2.6	~-3.3	~-5.2	~-5.8

Câble 2 : 5G NR / 4G-LTE / FirstNet / CBRS / LPWA / 3G / 2G

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
FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
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)	~-14.6	~-15.4	~-15,6	~-15,7
VSWR	~1,5:1	~1,5:1	~1,5:1	~1.4:1
EFFICACITÉ (%)	~55.1	~46,9	~35,5	~34.0
GAIN DE CRÊTE (DBI)	~3.3	~4.1	~3.2	~2.9
GAIN MOYEN (DB)	~-2.6	~-3.3	~-4.6	~-4.7

Câble 3 : 5G NR / 4G-LTE / FirstNet / CBRS / LPWA / 3G / 2G

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
FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
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)	~-15.4	~-14.3	~-13,7	~-13.0
VSWR	~1,5:1	~1.6:1	~1.7:1	~1.7:1
EFFICACITÉ (%)	~55.3	~44.0	~29,7	~27,5
GAIN DE CRÊTE (DBI)	~3.5	~3.4	~2.6	~3.1
GAIN MOYEN (DB)	~-2.6	~-3.6	~-5.4	~-5.6



Câble 4 : 5G NR / 4G-LTE / FirstNet / CBRS / LPWA / 3G / 2G

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
FRÉQUENCE(S) (MHZ)	617-960	1427-2690	3300-5000	5150-5925
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)	~-15.2	~-16,8	~-13,9	~-12,5
VSWR	~1,5:1	~1.4:1	~1.6:1	~1.7:1
EFFICACITÉ (%)	~57.1	~48,4	~30,4	~25.1
GAIN DE CRÊTE (DBI)	~3.4	~4.5	~2,5	~1.2
GAIN MOYEN (DB)	~-2.4	~-3.2	~-5.4	~-6.2

Caractéristiques communes Câbles 1 à 4 5G NR / 4G-LTE / FirstNet / CBRS / LPWA / 3G / 2G

IMPÉDANCE (OHMS)	50
POLARISATION	Linéaire
DIAGRAMME DE 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(s) D302 (autres câbles disponibles)

Câble 5 : WiFi, Bluetooth, ZigBee, ISM, SigFox, LoRa



BANDE(S) (MHZ)	2,4 GHz	5,0 GHz	6,0 GHz
FRÉQUENCE(S) (MHZ)	2410-2490	4920-5925	5925-7125
PERTE DE RETOUR (DB)	~-13,5	~-15,8	~-14.2
VSWR	~1.6:1	~1,5:1	~1.6:1
EFFICACITÉ (%)	~30,8	~20.2	~47.2
GAIN DE CRÊTE (DBI)	~4.5	~3.1	~3.8
GAIN MOYEN (DB)	~-5.1	~-7.1	~-3.3

Câble 6 : WiFi, Bluetooth, ZigBee, ISM, SigFox, LoRa

BANDE(S) (MHZ)	2,4 GHz	5,0 GHz	6,0 GHz
FRÉQUENCE(S) (MHZ)	2410-2490	4920-5925	5925-7125
PERTE DE RETOUR (DB)	~-11,9	~-13.2	~-11,8
VSWR	~1.9:1	~1.7:1	~1.9:1
EFFICACITÉ (%)	~37,6	~23.0	~42.3
GAIN DE CRÊTE (DBI)	~6.0	~5.0	~3.0
GAIN MOYEN (DB)	~-4.3	~-6,5	~-3.8

Câble 7 : WiFi, Bluetooth, ZigBee, ISM, SigFox, LoRa

BANDE(S) (MHZ)	2,4 GHz	5,0 GHz	6,0 GHz
FRÉQUENCE(S) (MHZ)	2410-2490	4920-5925	5925-7125
PERTE DE RETOUR (DB)	~-19.2	~-14,8	~-13.4
VSWR	~1.3:1	~1.6:1	~1.6:1
EFFICACITÉ (%)	~38.2	~34.3	~44.4
GAIN DE CRÊTE (DBI)	~3.7	~2.3	~3.1
GAIN MOYEN (DB)	~-4.2	~-4.7	~-3,5

Câble 8 : WiFi, Bluetooth, ZigBee, ISM, SigFox, LoRa

BANDE(S) (MHZ)	2,4 GHz	5,0 GHz	6,0 GHz
FRÉQUENCE(S) (MHZ)	2410-2490	4920-5925	5925-7125
PERTE DE RETOUR (DB)	~-16,5	~-15,5	~-7,9



VSWR	~1.4:1	~1,5:1	~1,5:1
EFFICACITÉ (%)	~36.3	~28,4	~39,4
GAIN DE CRÊTE (DBI)	~4.4	~2.6	~3.1
GAIN MOYEN (DB)	~-4.4	~-5.5	~-4.0

Caractéristiques communes Câbles 5 à 8 WiFi, Bluetooth, ZigBee, ISM, SigFox, LoRa

IMPÉDANCE (OHMS)	50
POLARISATION	Linéaire
DIAGRAMME DE RAYONNEMENT	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(s) D302 (autres câbles disponibles)

Câble 9 : GPS/GLONASS/QZSS/Galileo

BANDES (MHZ)	1575	1602
FRÉQUENCE(S) (MHZ)	1575.42	1598-1606
GAIN PASSIF (DBI)	~4.5	~5.0
IMPÉDANCE (OHMS)	50	
DIAGRAMME DE RAYONNEMENT	Hémisphérique	
PLAGE DE TENSION (V)	1,5 - 3,6	
GAIN ACTIF (DB)	28 à 2,7 V	
FACTEUR DE BRUIT (DB)	1,8 à 2,7 V	
CONSOMMATION DE COURANT (MA)	9 à 2,7 V	
CONSOMMATION D'ÉNERGIE (MW)	24,3 à 2,7 V	
TYPE DE FILTRE À SCIE	Pré-filtre	
REJET HORS BANDE (DB)	~43	
PROTECTION CONTRE LES DÉCHARGES ÉLECTROSTATIQUES (KV)	6	
CONNECTEUR	SMA-Mâle Standard (Autres connecteurs disponibles)	
LONGUEUR DU CÂBLE	300 cm Standard (toute longueur de câble disponible)	



TYPE DE CÂBLE

LL100 Standard (Autres câbles disponibles)

Conditions de mesure de l'antenne :

- Monté sur plaque plastique de 30 × 30 × 0,25 cm
- 100 cm de câble D302
- Mesuré dans une chambre anéchoïque 3D certifiée CTIA

SPÉCIFICATIONS

TYPE DE MONTAGE	Support adhésif
DIMENSIONS (MM)	198 × 127 × 15,7
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

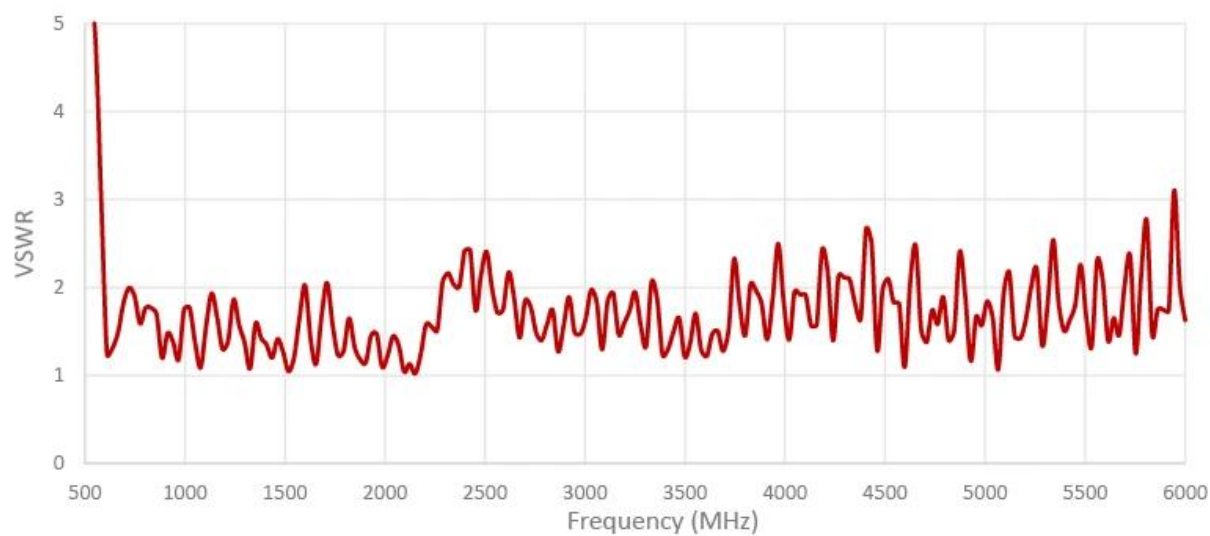
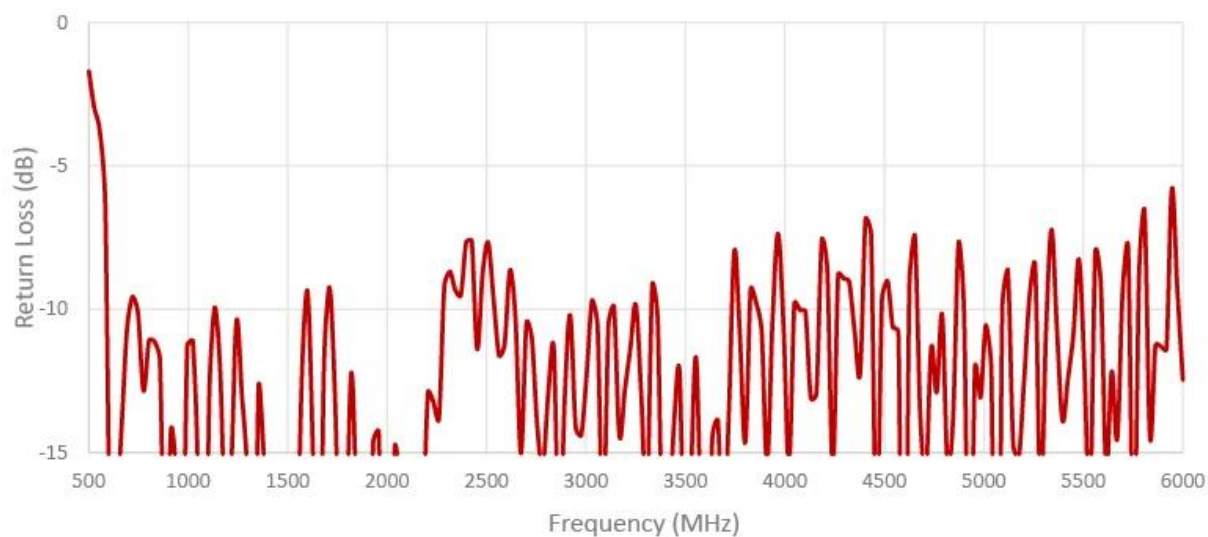
Cette gamme d'antenne est fabriquée sans matières dangereuses tout en maintenant une conformité totale avec REACH et RoHS.





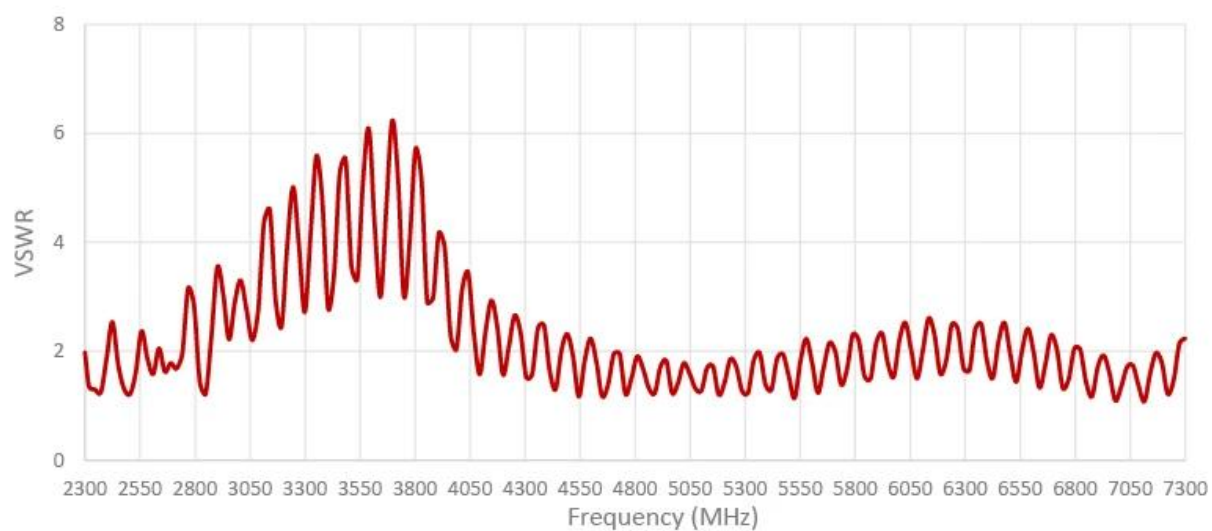
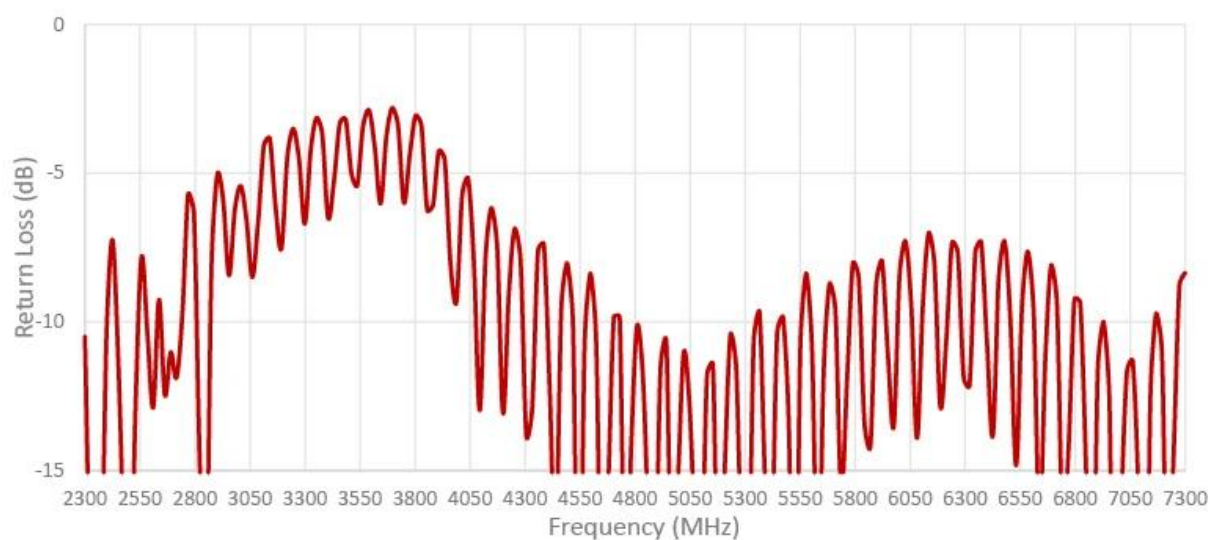
MESURES

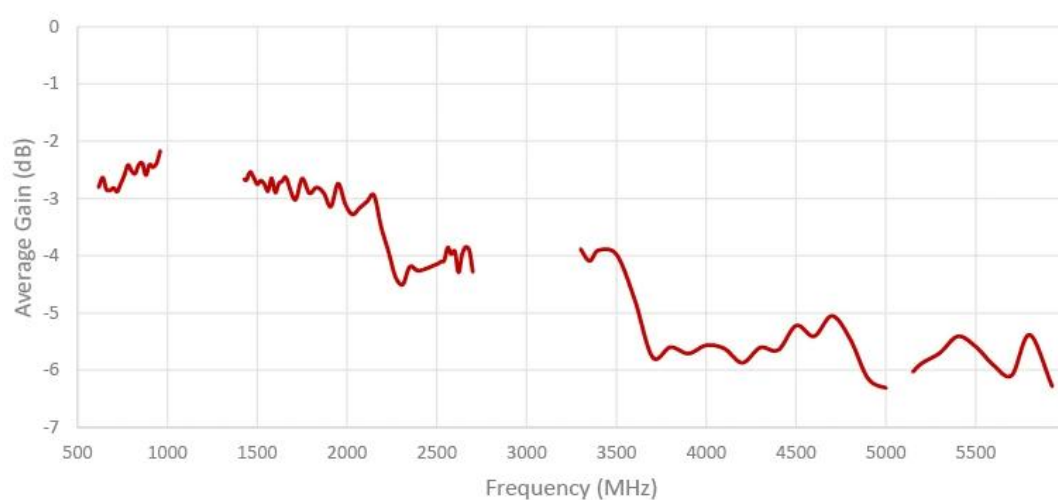
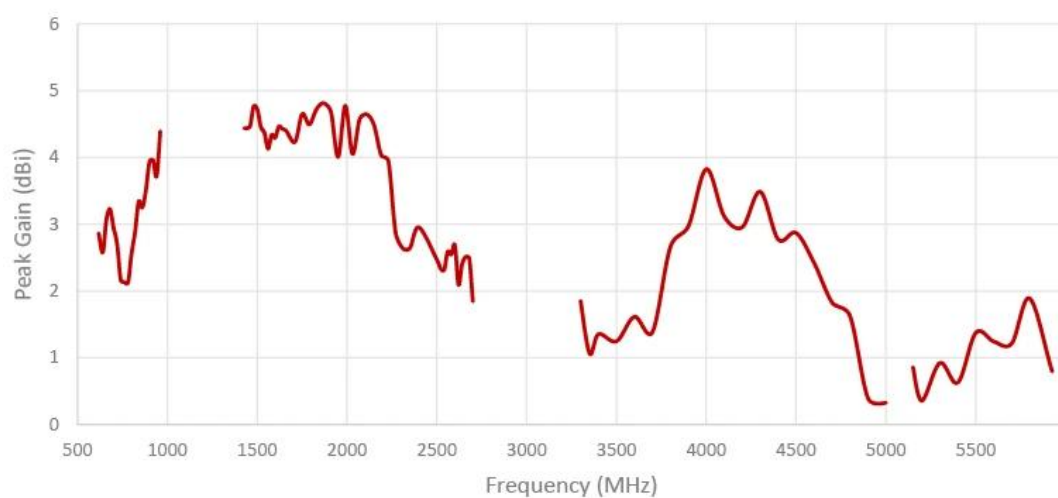
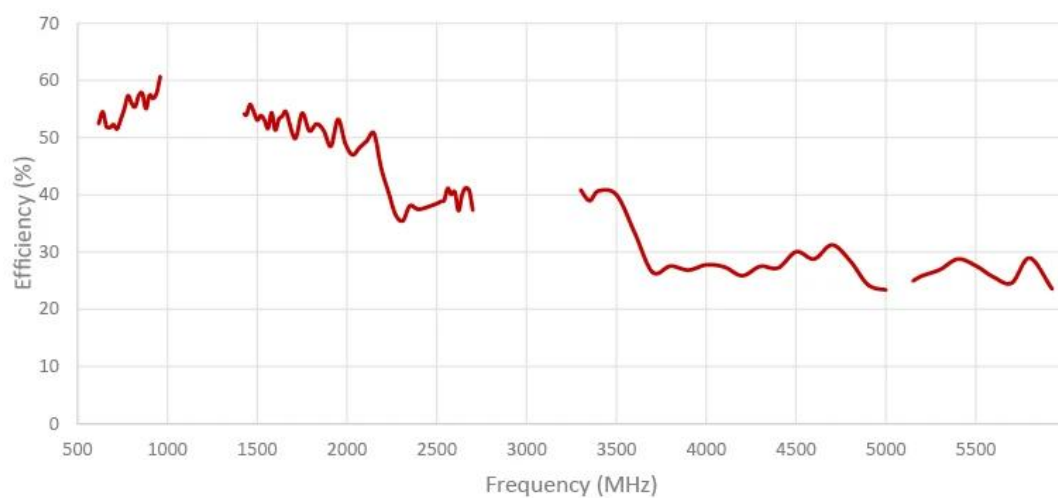
Cable 1: 5GNR





