

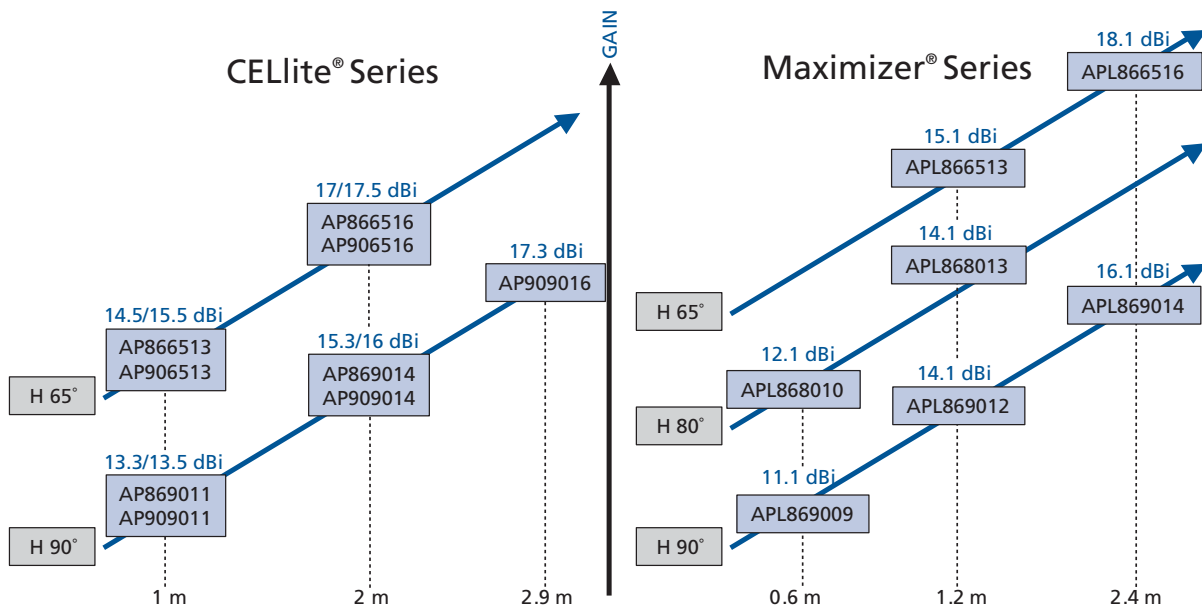
# Base Station Antennas

## BSA Panel Portfolio Summary

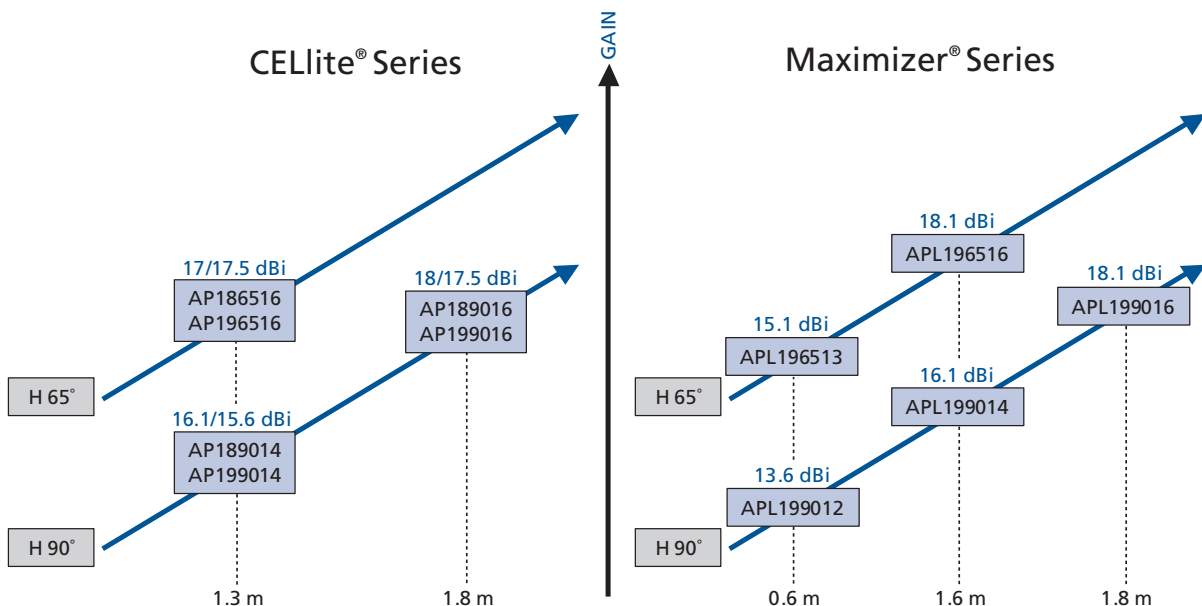
BASE STATION ANTENNAS  
2

### BSA single band portfolio: Cellular850-GSM900

Vertical Polarisation antennas – 806-824 & 870-960 MHz

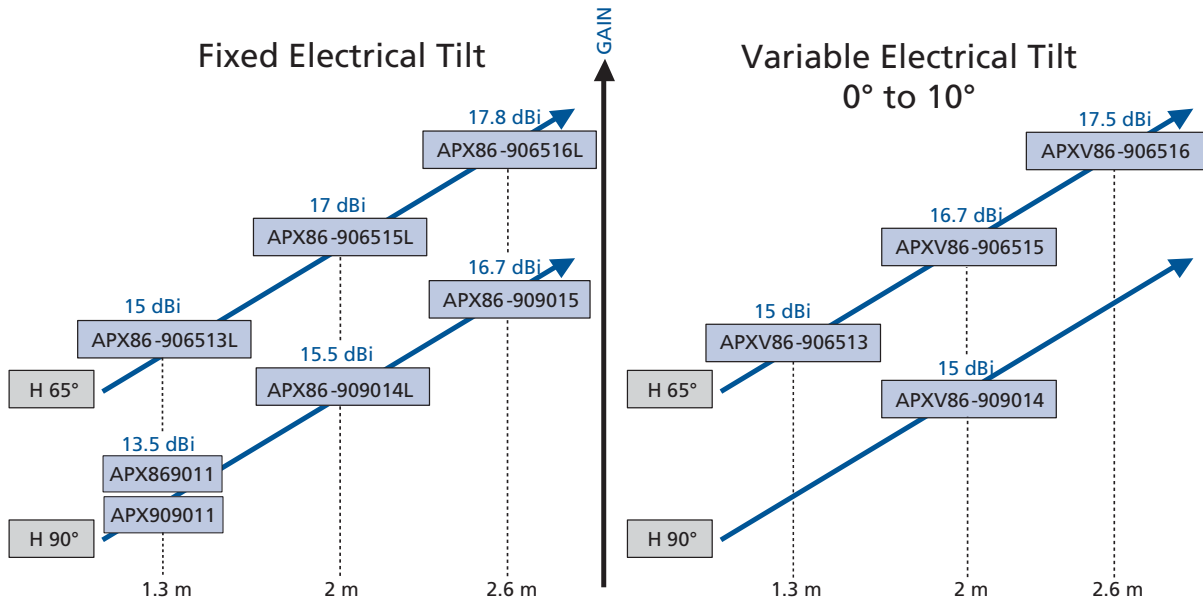


Vertical Polarisation antennas – 1710-1880 & 1850-1990 MHz

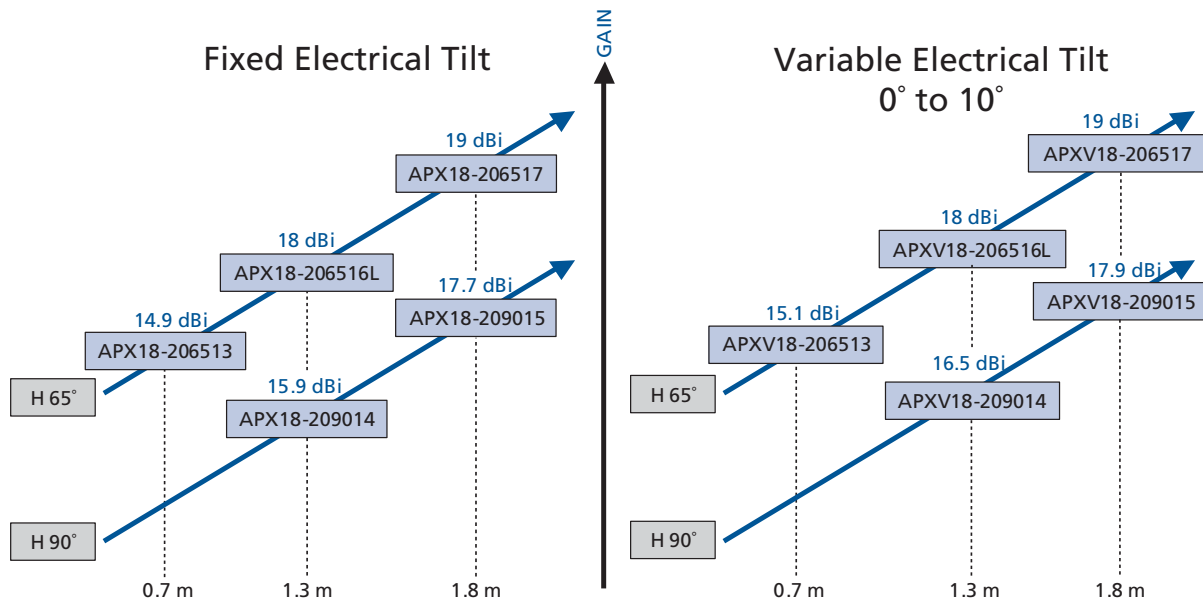


### BSA single band portfolio: Optimizer® Series

Cross Polarisation antennas – 806-960 MHz



Cross Polarisation antennas – 1710-2170 MHz



# Base Station Antennas

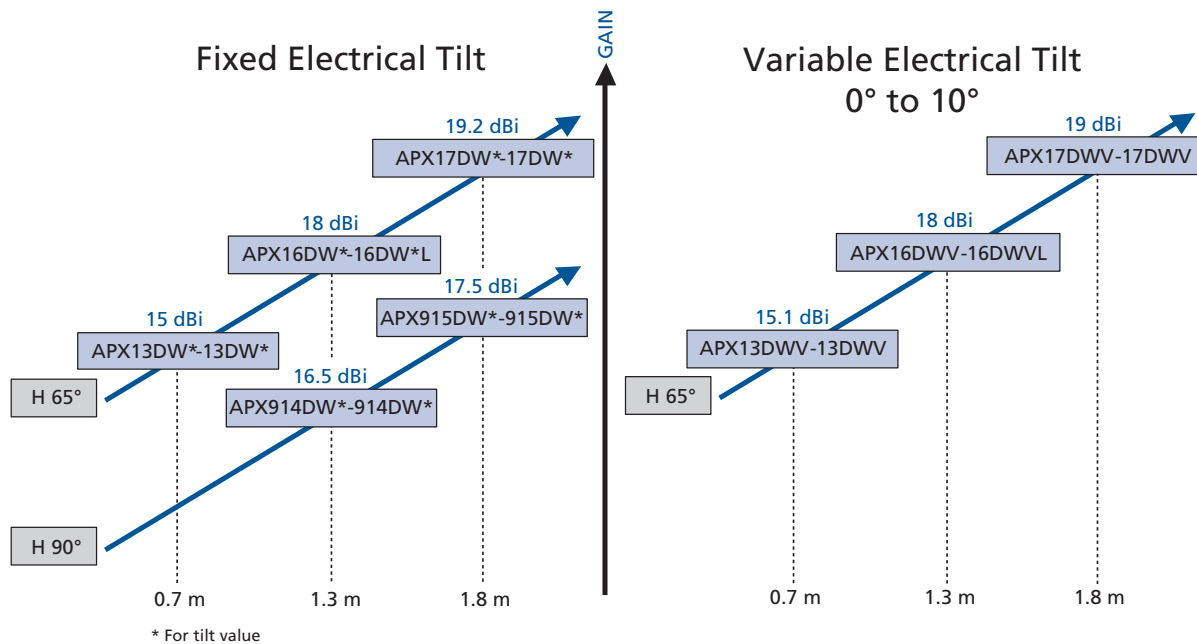
## BSA Panel Portfolio Summary

### BSA side-by-side portfolio: Optimizer® Series

Cross Polarisation antennas – 1710-2170 MHz

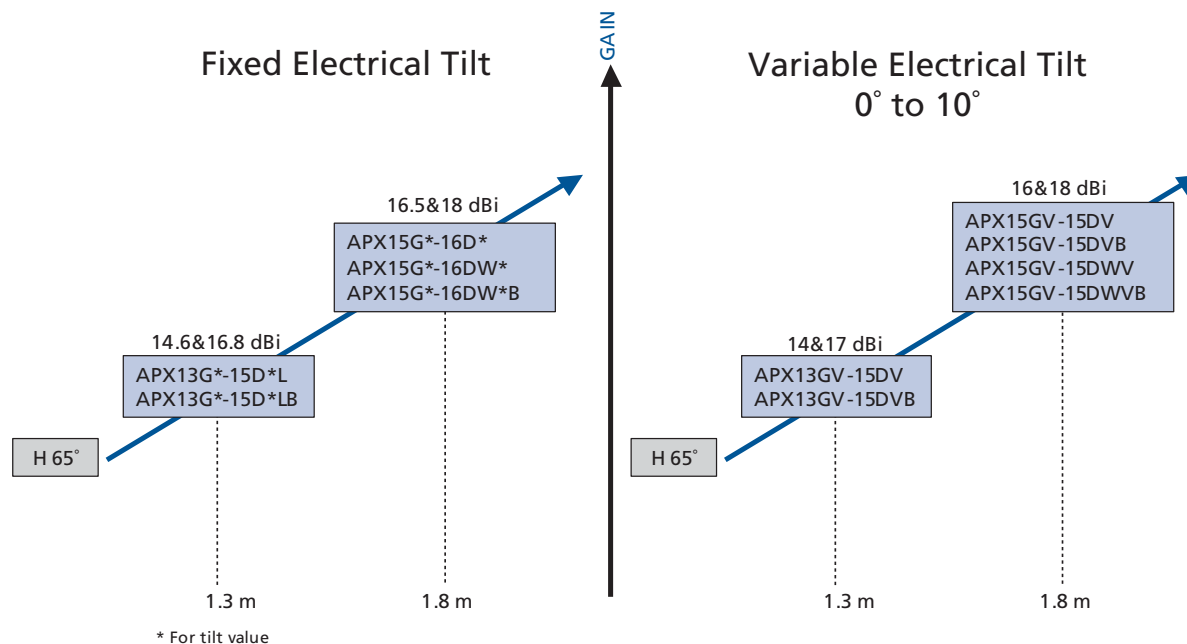
