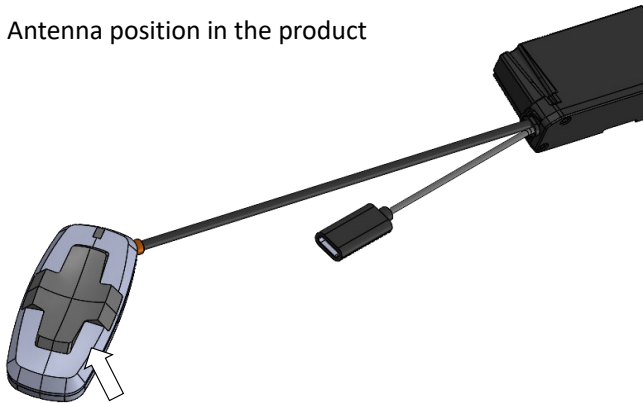


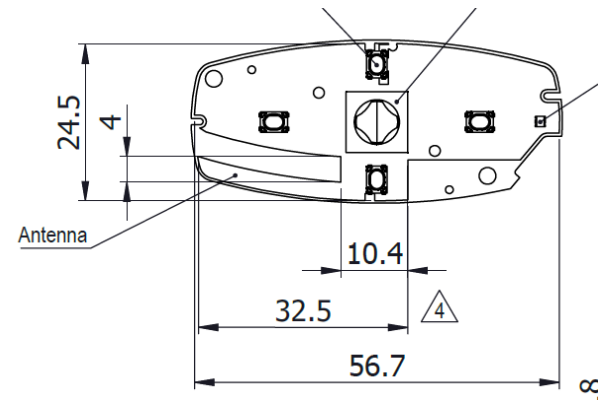
Antenna size	56.6x24.96mm
Freq range	2.4GHz-2.48GHz
VSWR	2 Max
Gain	0dBi max
Impedance	50ohm
Antenna type	Internal Pifa with coaxial cable attachment
Polarization	Linear
Max Power	200mW
Operating temp	-20 to +55 deg celcius
Interconnection and cable assembly	MMCX to Hirose UFL connector with 1.13 RF cable
Manufacturer:	Cardo
PN:	UCS antenna
Testing LAB	Hermon labs - https://hermonlabs.com/

- Antenna position in the product



- RF cable connection MMCX to UFL (all size in mm)

- Antenan size in mm



Technical drawing of a cable assembly showing dimensions and labels:

- Dimensions:**
 - 16 ± 2 (SR to 12p con)
 - $24,5 \pm 2$ (SR to MMCX con center)
 - $25,5 \pm 2$ (SR to 5P con)
 - 3 max.
 - 5
 - 98 ± 5
 - 197 ± 5
- Labels:**
 - B02 (two locations)
 - Bending B and pulling
 - Bending A and pulling
 - MMCX connector
 - E
 - 1, 2, 3 (component numbers)

Bending B and pulling

3 max.