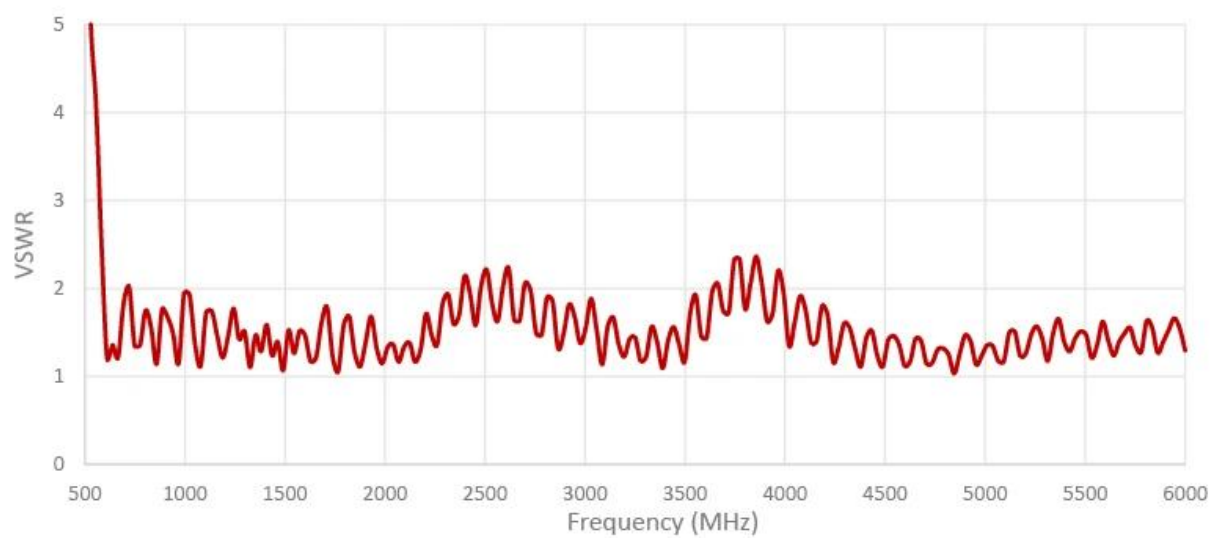
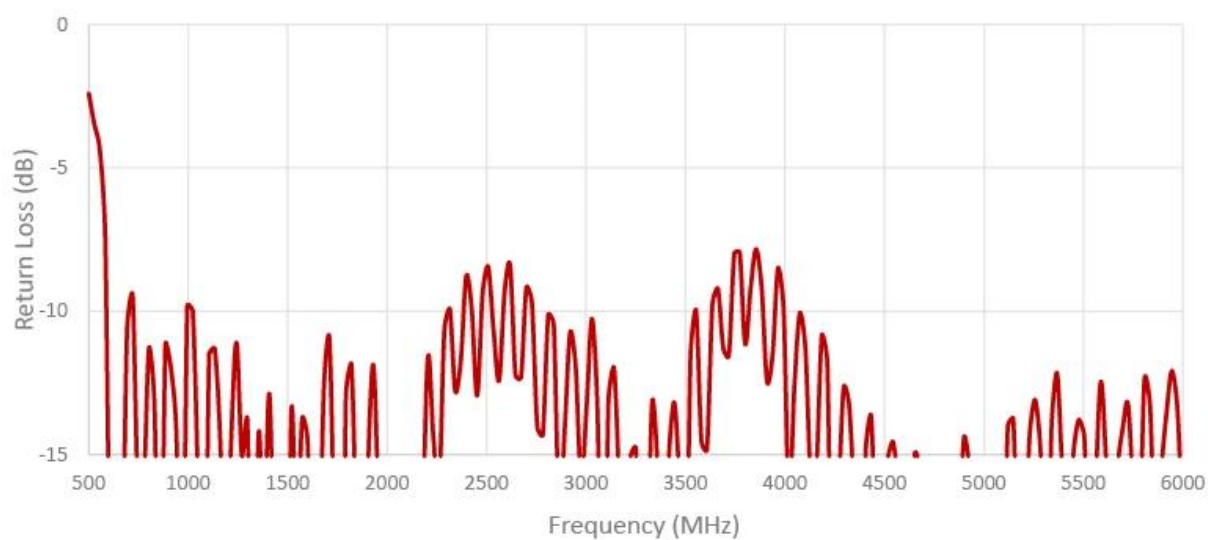
Cable 6: 2.4/5.0/6.0 GHz ISM

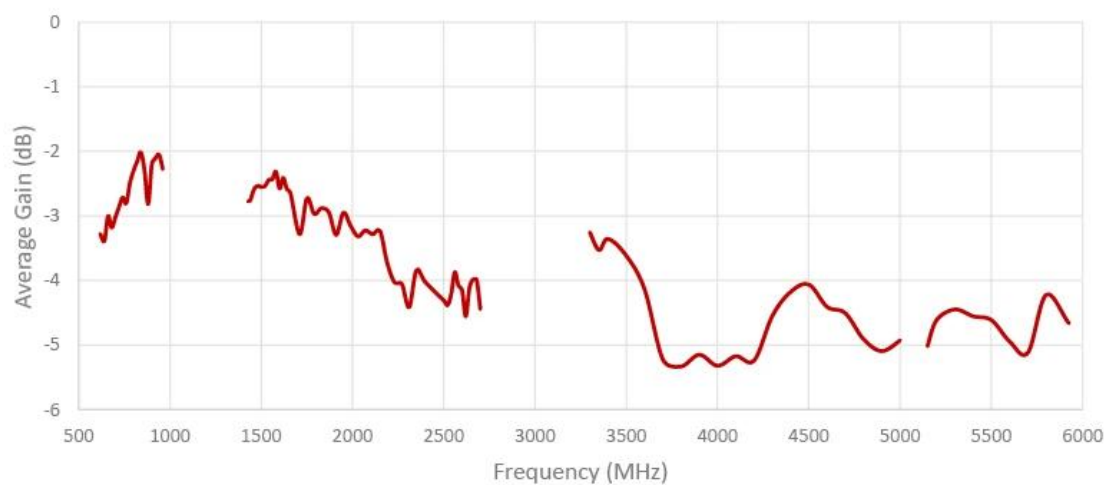
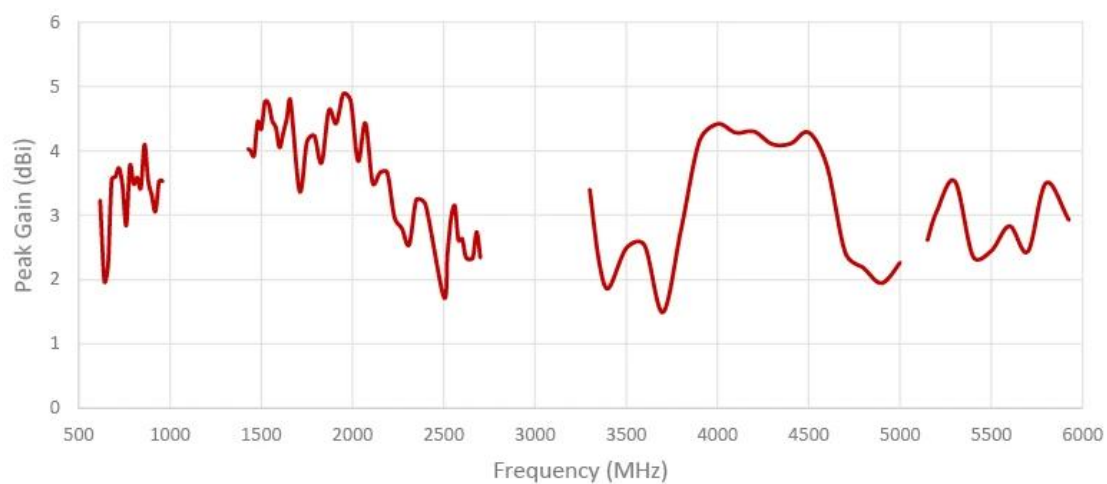
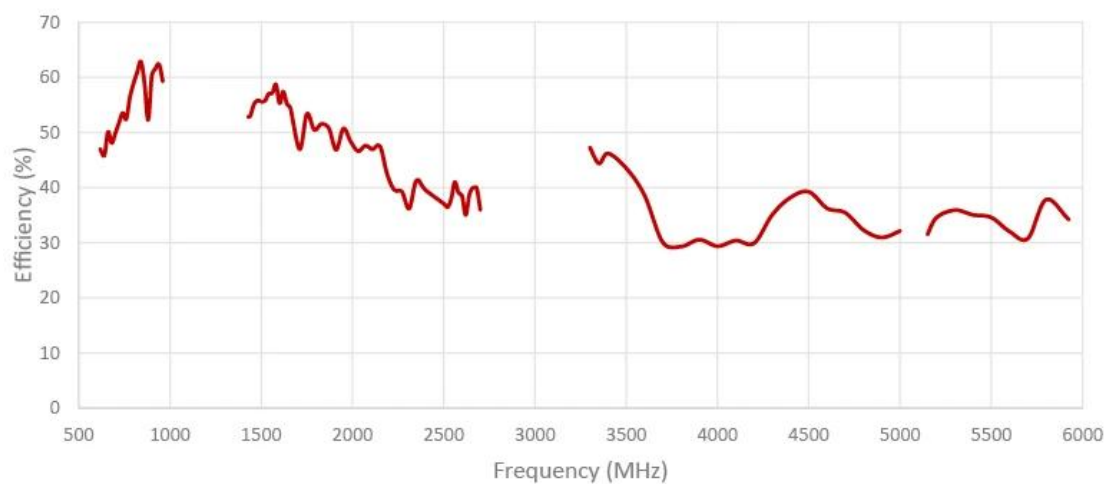






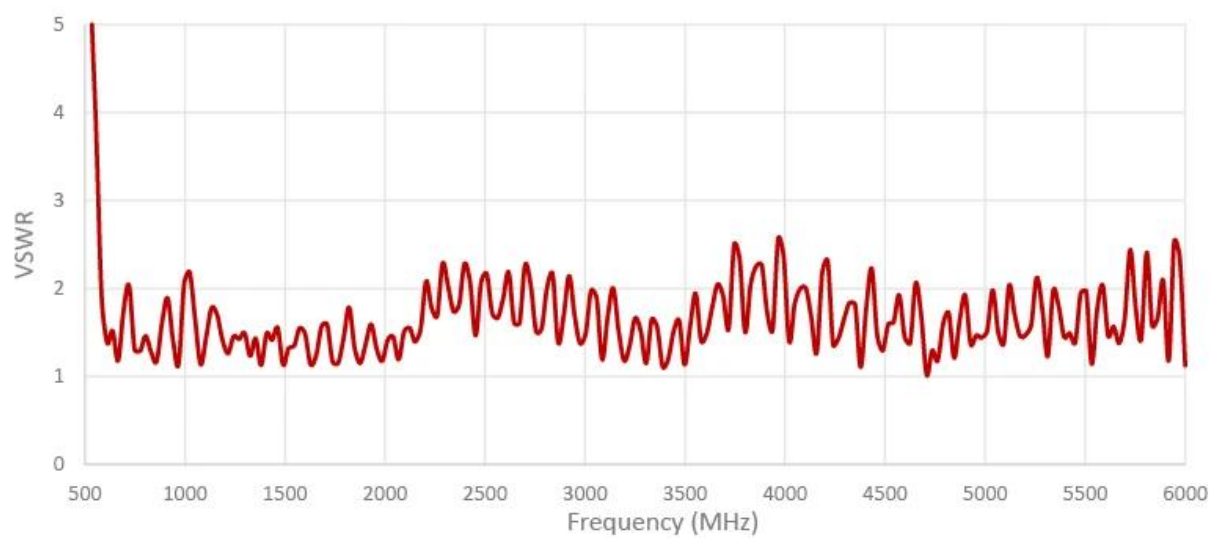
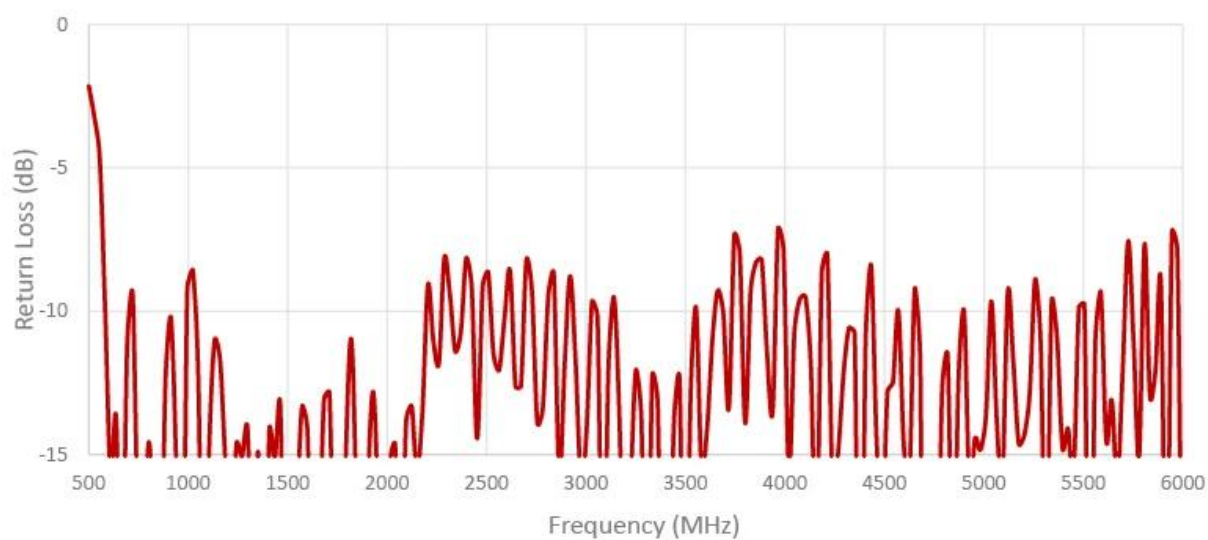
Cable 2: 5GNR

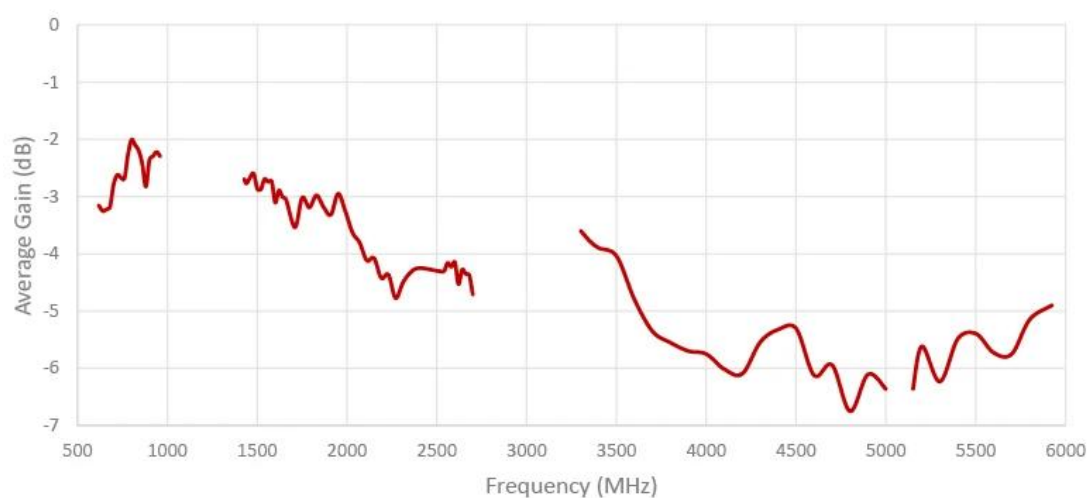
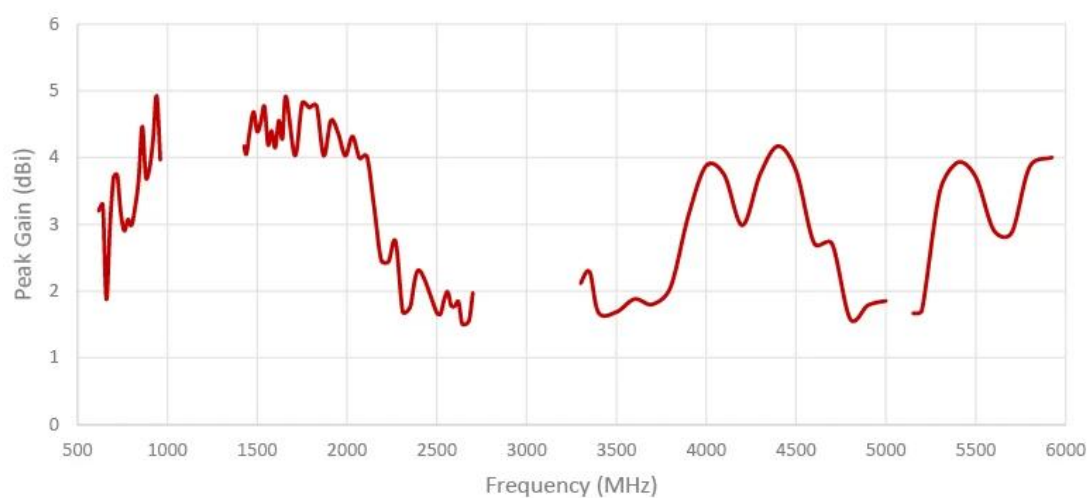
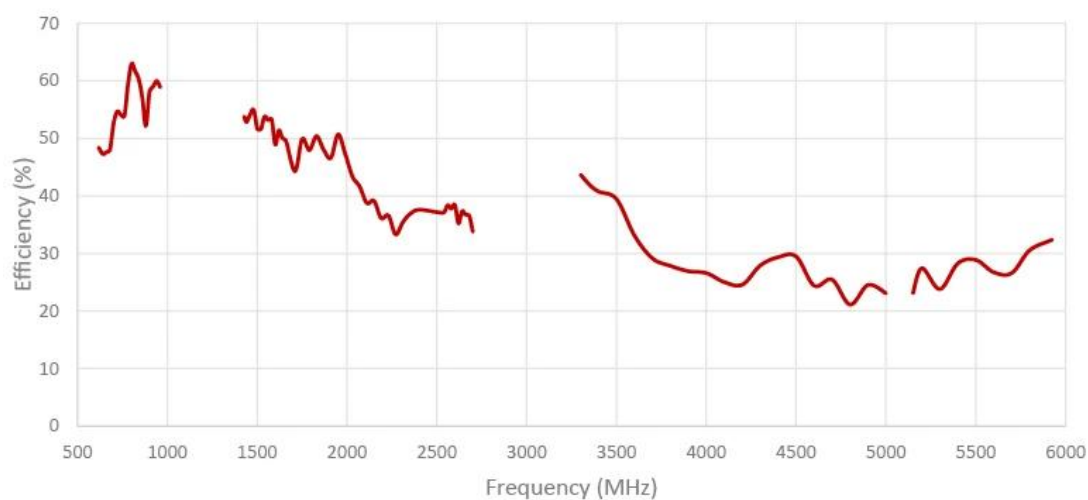