BASE STATION ANTENNAS

2



### BSA dual-band portfolio: Optimizer® Series

Cross Polarisation antennas – 870-960 & 1710-2170 MHz



# Base Station Antennas

## Availability List / Panel Portfolio Summary

Frequency, MHz	Polarization	Horizontal Beamwidth, deg	Vertical Beamwidth, deg	Gain*, dBi	Tilt, deg	Length, m (ft)	Model Number	Page No.
<b>PANEL ANTENNAS (806-960 MHz)</b>								
806-894	V	65	18	14.5	0	1	AP866513-CT0	136
806-894	V	65	15	15.1	0	1.2	APL866513-42T0	142
806-894	V	65	15	15.1	6	1.2	APL866513-42T6	142
806-894	V	65	9	17	0	2	AP866516-CT0	136
806-894	V	65	8	18.1	0	2.4	APL866516-42T0	143
806-894	V	65	8	18.1	4	2.4	APL866516-42T4	143
806-894	V	65	17	15.1	0-14	1.2	ALE866513-42T0	148
806-894	V	80	30	12.1	0	0.6	APL868010-42T0	144
806-894	V	80	15	14.1	0	1.2	APL868013-42T0	144
806-894	V	80	15	14.1	4	1.2	APL868013-42T4	145
806-894	V	90	30	11.1	0	0.6	APL869009-42T0	145
806-894	V	90	17.5	13.3	0	1	AP869011-CT0	137
806-894	V	90	15	14.1	0	1.2	APL869012-42T0	146
806-894	V	90	15	14.1	3	1.2	APL869012-42T3	146
806-894	V	90	9	15.3	0	2	AP869014-CT0	137
806-894	V	90	7.8	16.1	0	2.4	APL869014-42T0	147
806-894	V	90	7.8	16.1	6	2.4	APL869014-42T6	147
806-894	V	90	16	13.6	0-14	1.2	ALE859012-42T0	148
824-960	V	65	17	14.5-15.5	0	1	AP906513-CT0	138
824-960	V	65	8.5	17-17.5	0	2	AP906516-CT0	138
824-960	V	90	17.5	13.3-13.5	0	1	AP909011-CT0	139
824-960	V	90	8.5	15.5-16	0	2	AP909014-CT0	139
824-960	V	90	5.5	17.3	0	2.9	AP909016-CT0	140
<b>Panel Antennas (806-960 MHz) - X Polarization</b>								
806-960	X	65	16-15	14.5-15	0	1.3	APX86-906513L-CT0	126
806-960	X	65	16-15	14.3-15	4	1.3	APX86-906513L-CT4	126