40.5 $\pm$ 2

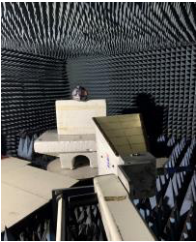
33.5 $\pm$ 2

UFL connector

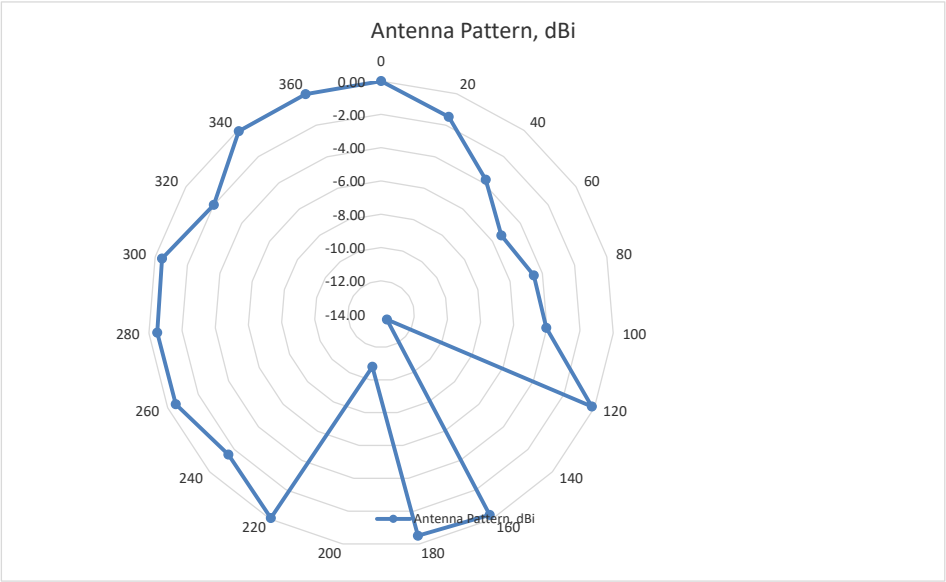
F

Vertical position of EUT			
Frequency:	2480	MHz	
Angle (deg)	Spectrum Analyzer reading (dBuV/m)	EIRP, dBm	Antenna Pattern, dBi
0	89.62	-7.12	0.00
20	88.15	-8.59	-1.47
40	85.86	-10.88	-3.76
60	84.26	-12.48	-5.36
80	85.09	-11.65	-4.53
100	85.59	-11.15	-4.03
120	89.45	-7.29	-0.17
140	76.1	-20.64	-13.52
160	89.34	-7.4	-0.28
180	89.12	-7.62	-0.50
200	78.83	-17.91	-10.79
220	89.55	-7.19	-0.07
240	88.09	-8.65	-1.53
260	89.1	-7.64	-0.52
280	89.12	-7.62	-0.50
300	89.2	-7.54	-0.42
320	87.62	-9.12	-2.00
340	89.55	-7.19	-0.07
360	89.6	-7.14	-0.02
			-2.61

Spectrum Analyzer Data		
Span	10	MHz
RBW	1000	kHz
VBW	3000	kHz
Ref Level	120	dBuV/m
SG	0	dBm
F, MHz	2480	MHz
SA reading	103.87	dBuV/m
AG, dBi	10.3	dBi
Cable Loss	3.17	dB
Substitution		
Antenna polarization Vertical		
Antenna Horn HL 4474		



Gain measurement calculation:
=-(Reference SA reading)+(SA reading of Antenna Power)+(Reference Signal Generator RF Power)+(Ref Antenna gain)-(Reference Antenna cable loss)



Vertical position of EUT			
Frequency:	2440	MHz	
Angle (deg)	Spectrum Analyzer reading (dBuV/m)	EIRP, dBm	Antenna Pattern, dBi
0	93.06	-3.36	0.00
20	91.76	-4.66	-1.30
40	89.58	-6.84	-3.48
60	86.75	-9.67	-6.31
80	91.16	-5.26	-1.90
100	83.21	-13.21	-9.85
120	93.01	-3.41	-0.05
140	84.13	-12.29	-8.93
160	92.98	-3.44	-0.08
180	92.98	-3.44	-0.08
200	88.02	-8.4	-5.04
220	93.01	-3.41	-0.05
240	93.04	-3.38	-0.02
260	92.99	-3.43	-0.07
280	92.98	-3.44	-0.08
300	89.53	-6.89	-3.53
320	93.02	-3.4	-0.04
340	92.91	-3.51	-0.15
360	92.46	-3.96	-0.60
			-2.19

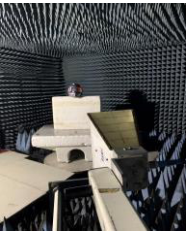
Spectrum Analyzer Data		
Span	10	MHz
RBW	1000	kHz
VBW	3000	kHz
Ref Level	120	dBuV/m
SG	0	dBm
F, MHz	2440	MHz
SA reading	103.5	dBuV/m
AG, dBi	10.2	dBi
Cable Loss	3.12	dB