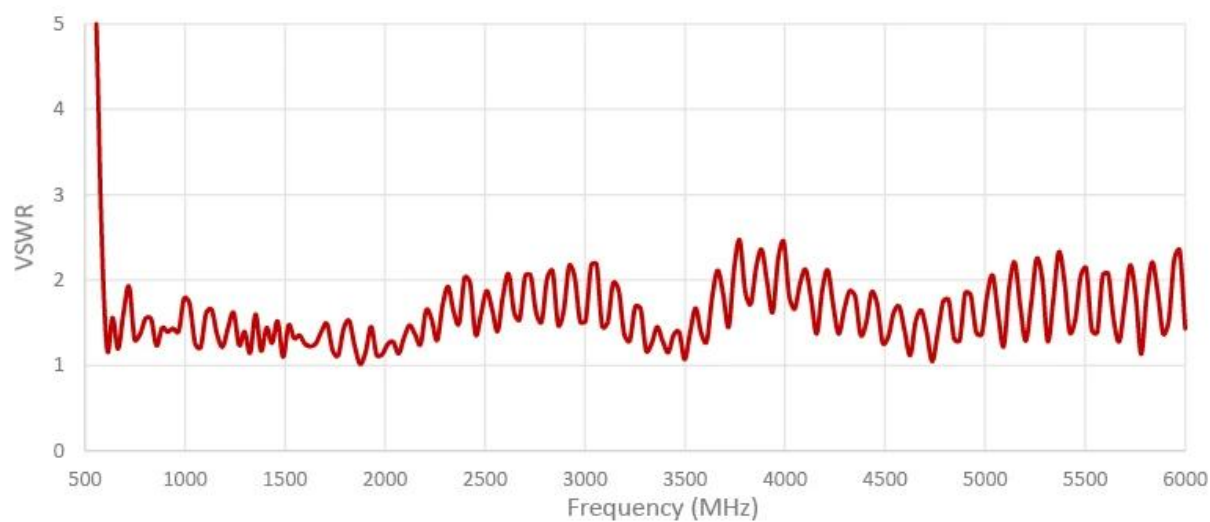
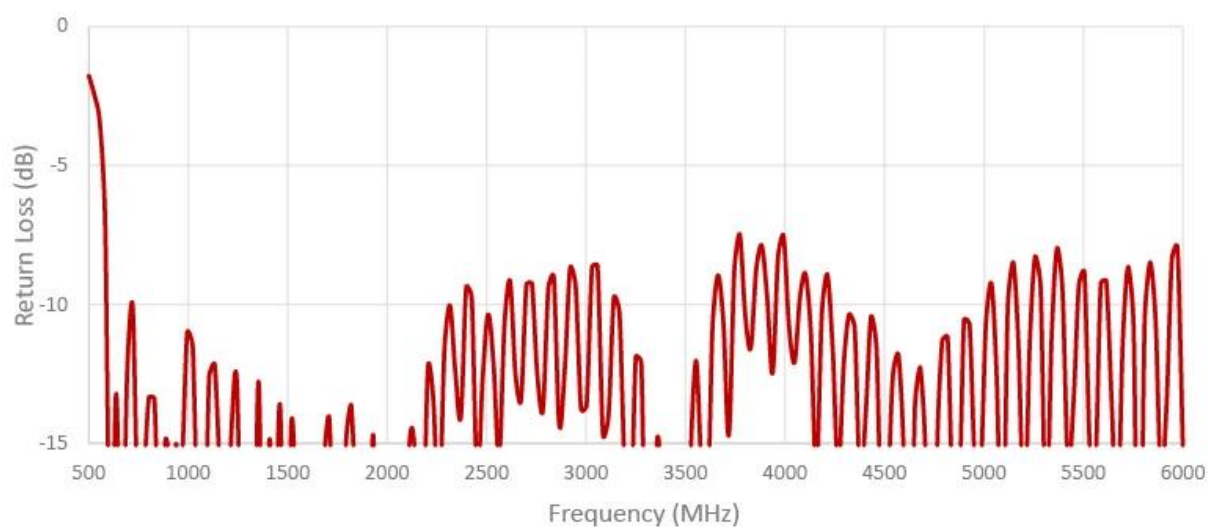
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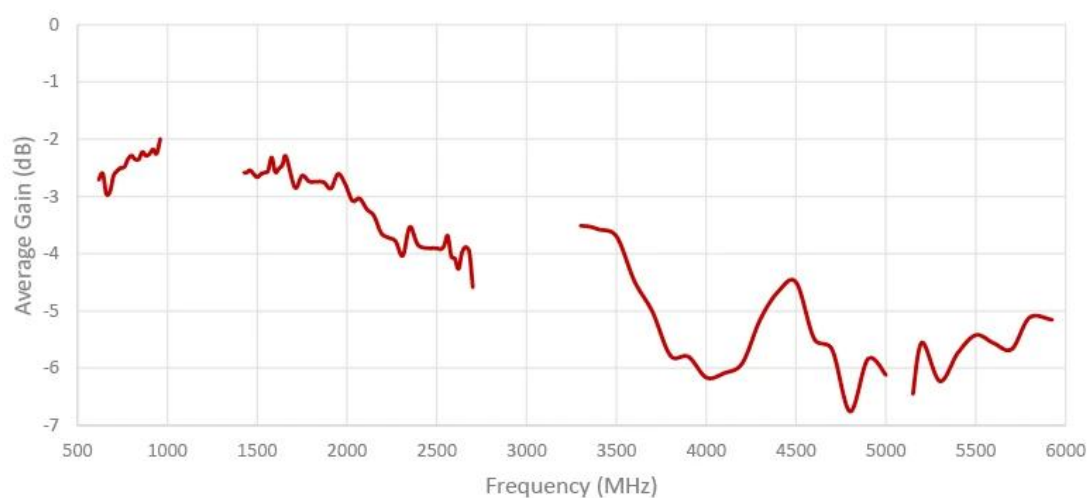
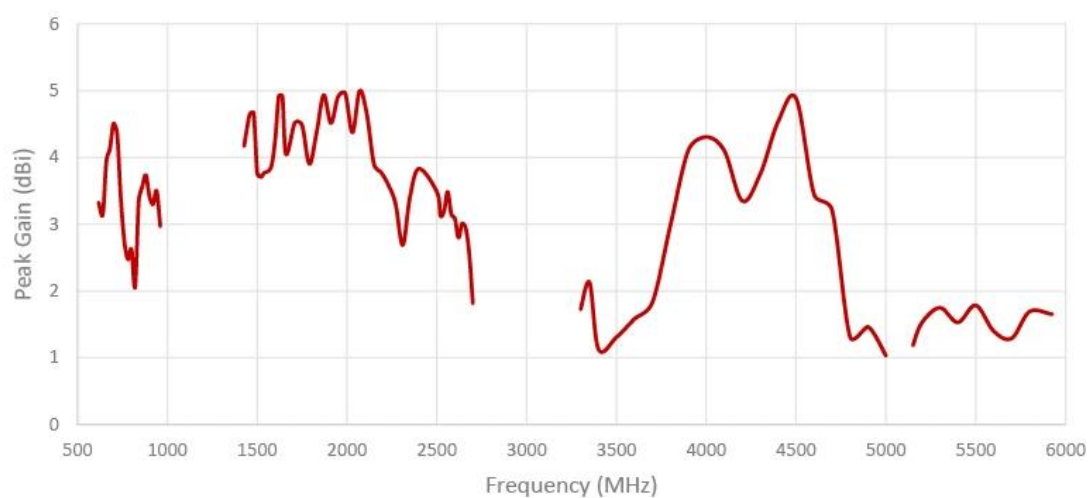
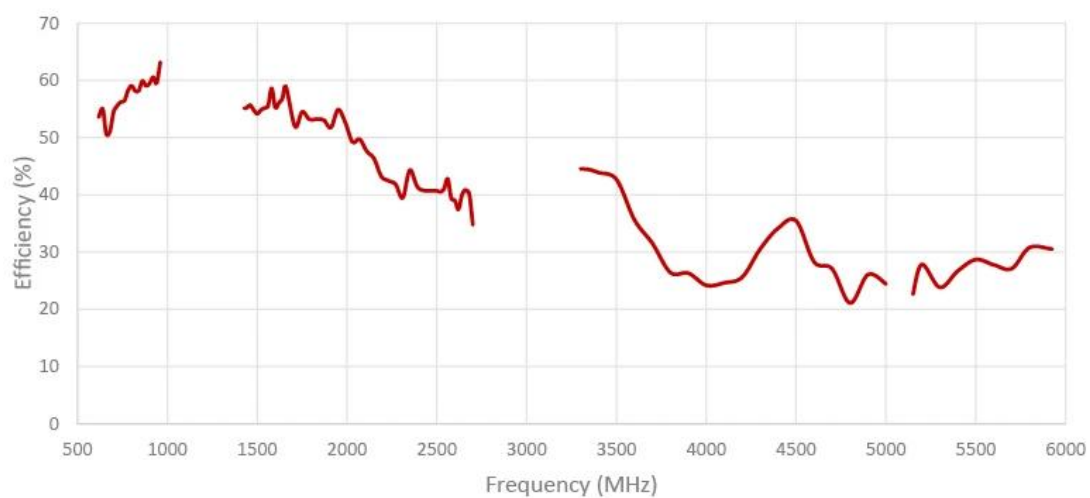






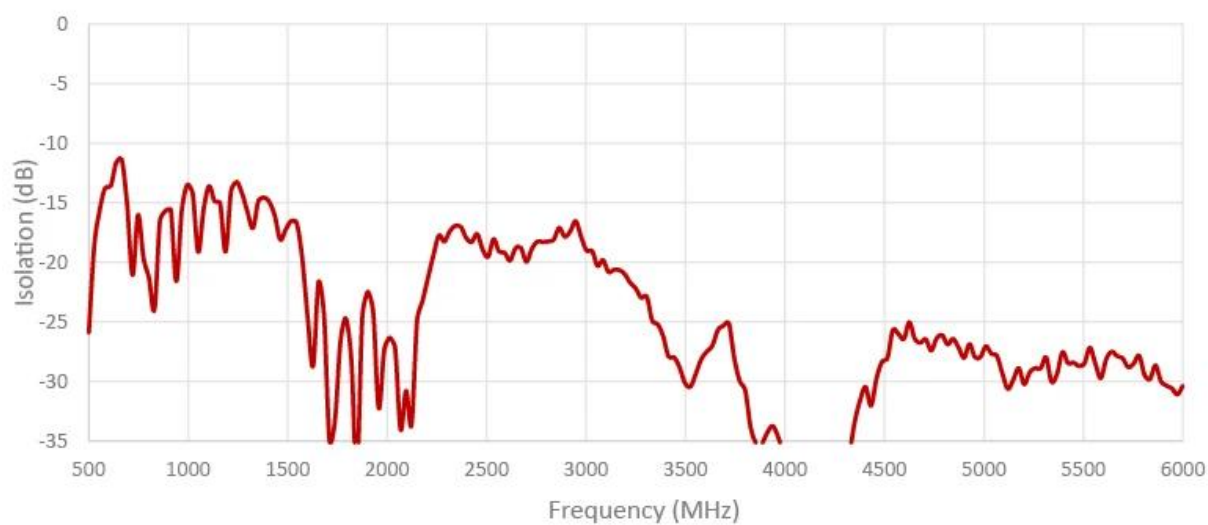
Cable 4: 5GNR



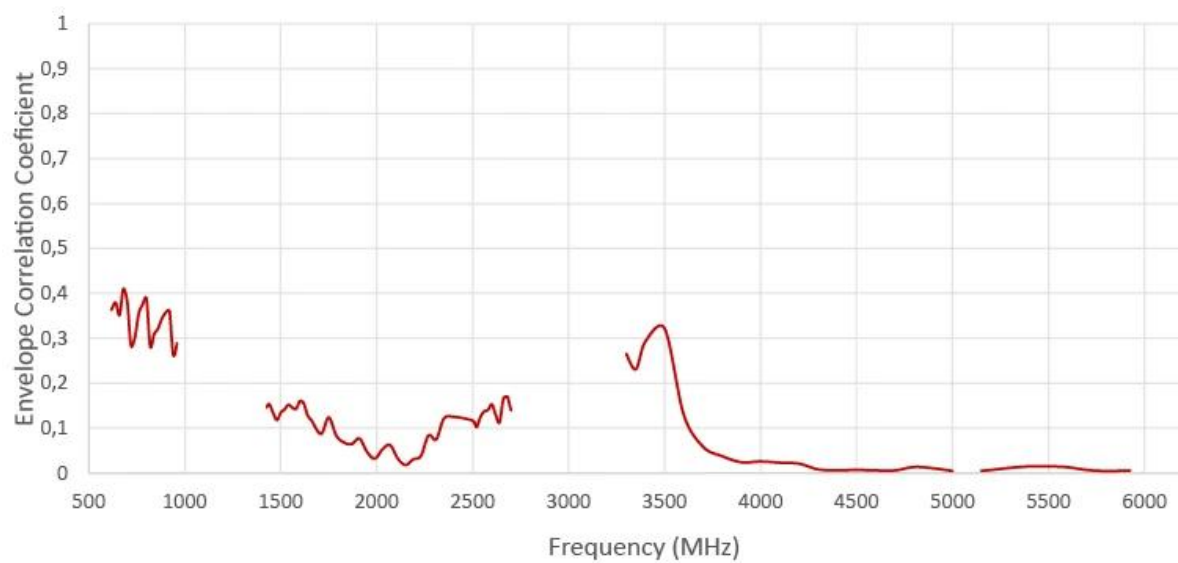




ISOLATION FOR CABLES 1 AND 2

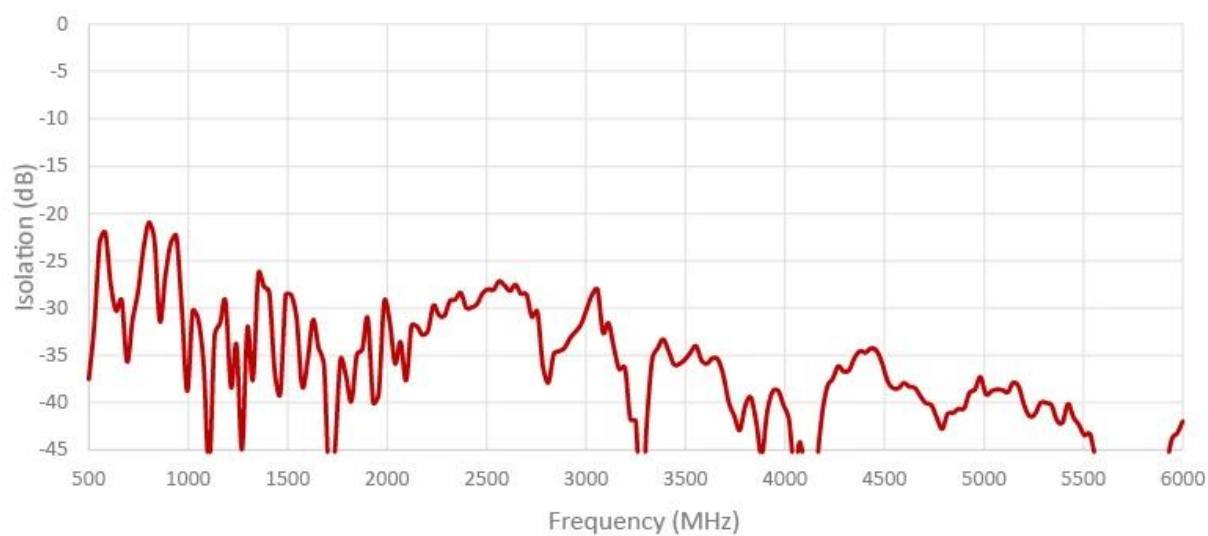


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 2

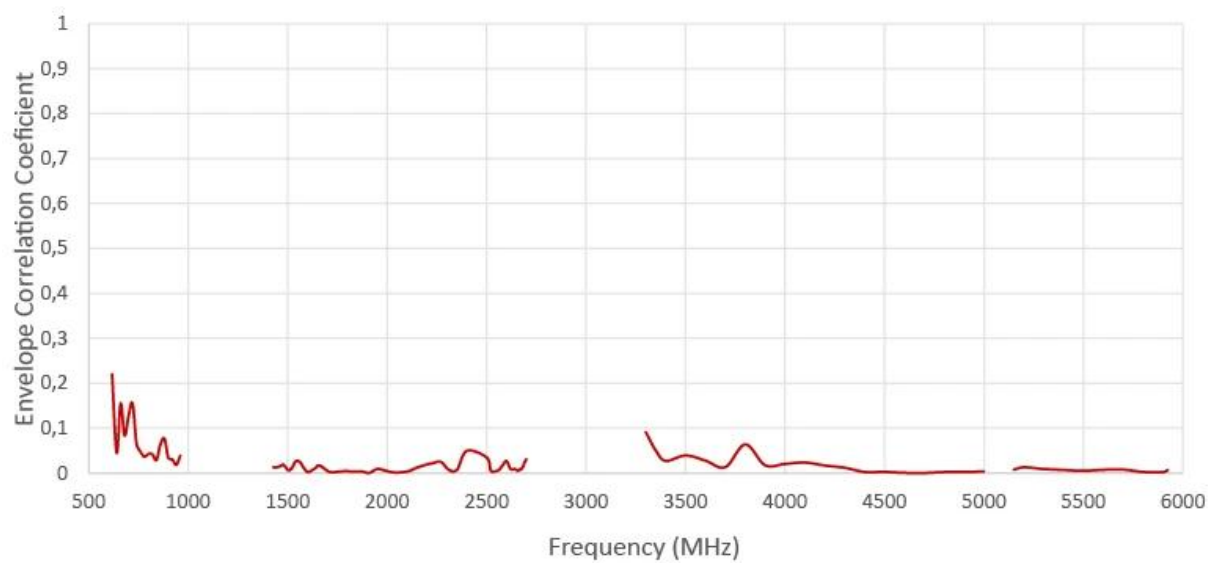




ISOLATION FOR CABLES 1 AND 3

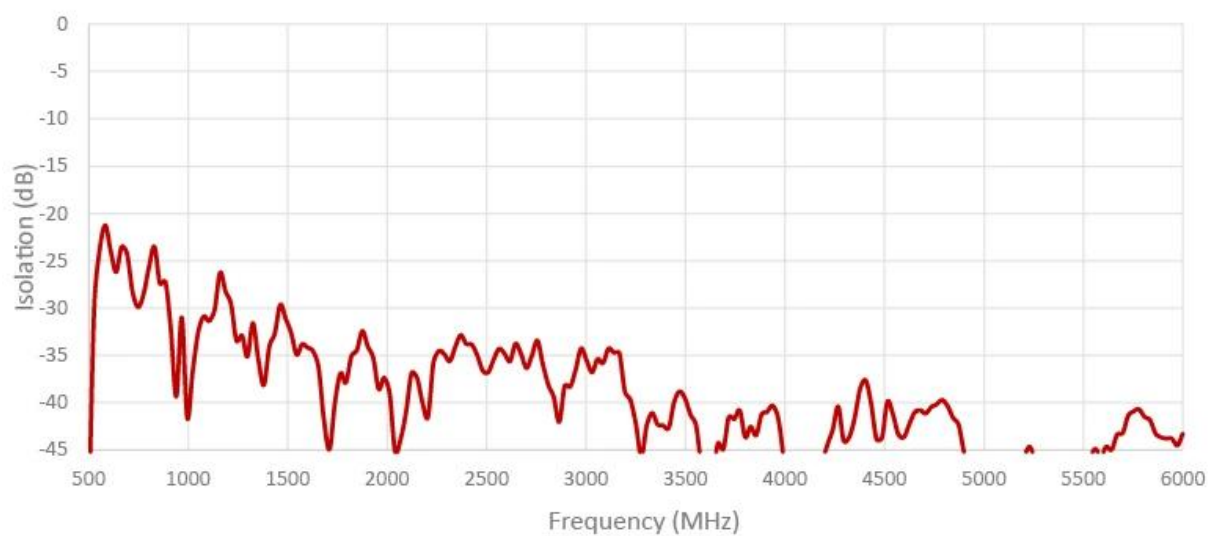


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 3

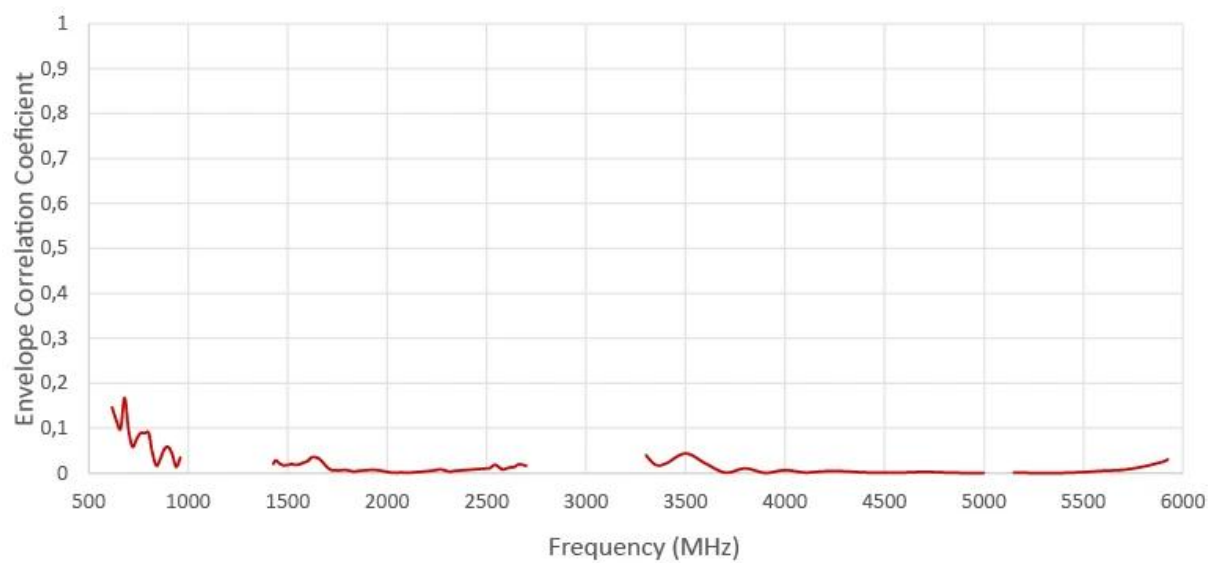




ISOLATION FOR CABLES 1 AND 4

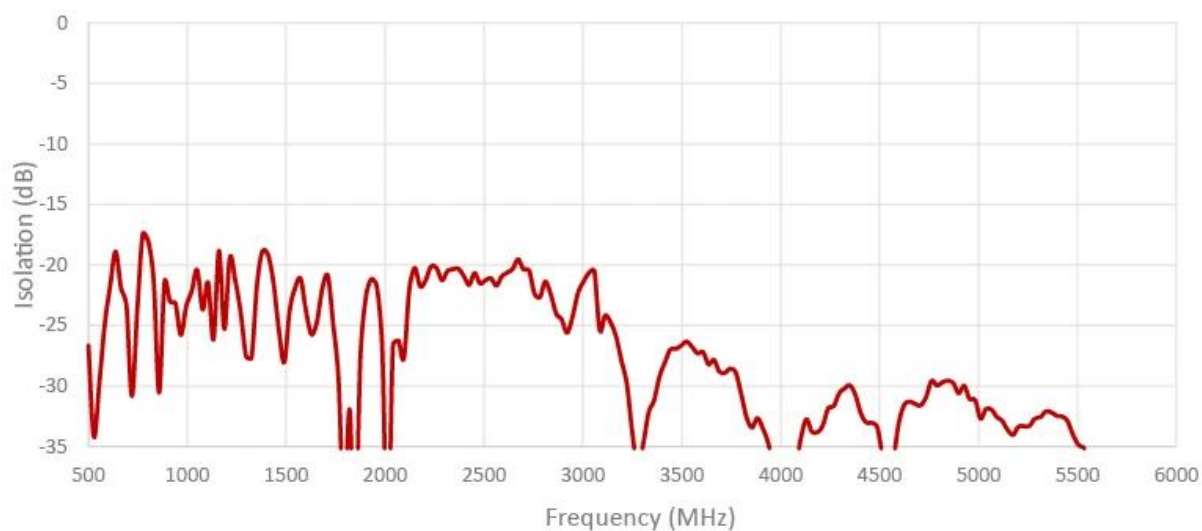


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 1 AND 4

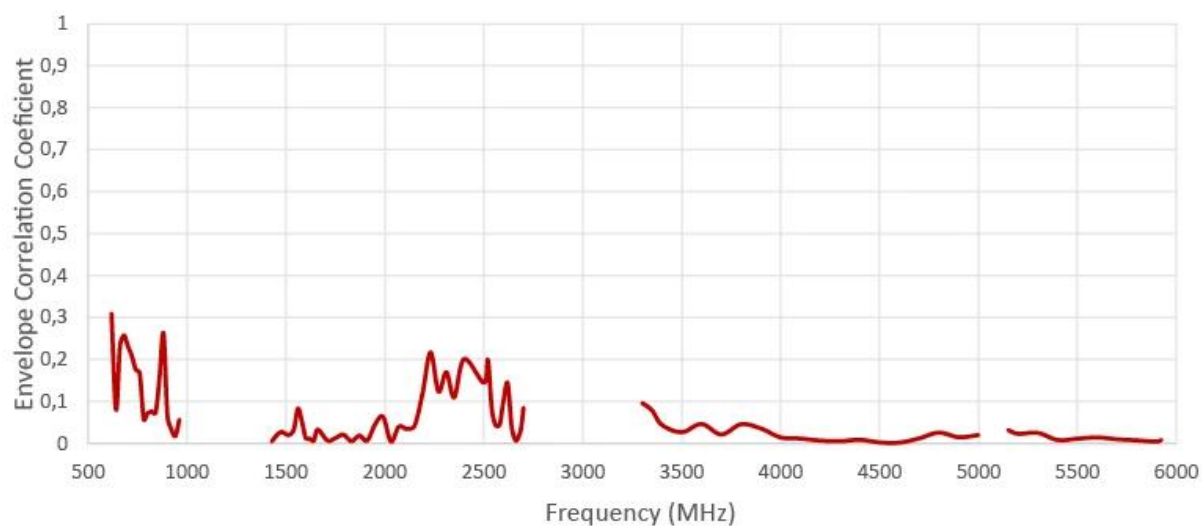




ISOLATION FOR CABLES 2 AND 3

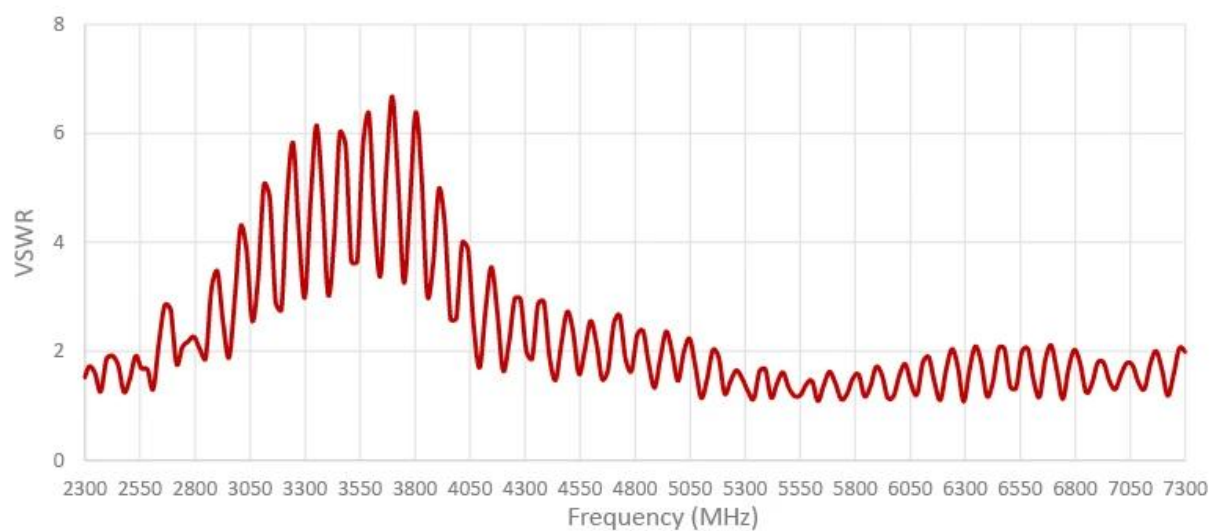
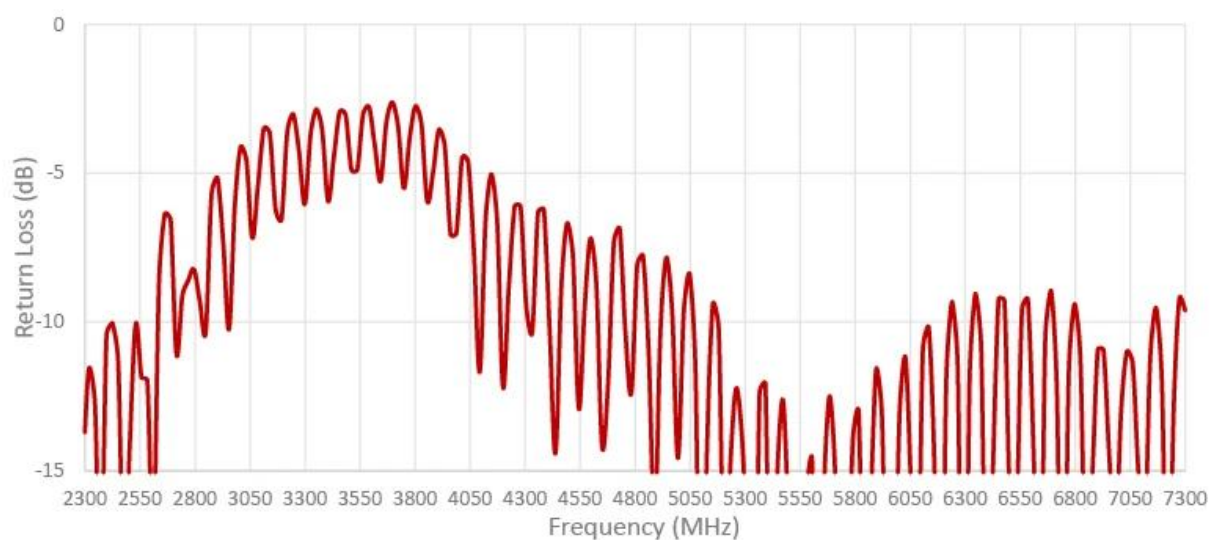


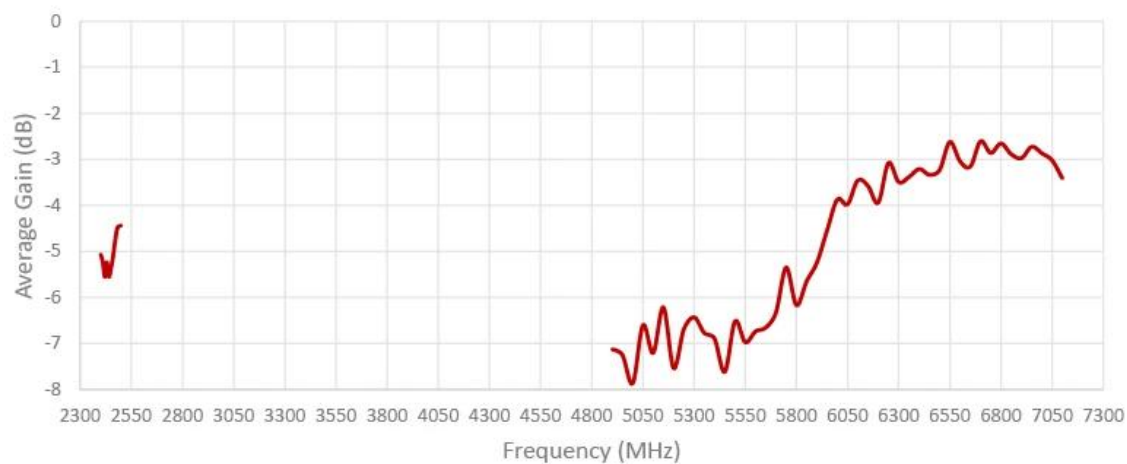
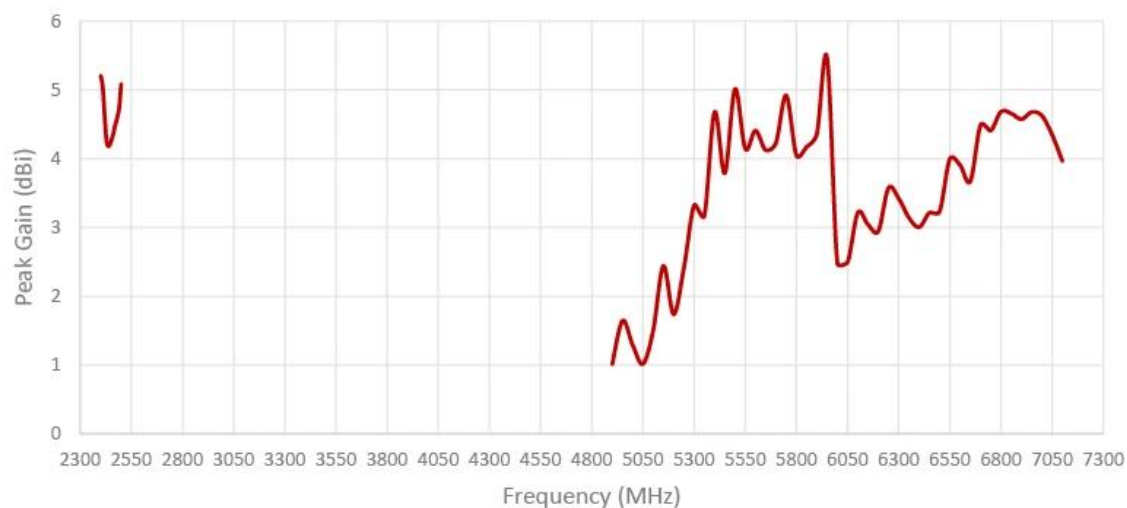
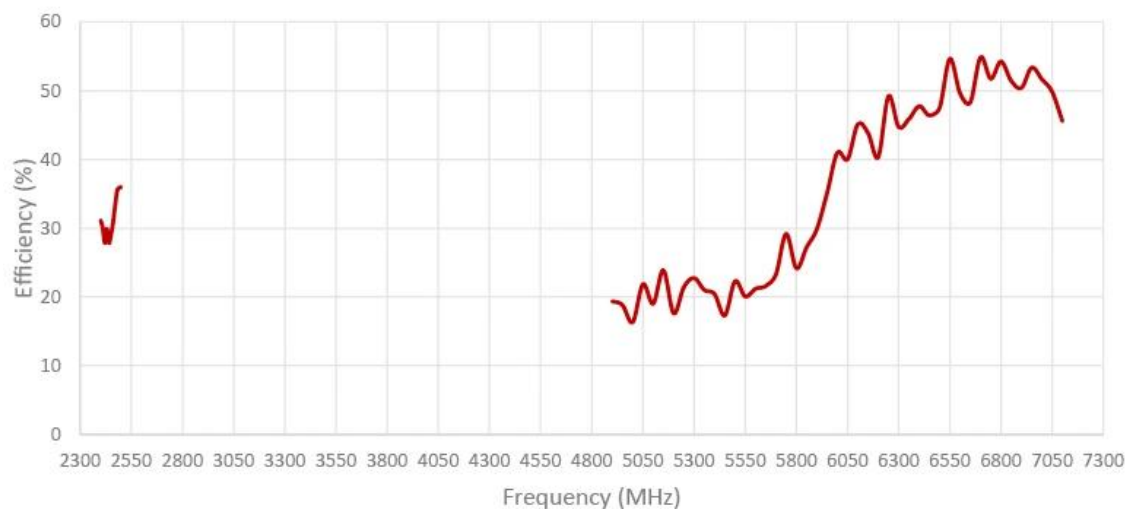
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 2 AND 3

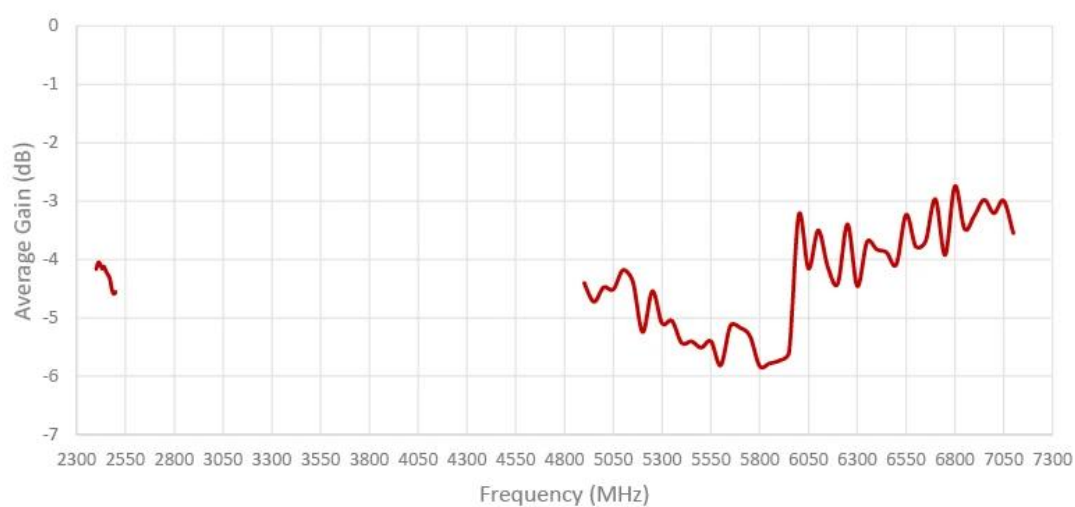
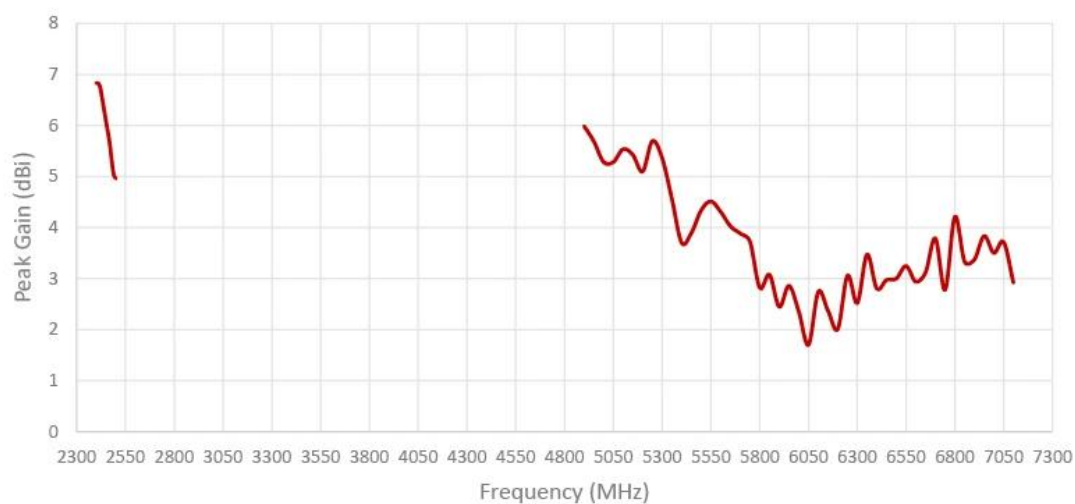
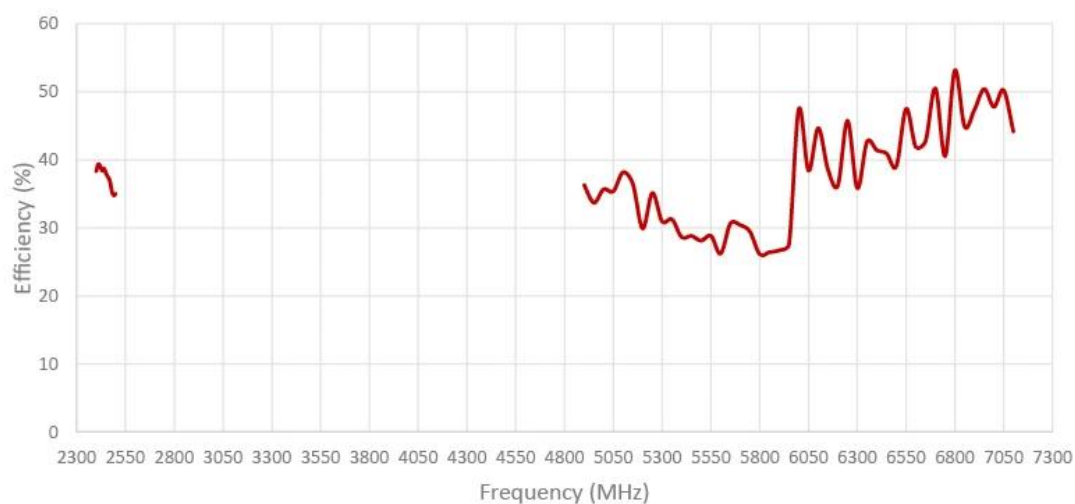