Antenna polarization Vertical

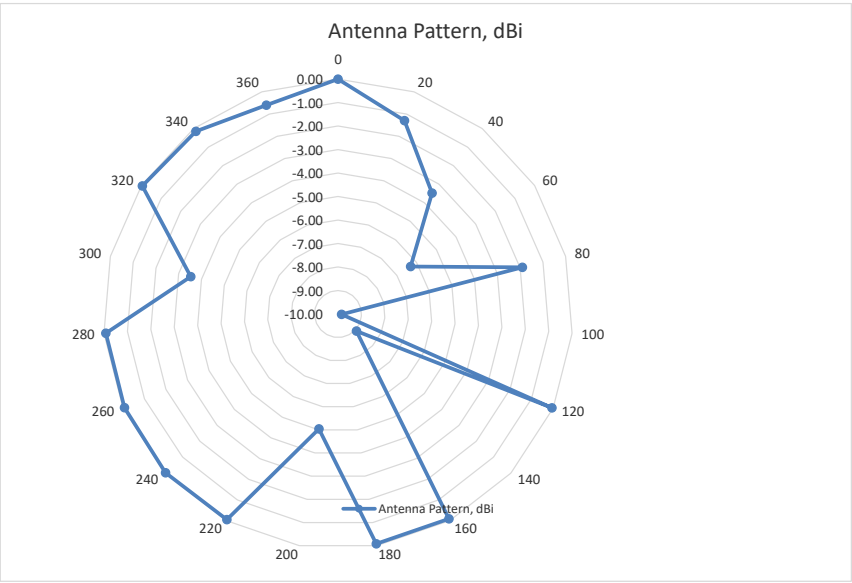
sweep time 20 ms

Substitution

Antenna Horn HL 4474



Gain measurement calculation:
=-(Reference SA reading)+(SA reading of Antenna Power)+(Reference Signal Generator RF Power)+(Ref Antenna gain)-(Reference Antenna cable loss)

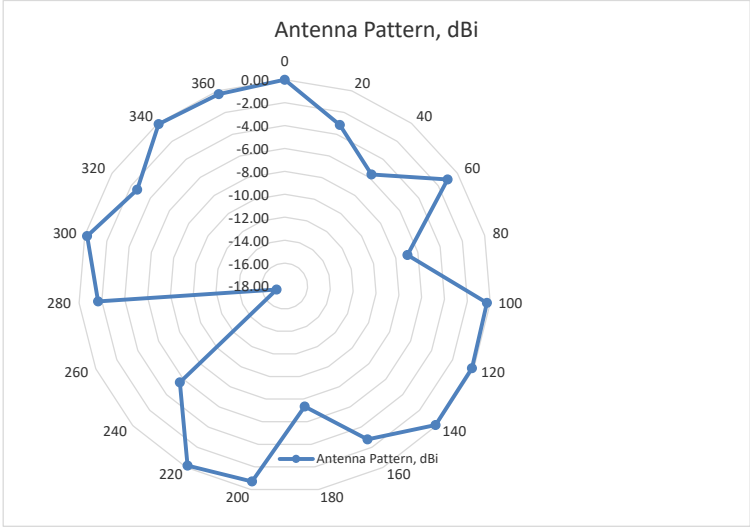


Vertical position of EUT			
Frequency:	2440	MHz	
Angle (deg)	Spectrum Analyzer reading (dBuV/m)	EIRP, dBm	Antenna Pattern, dBi
0	100.33	3.91	0.00
20	97.18	0.76	-3.15
40	94.66	-1.76	-5.67
60	99.31	2.89	-1.02
80	93.38	-3.04	-6.95
100	100.04	3.62	-0.29
120	100.18	3.76	-0.15
140	100.23	3.81	-0.10
160	97.54	1.12	-2.79
180	92.99	-3.43	-7.34
200	99.62	3.2	-0.71
220	100.15	3.73	-0.18
240	94.75	-1.67	-5.58
260	83.09	-13.33	-17.24
280	98.67	2.25	-1.66
300	100.11	3.69	-0.22
320	97.71	1.29	-2.62
340	100.23	3.81	-0.10
360	100.02	3.6	-0.31
			-2.95

Spectrum Analyzer Data		
Span	10	MHz
RBW	1000	kHz
VBW	3000	kHz
Ref Level	120	dBuV/m
SG	0	dBm
F, MHz	2440	MHz
SA reading	103.5	dBuV/m
AG, dBi	10.2	dBi
Cable Loss	3.12	dB
Substitution		
Antenna polarization Vertical		
Antenna Horn HL 4474		



Gain measurement calculation:
=-(Reference SA reading)+(SA reading of Antenna Power)+(Reference Signal Generator RF Power)-(Ref Antenna gain)-(Reference Antenna cable loss)