Cable 5: 2.4/5.0/6.0 GHz ISM

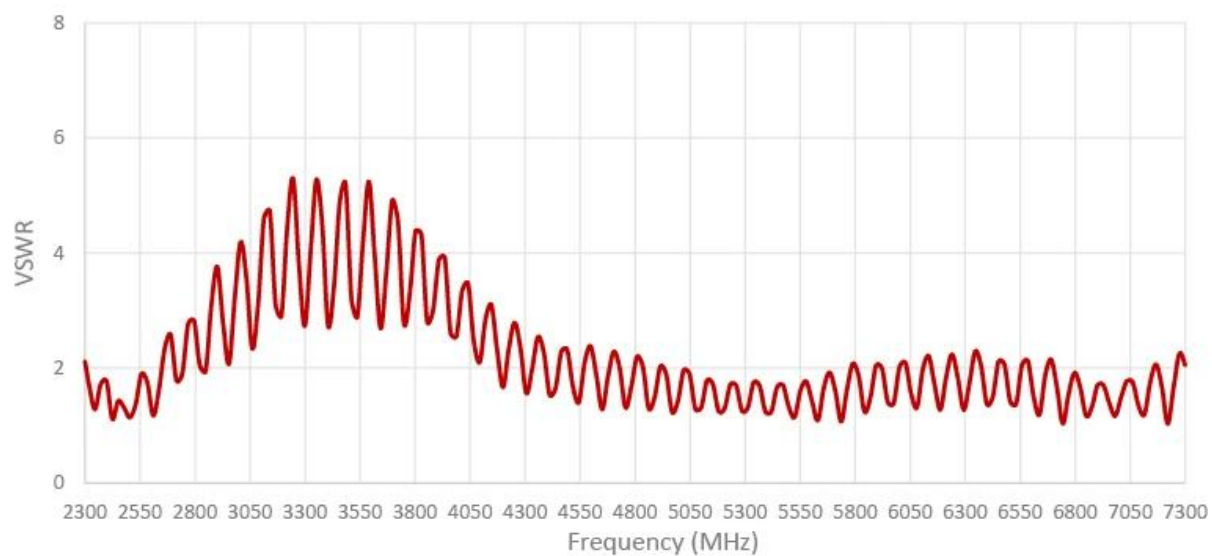
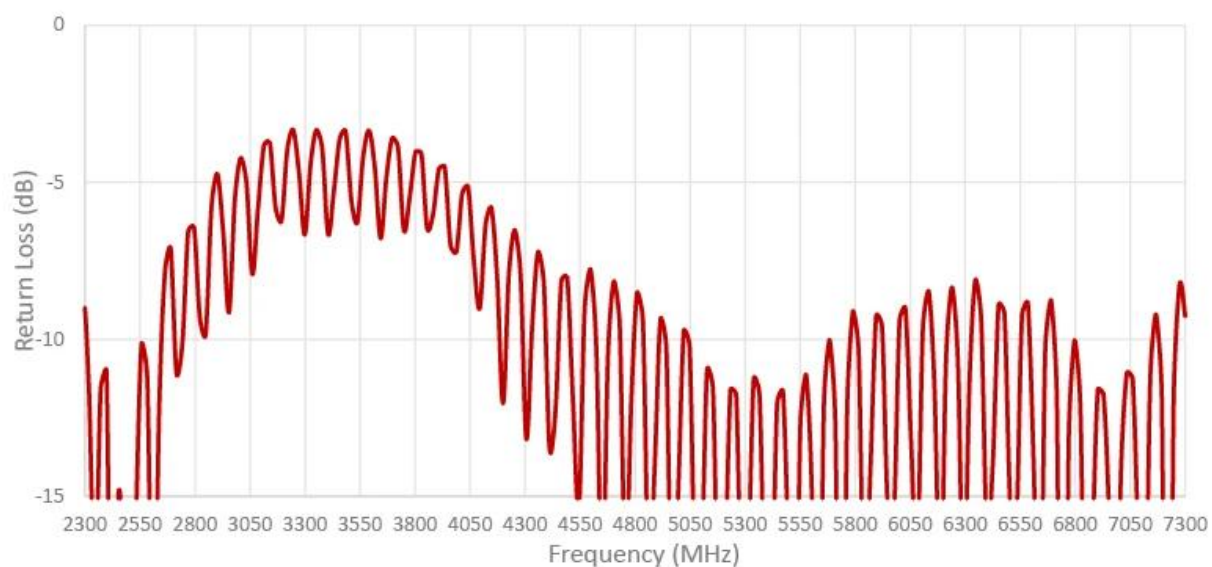


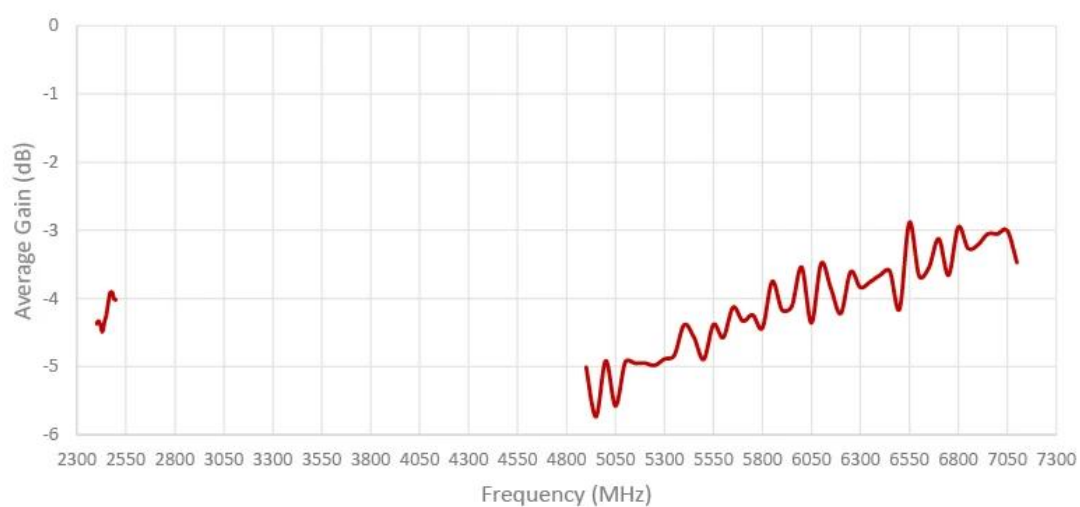
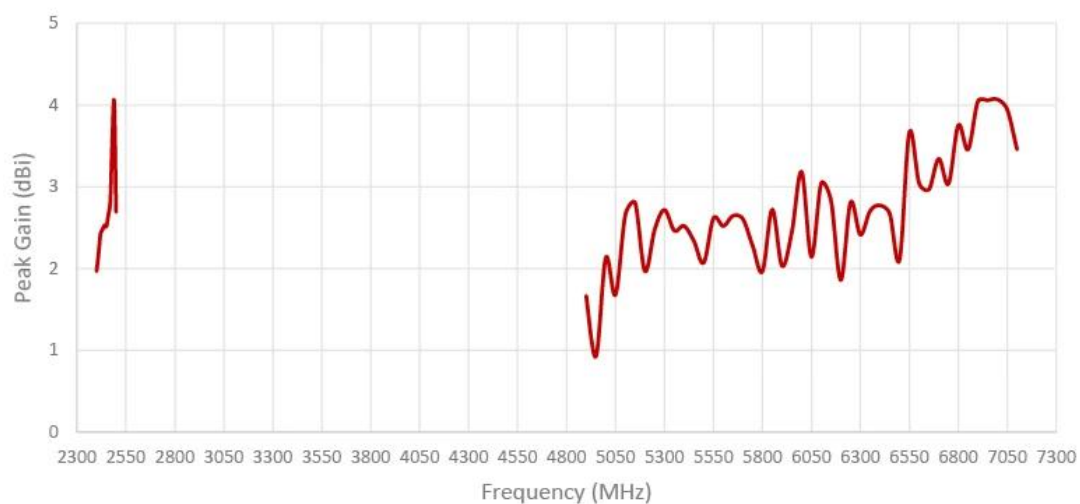
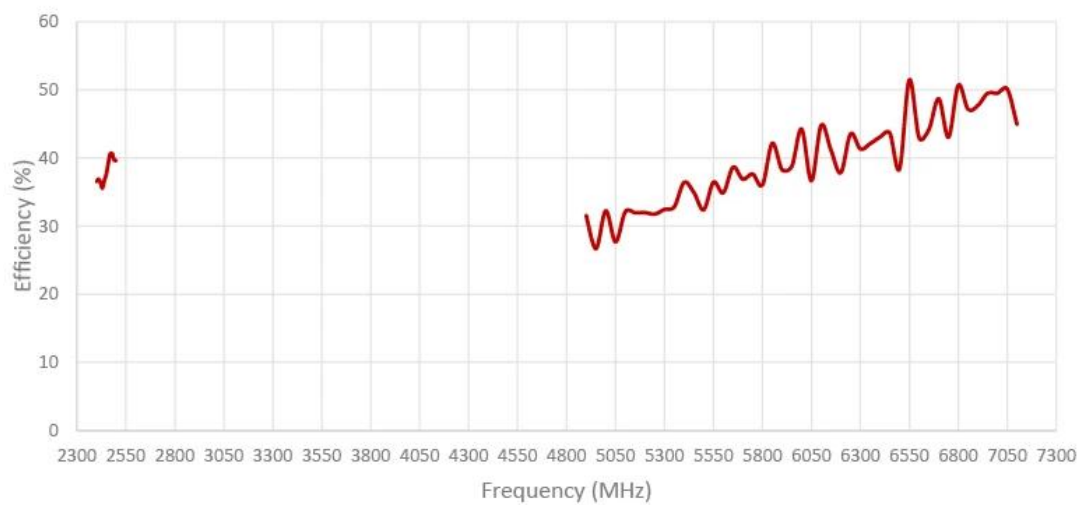






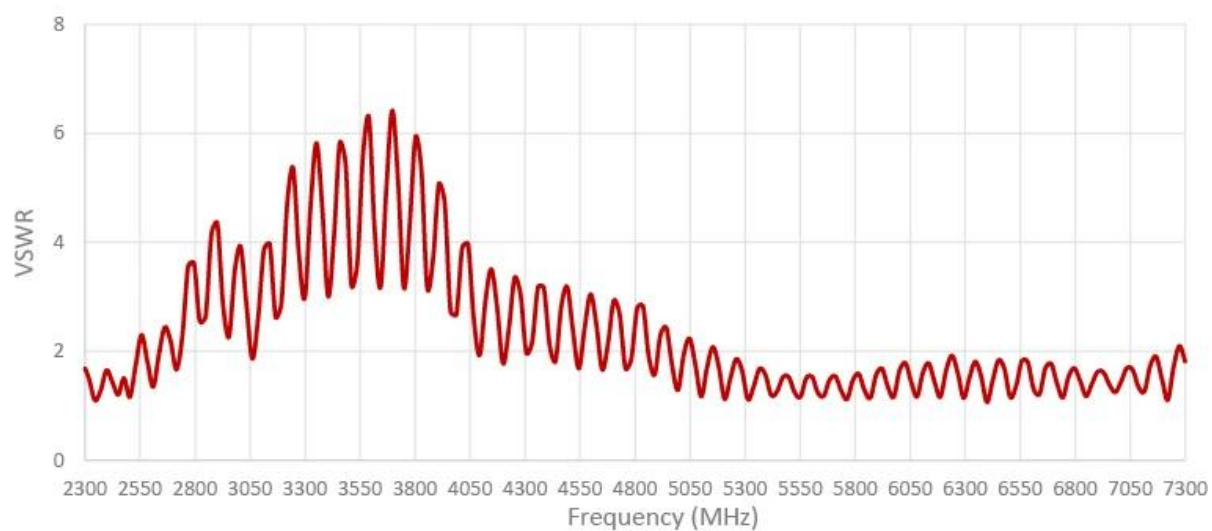
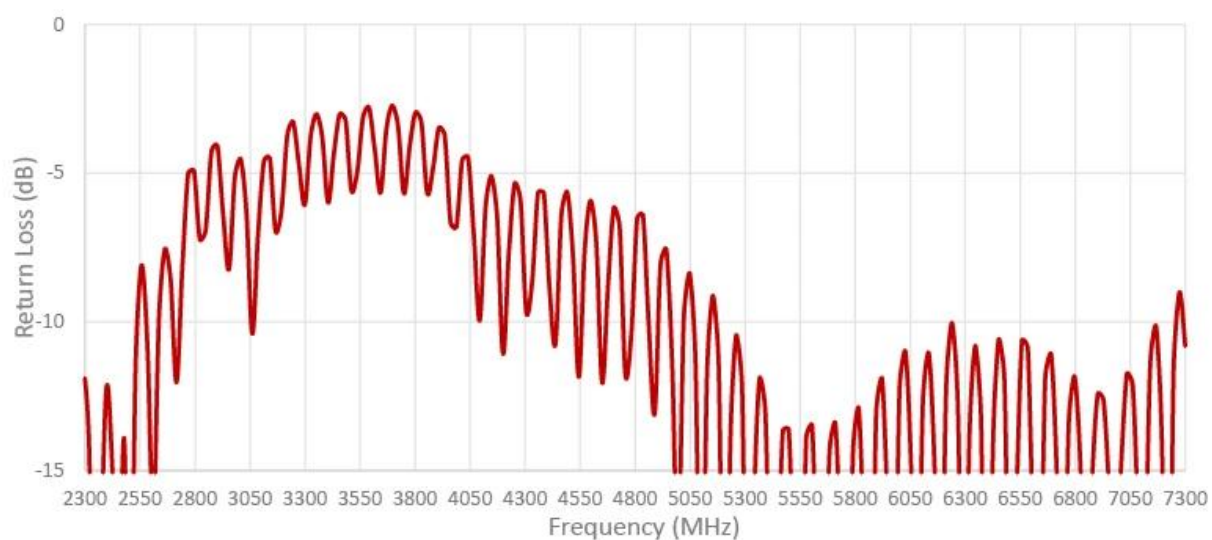
Cable 7: 2.4/5.0/6.0 GHz ISM

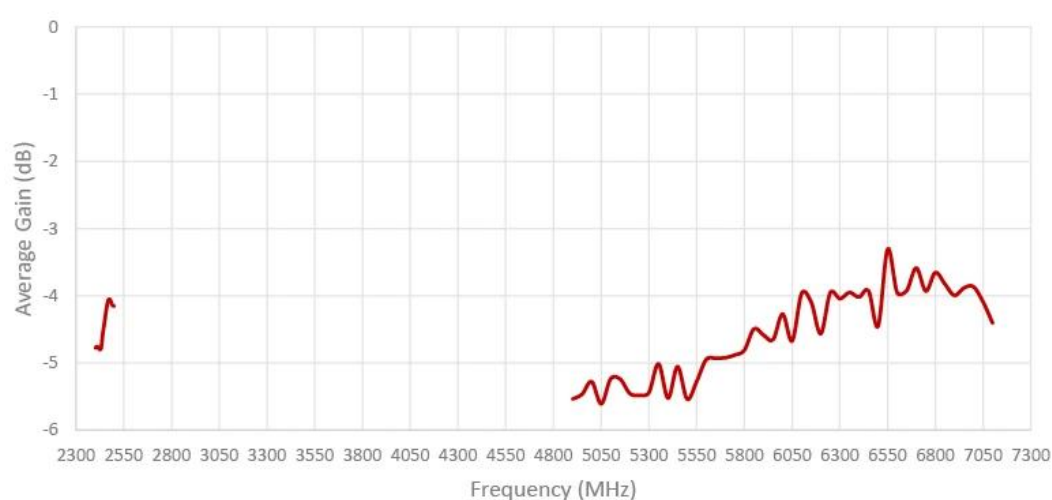
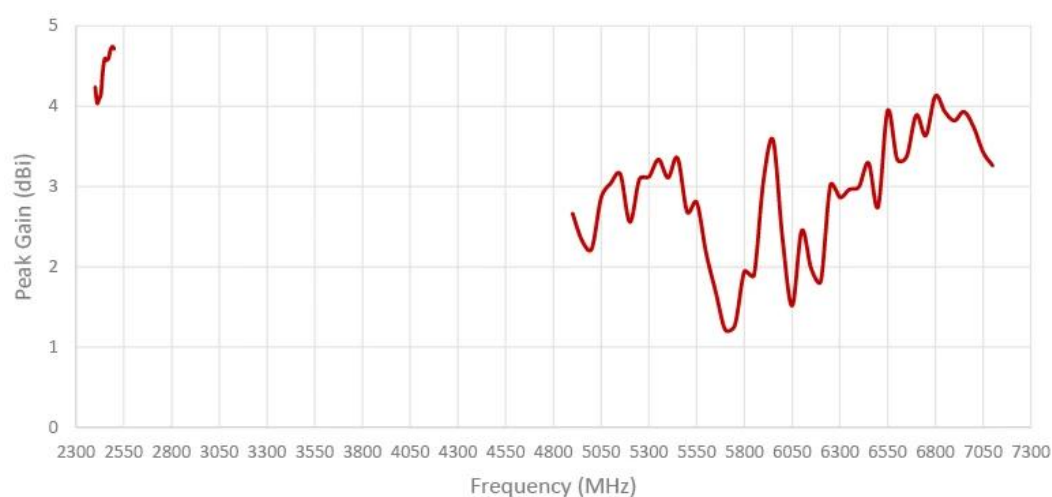
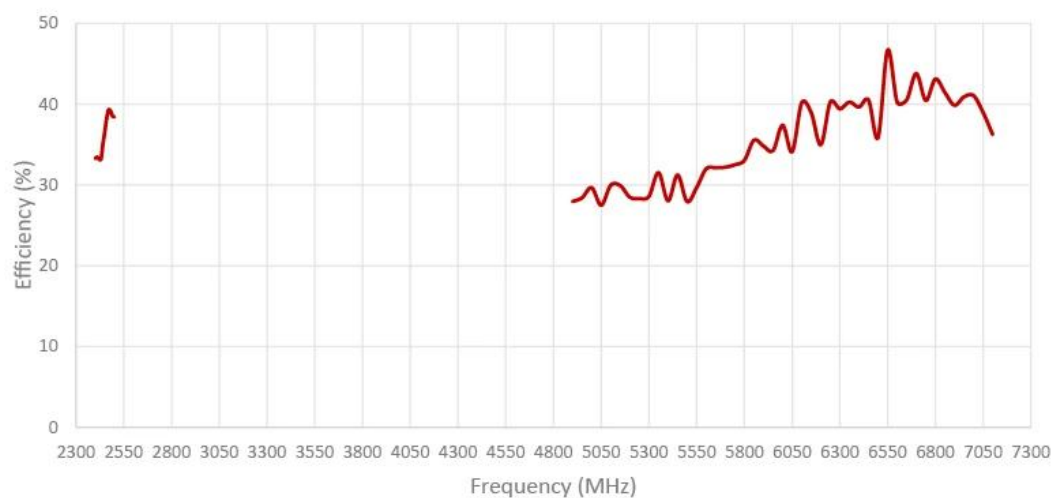






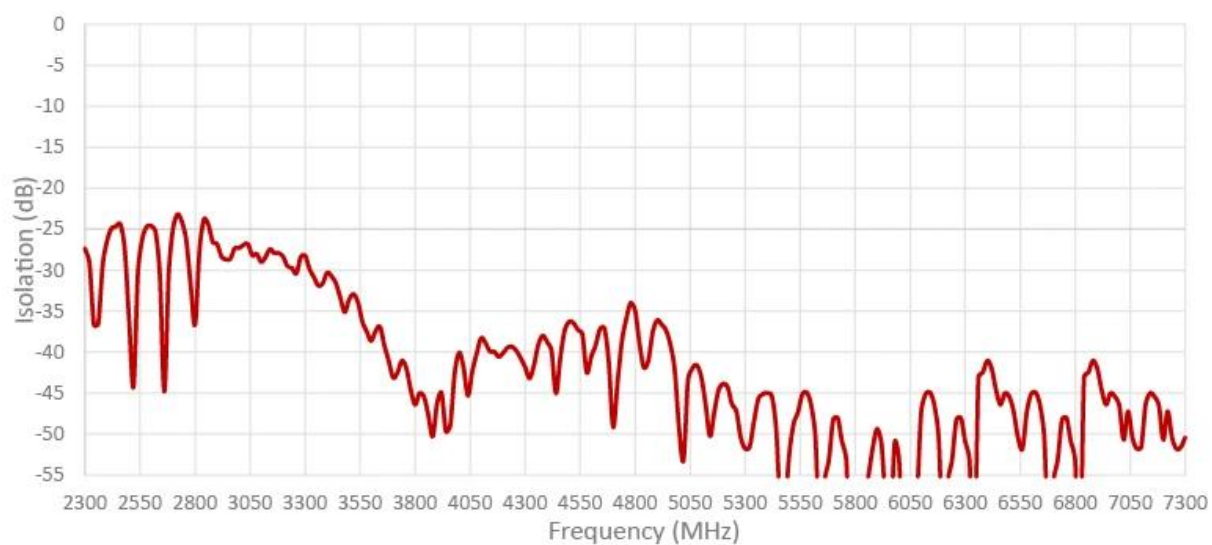
Cable 8: 2.4/5.0/6.0 GHz ISM



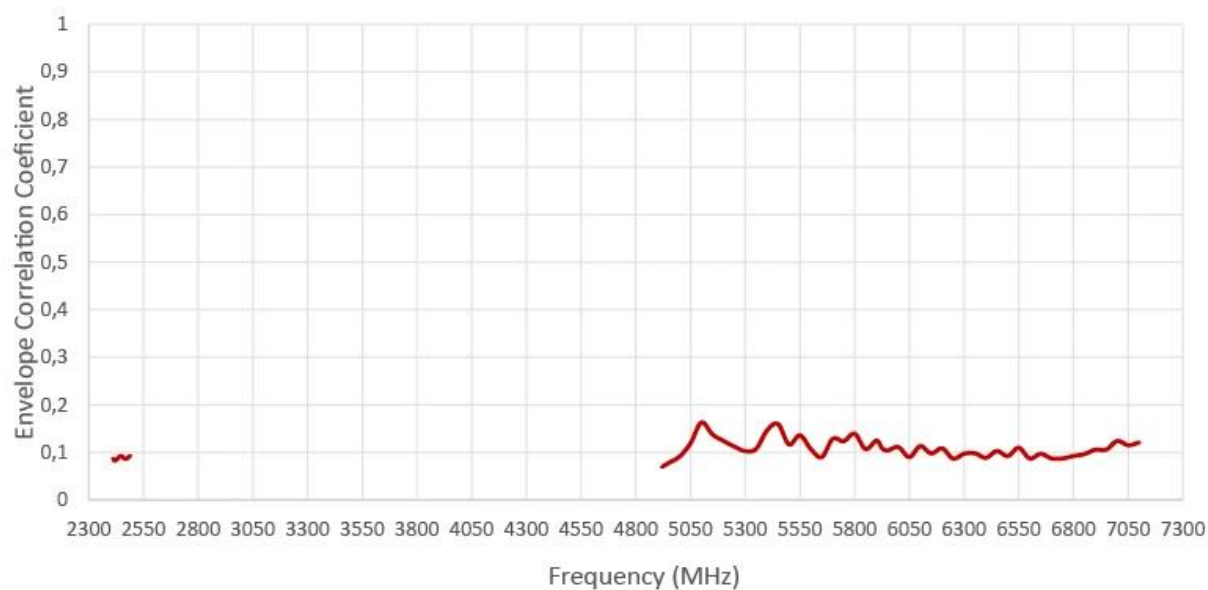




ISOLATION FOR CABLES 5 AND 6

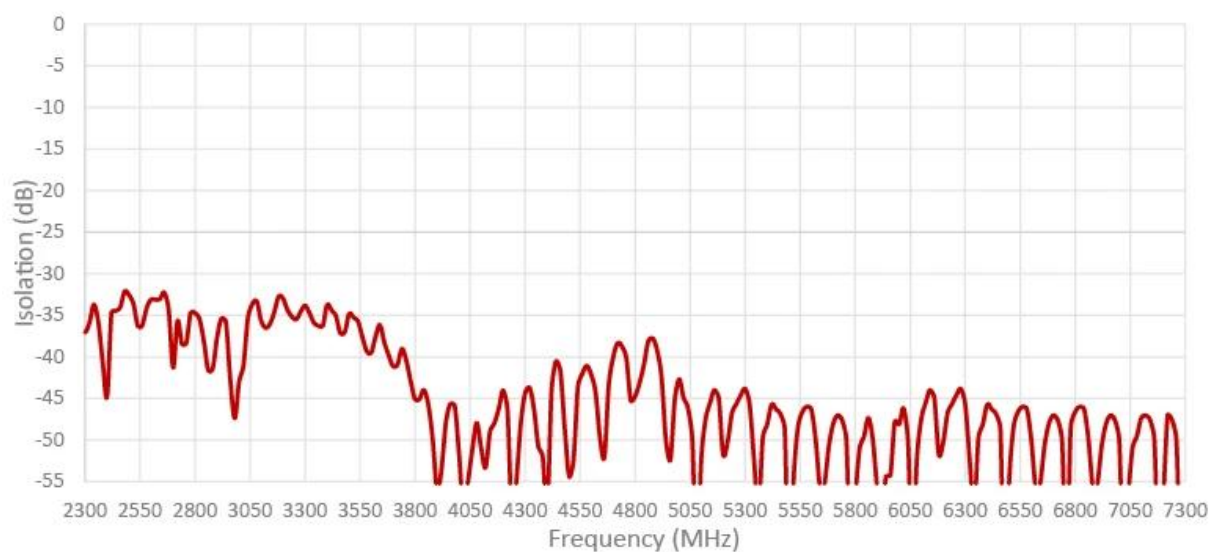


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 5 AND 6

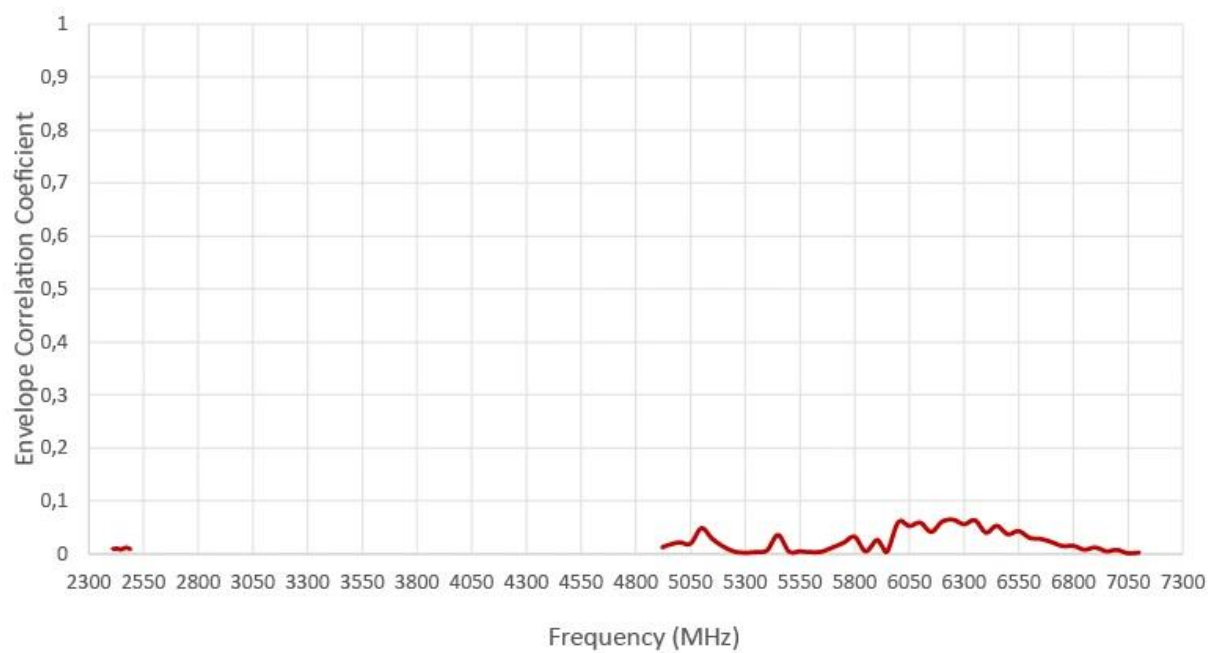




ISOLATION FOR CABLES 5 AND 7

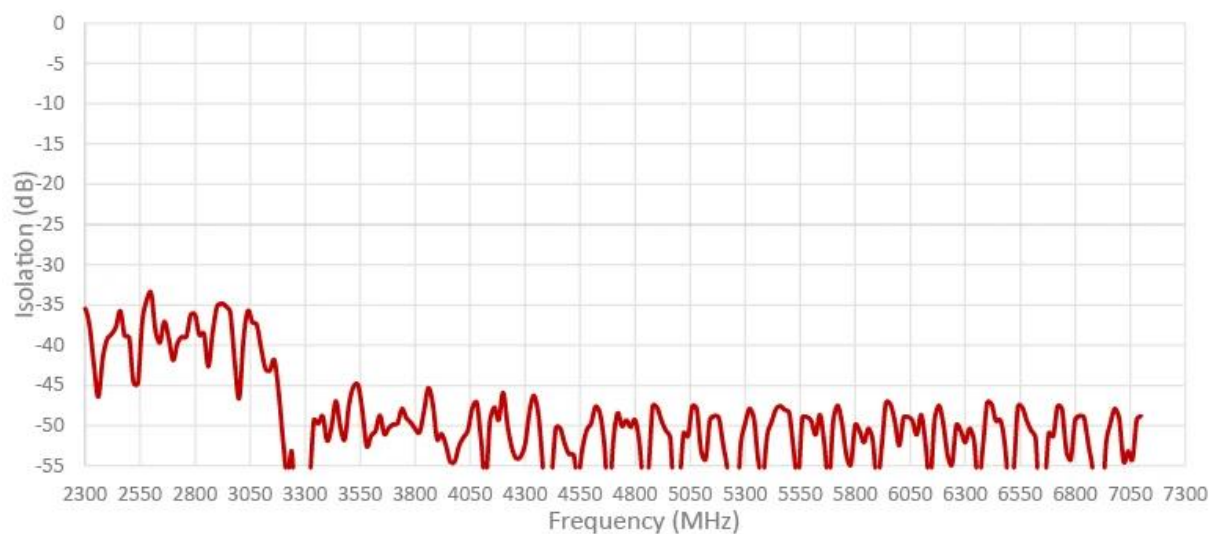


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 5 AND 7

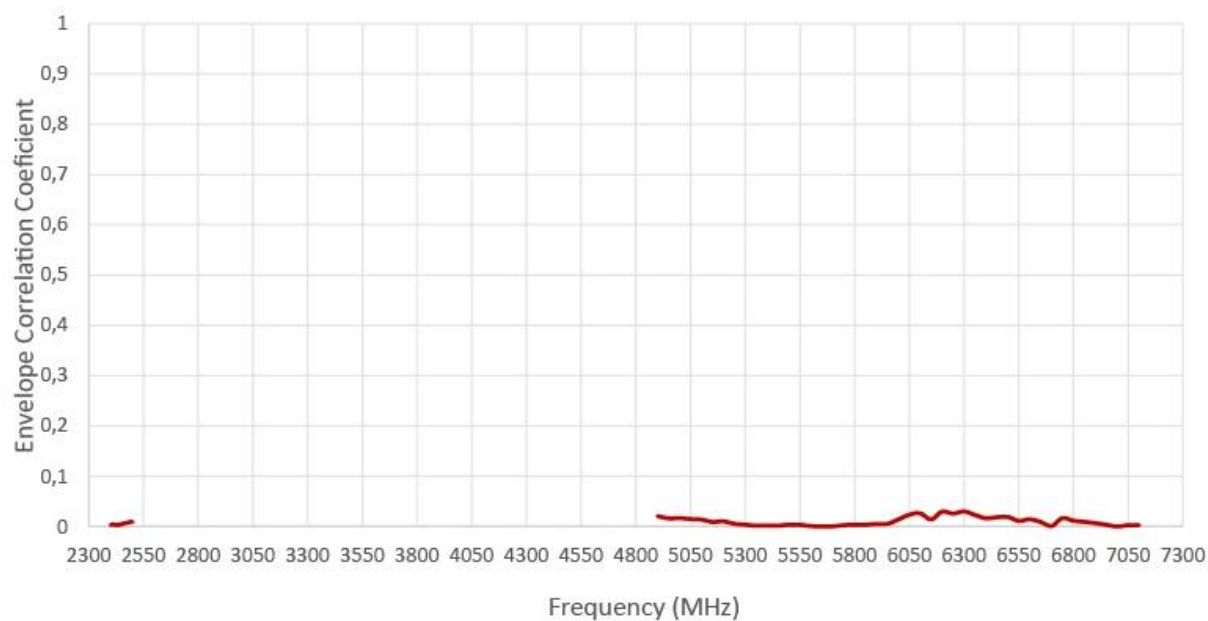




ISOLATION FOR CABLES 5 AND 8

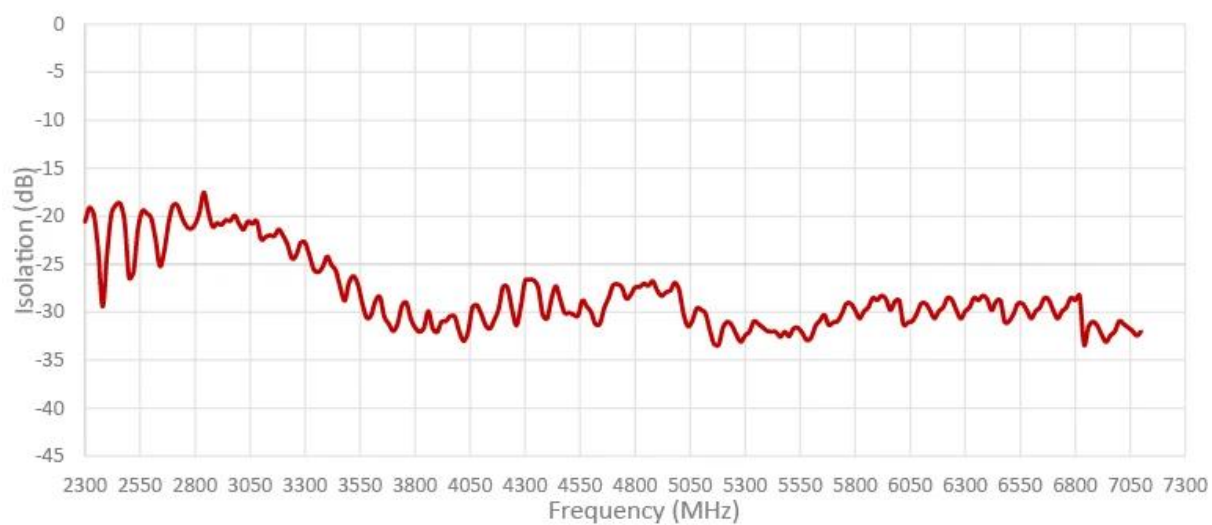


ENVELOPE CORRELATION COEFFICIENT FOR CABLES 5 AND 8

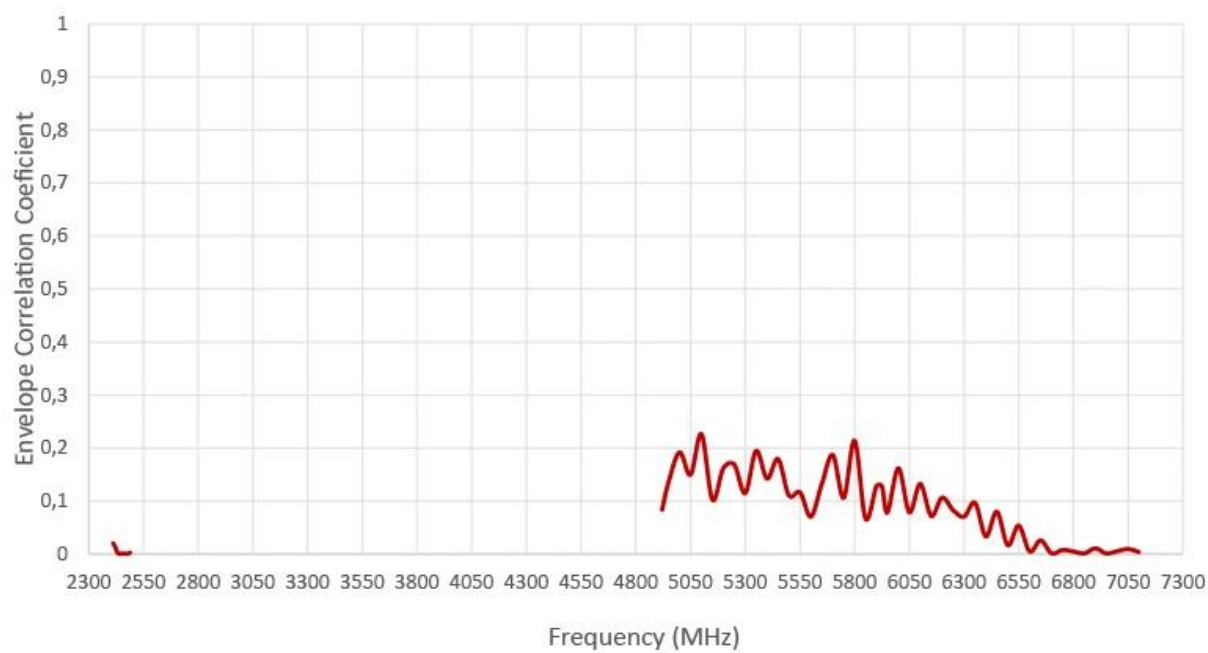


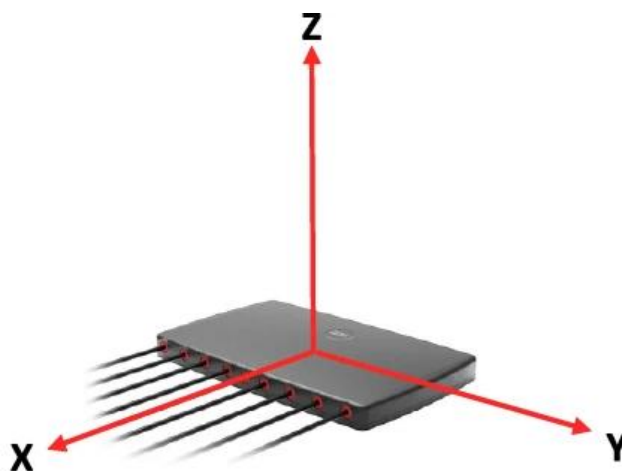


ISOLATION FOR CABLES 6 AND 7



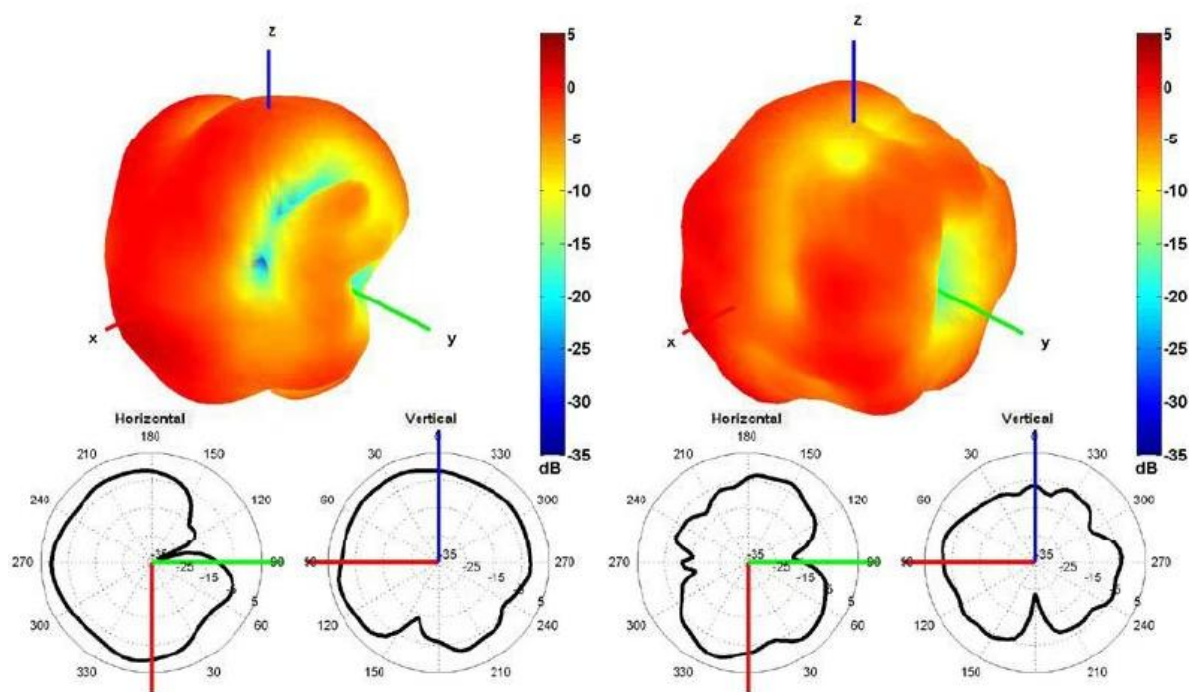
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 6 AND 7