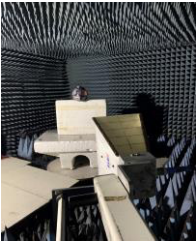


Vertical poztion of EUT			
Frequency:	2402	MHz	
Angle (deg)	Spectrum Analyzer reading (dBuV/m)	EIRP, dBm	Antenna Pattern, dBi
0	92.35	-4.04	0.00
20	91.23	-5.16	-1.12
40	92	-4.39	-0.35
60	92.14	-4.25	-0.21
80	92.23	-4.16	-0.12
100	92.08	-4.31	-0.27
120	92.29	-4.1	-0.06
140	88.33	-8.06	-4.02
160	92.32	-4.07	-0.03
180	92.24	-4.15	-0.11
200	91.72	-4.67	-0.63
220	91.46	-4.93	-0.89
240	92.12	-4.27	-0.23
260	92.29	-4.1	-0.06
280	92.32	-4.07	-0.03
300	85.92	-10.47	-6.43
320	92.12	-4.27	-0.23
340	86.39	-10	-5.96
360	92.19	-4.2	-0.16
			-1.10

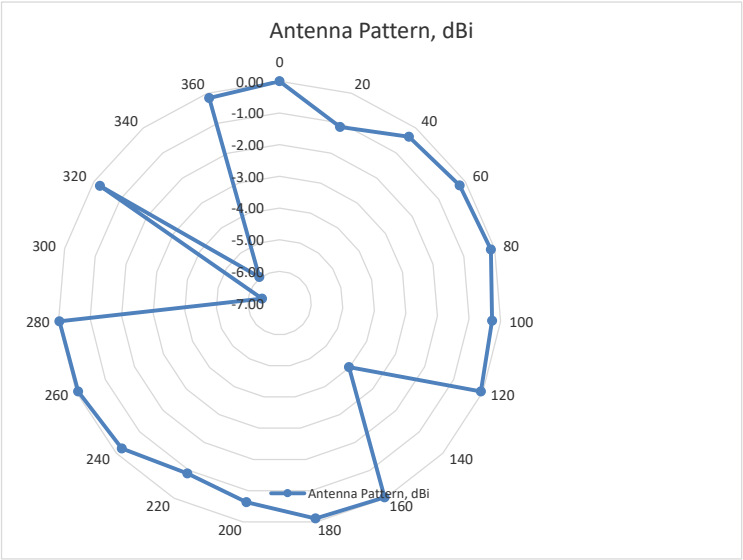
Spectrum Analyzer Data		
Span	10	MHz
RBW	1000	kHz
VBW	3000	kHz
Ref Level	120	dBuV/m
SG	0	dBm
F, MHz	2405	MHz
SA reading	103.2	dBuV/m
AG, dBi	9.9	dBi
Cable Loss	3.09	dB
Antenna polarization Vertical		
Antenna Horn HL 4474		

sweep time 20 ms

Substitution



Gain measurement calculation:
=-(Reference SA reading)+(SA reading of Antenna Power)+(Reference Signal Generator RF Power)-(Ref Antenna gain)-(Reference Antenna cable loss)



Vertical position of EUT			
Frequency:	2402	MHz	
Angle (deg)	Spectrum Analyzer reading (dBuV/m)	EIRP, dBm	Antenna Pattern, dBi
0	101.63	5.24	0.00
20	97.62	1.23	-4.01
40	98.01	1.62	-3.62
60	97.98	1.59	-3.65
80	86.51	-9.88	-15.12
100	98.26	1.87	-3.37
120	101.1	4.71	-0.53
140	101.45	5.06	-0.18
160	101.58	5.19	-0.05
180	98.16	1.77	-3.47
200	100.5	4.11	-1.13
220	101.23	4.84	-0.40
240	89.29	-7.1	-12.34
260	87.09	-9.3	-14.54
280	100.32	3.93	-1.31
300	101.24	4.85	-0.39
320	101.18	4.79	-0.45
340	100.47	4.08	-1.16
360	101.63	5.24	0.00
			-3.46

Spectrum Analyzer Data			sweep time 20 ms Substitution
Span	10	MHz	
RBW	1000	kHz	
VBW	3000	kHz	
Ref Level	120	dBuV/m	
SG	0	dBm	
F, MHz	2405	MHz	
SA reading	103.2	dBuV/m	
AG, dBi	9.9	dBi	
Cable Loss	3.09	dB	

Antenna polarization Vertical

Antenna Horn HL 4474



Gain measurement calculation:
 =(Reference SA reading)+(SA reading of Antenna Power)+(Reference Signal Generator RF Power)+(Ref Antenna gain)-(Reference Antenna cable loss)