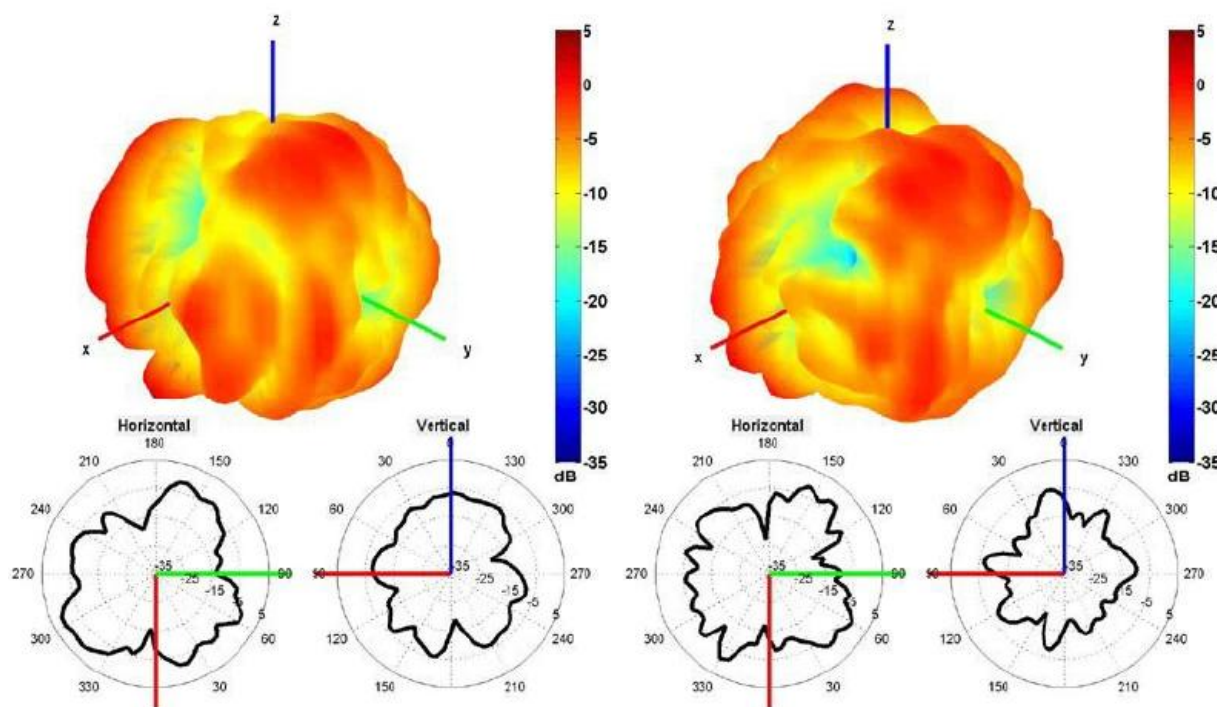


Radiation pattern reference

Cable 1: 5GNR

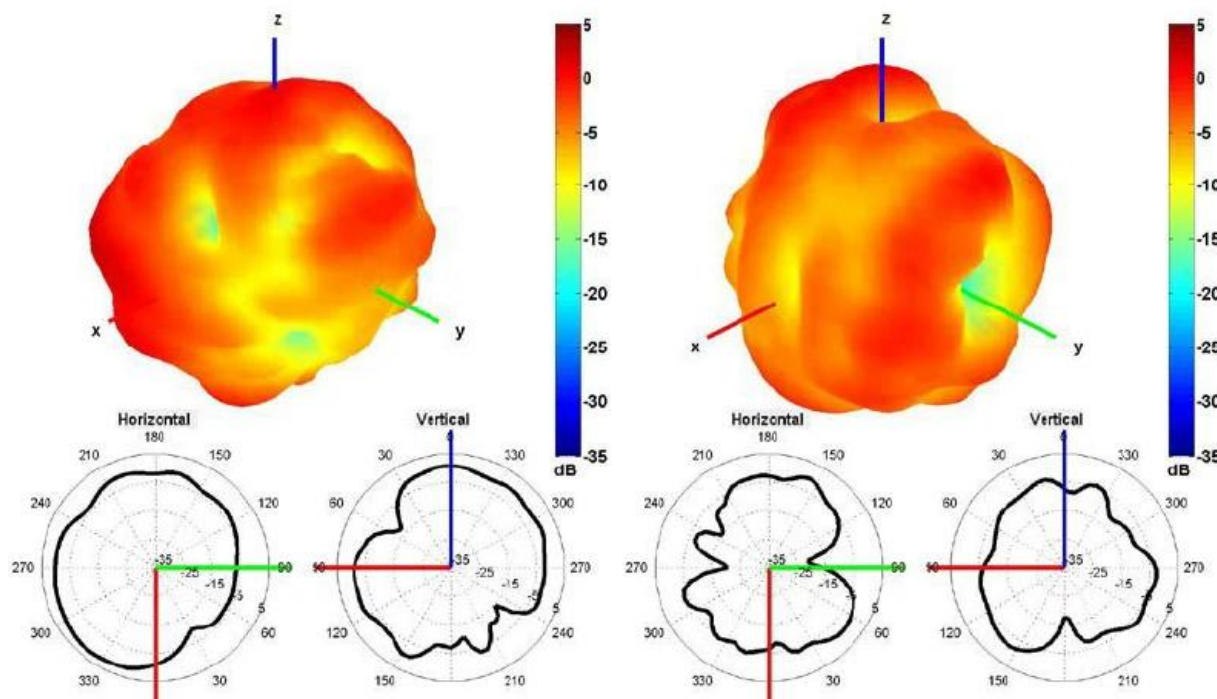


750 and 2500 MHz Radiation pattern

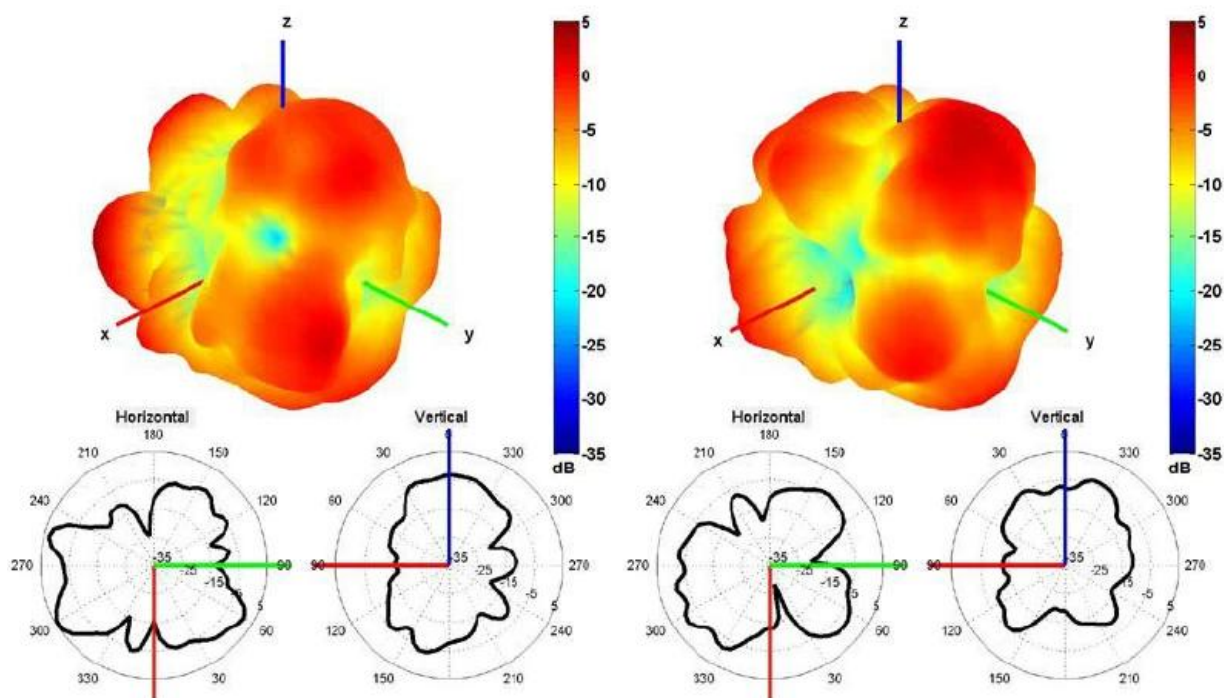


4500 and 5500 MHz Radiation pattern

Cable 2: 5GNR

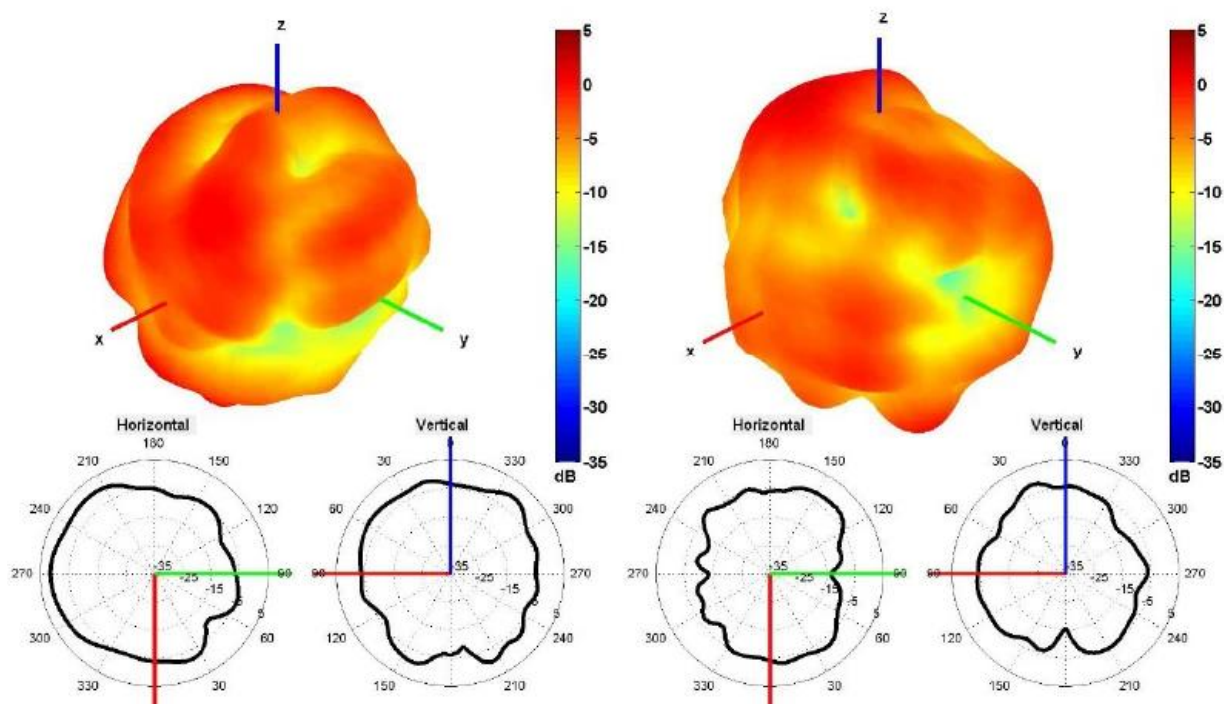


750 and 2500 MHz Radiation pattern

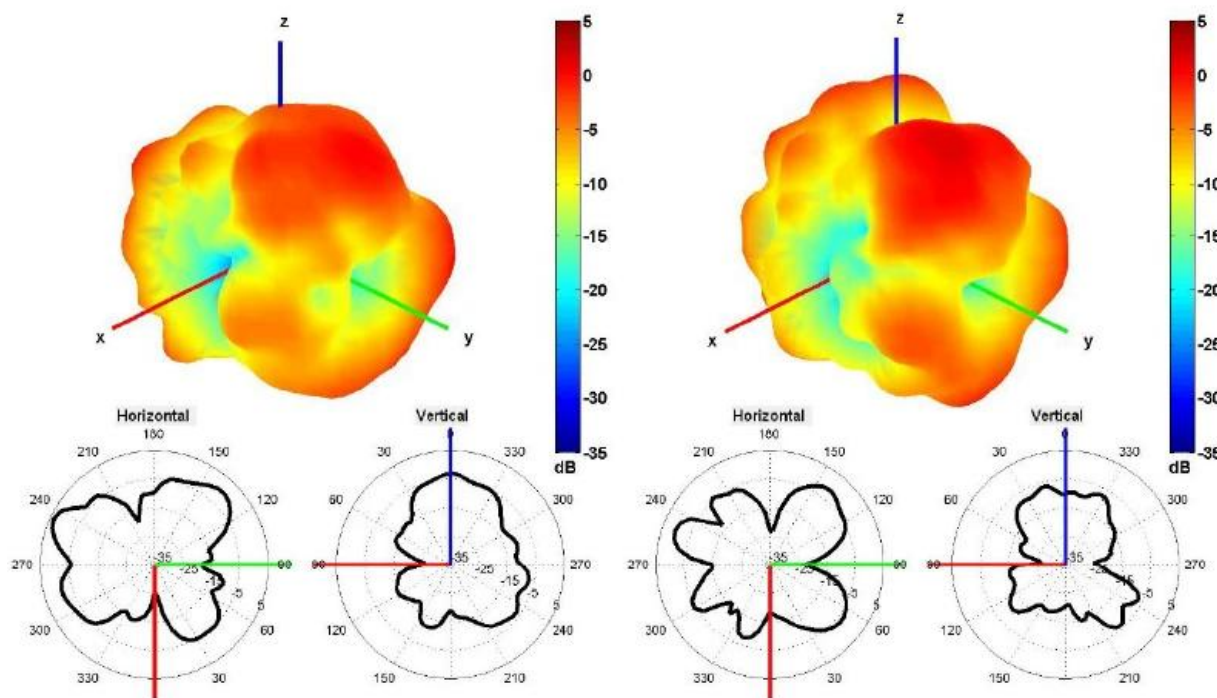


4500 and 5500 MHz Radiation pattern

Cable 3: 5GNR

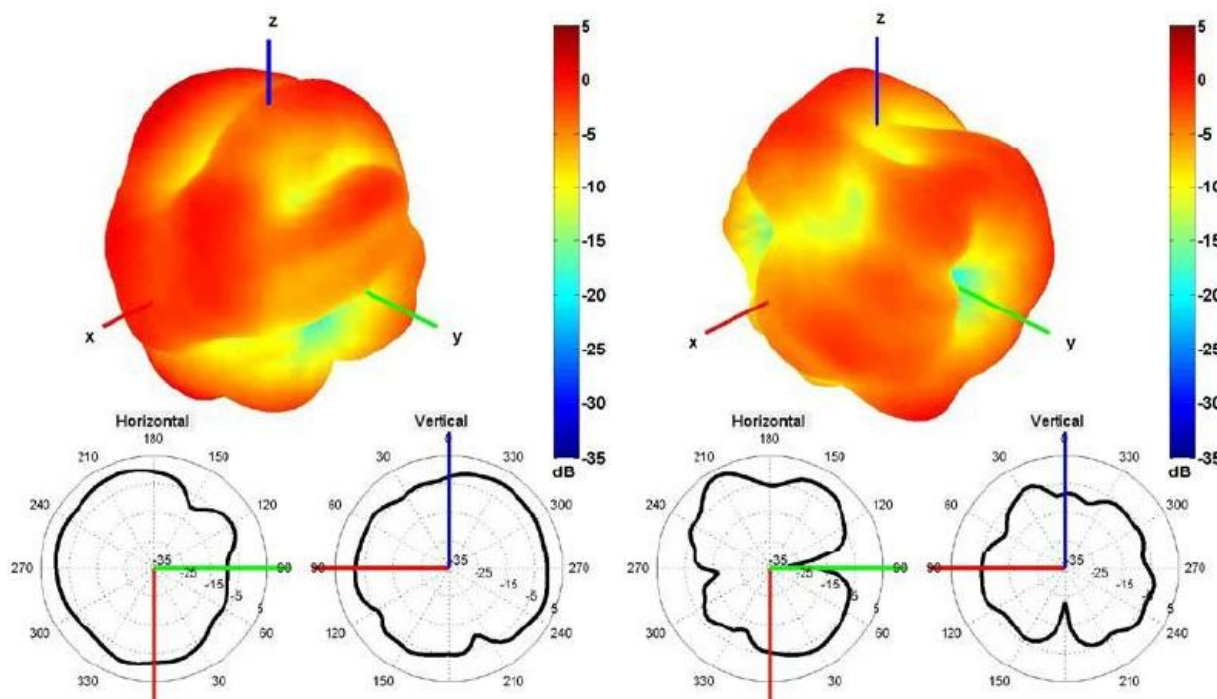


750 and 2500 MHz Radiation pattern

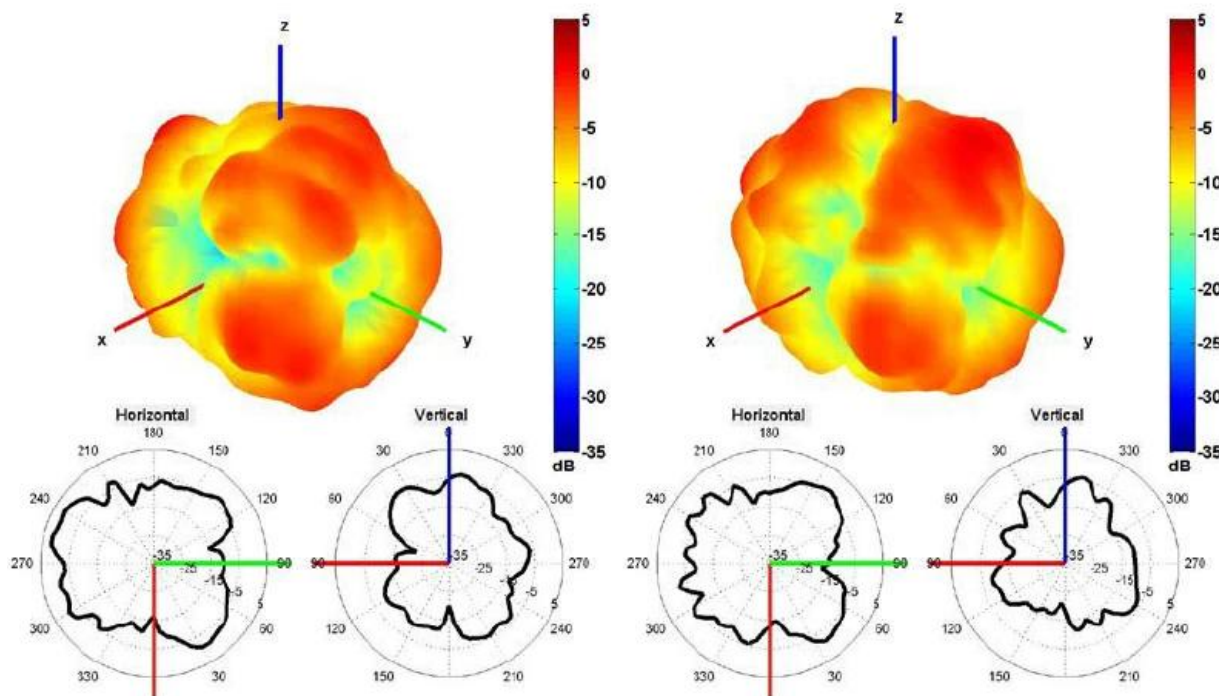


4500 and 5500 MHz Radiation pattern

Cable 4: 5GNR

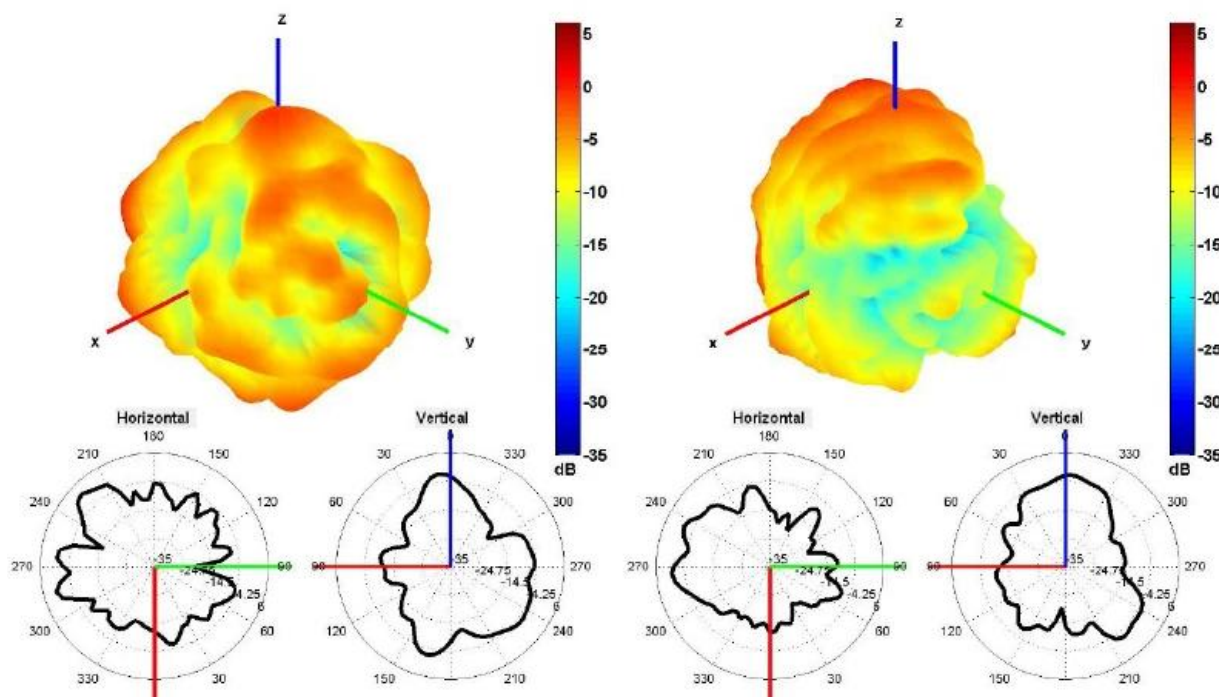


750 and 2500 MHz Radiation pattern

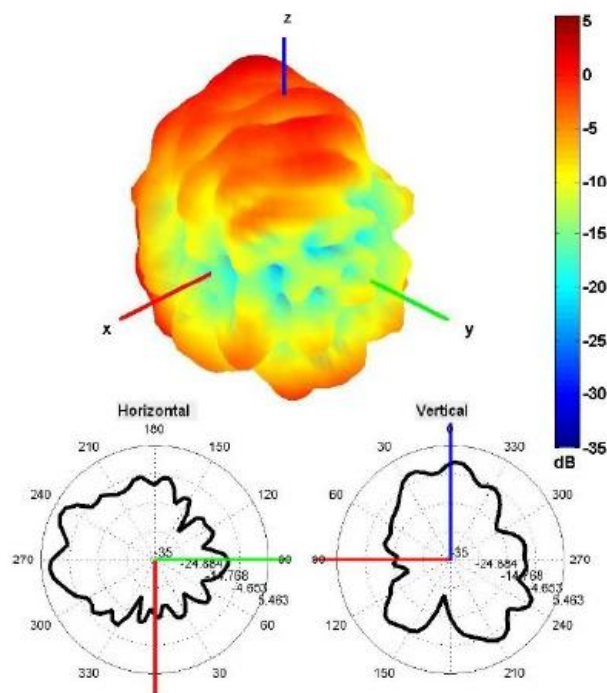


4500 and 5500 MHz Radiation pattern

Cable 5: 2.4/5.0/6.0 GHz ISM

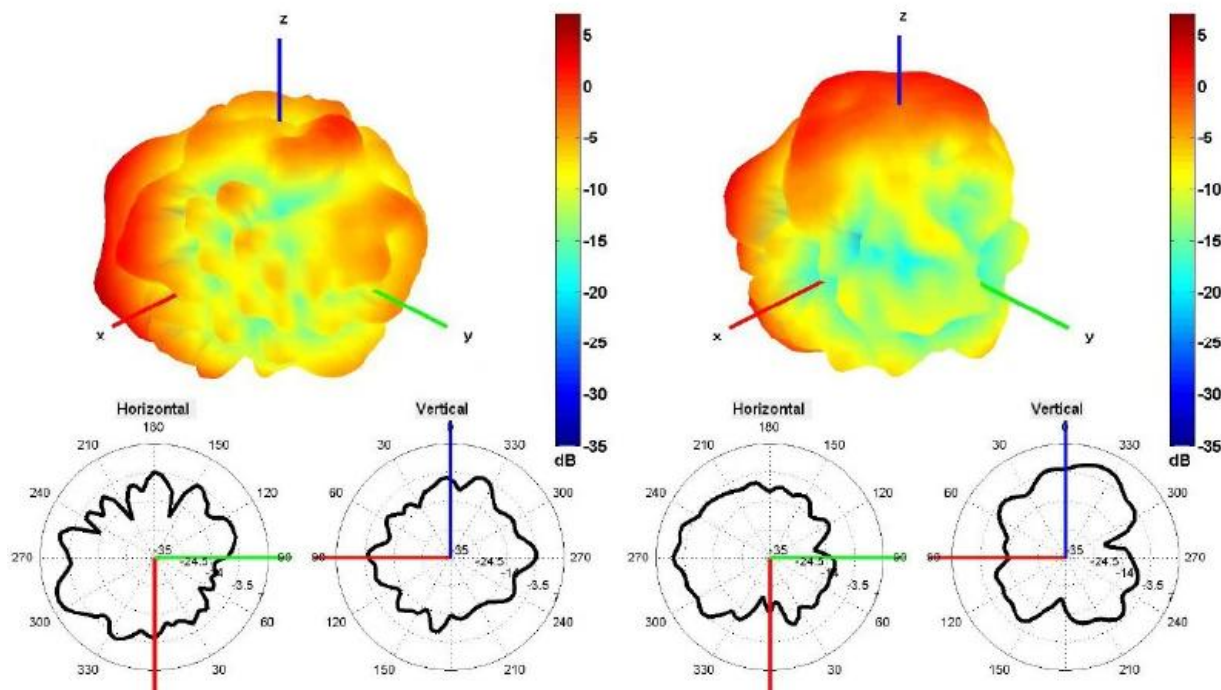


2450 and 5500 MHz Radiation pattern

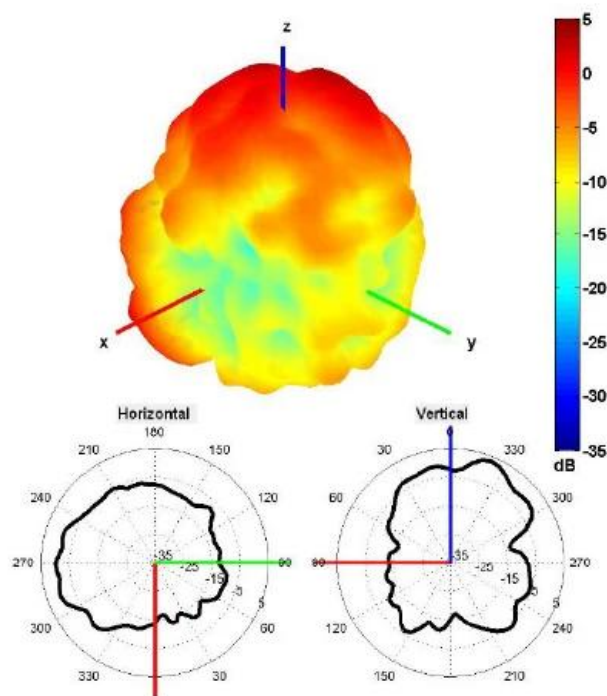


6500 MHz Radiation pattern

Cable 6: 2.4/5.0/6.0 GHz ISM

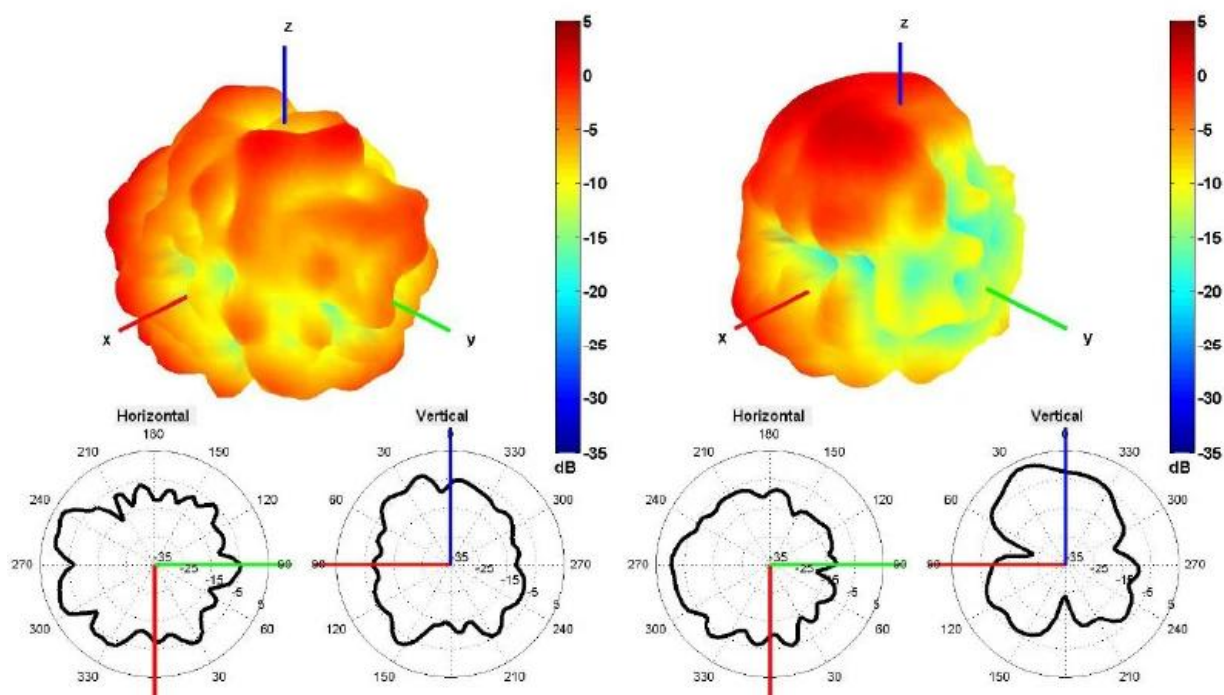


2450 and 5500 MHz Radiation pattern

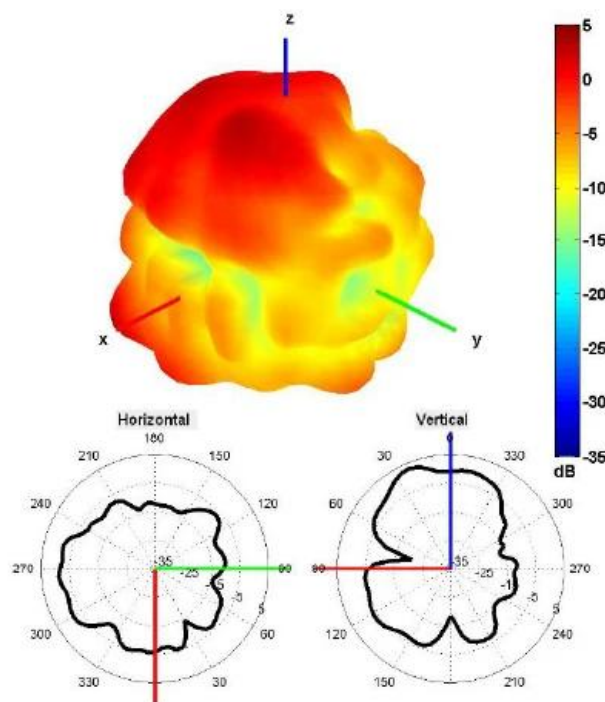


6500 MHz Radiation pattern

Cable 7: 2.4/5.0/6.0 GHz ISM

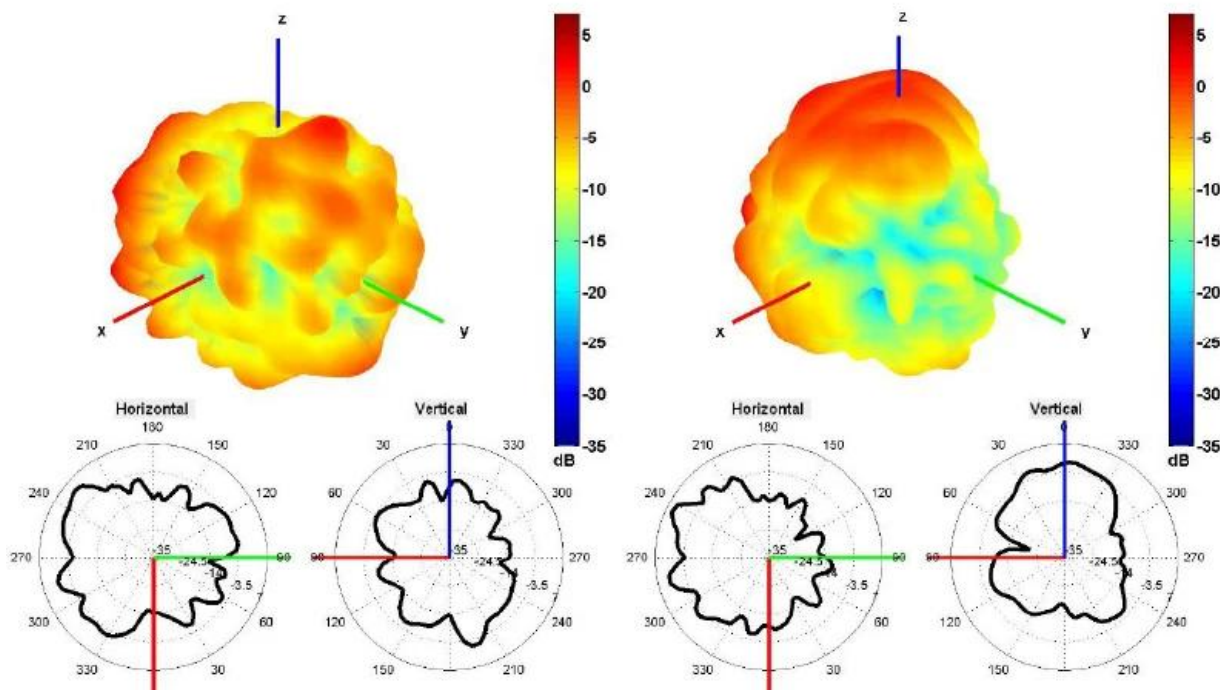


2450 and 5500 MHz Radiation pattern

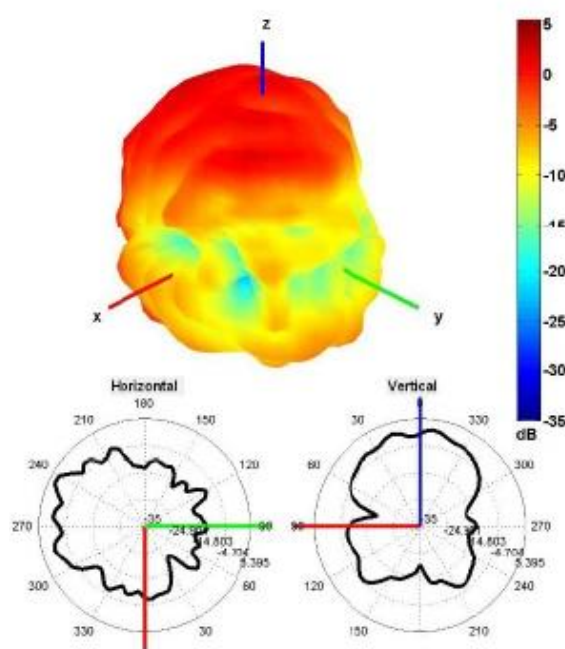


6500 MHz Radiation pattern

Cable 8: 2.4/5.0/6.0 GHz ISM



2450 and 5500 MHz Radiation pattern



6500 MHz Radiation pattern



SCHÉMA(S)