806-960	X	65	16-15.5	14.3-14.8	8	1.3	APX86-906513L-CT8	127
806-960	X	65	16-15	14.3-14.7	12	1.3	APX86-906513L-CT12	127
806-894	X	65	9.6-9	16.5-17	0	2	APX86-906515L-CT0	128
806-894	X	65	9.6-9	16.5-17	6	2	APX86-906515L-CT6	128
806-960	X	65	7.4-6.8	17.5-18	0	2.6	APX86-906516L-CT0	129
806-960	X	65	7.4-6.8	17.2-17.8	4	2.6	APX86-906516L-CT4	129
806-960	X	65	7.4-6.8	16.8-17.5	6	2.6	APX86-906516L-CT6	130
806-960	X	65	7.4-6.8	16.8-17.3	9	2.6	APX86-906516L-CT9	130
806-894	X	90	15	13.7	0	1.3	APX869011-CT0	131
870-960	X	90	13	13.5	0	1.3	APX909011-CT0	131
806-960	X	90	9	15.2-15.5	0	2	APX86-909014L-CT0	132
806-960	X	90	9	15.3-15.7	4	2	APX86-909014L-CT4	132
806-960	X	90	9	15.2-15.6	6	2	APX86-909014L-CT6	133
806-960	X	90	7.5-7	16.3-16.8	0	2.6	APX86-909015-CT0	133
806-960	X	90	7.5-7	16.3-16.7	4	2.6	APX86-909015-CT4	134
806-960	X	90	7.5-7	16-16.5	6	2.6	APX86-909015-CT6	134
<b>Panel Antennas (806-960 MHz) - X Polarization - C</b>								
806-960	X	65	16-15	14.4-15	0-10	1.3	APXV86-906513L-C	122
806-960	X	65	16-15	14.4-14.8	4-14	1.3	APXV86-906513T-C	122
806-960	X	65	10-9	16.1-16.7	0-10	2	APXV86-906515-C	123
806-960	X	65	8-7	16.5-17.5	0-10	2.6	APXV86-906516-C	123
806-960	X	90	9.5	15	0-10	2	APXV86-909014-C	124

\* Gain is specified as an AVERAGE value over the whole frequency band

# Base Station Antennas

## Availability List / Panel Portfolio Summary

Frequency, MHz	Polarization	Horizontal Beamwidth, deg	Vertical Beamwidth, deg	Gain*, dBi	Tilt, deg	Length, m (ft)	Model Number	Page No.
<b>PANEL ANTENNAS (1710-2170 MHz)</b>								
1710-1990	V	65	7.5	17	0	1.3	AP186516-CT0	162
1710-1990	V	65	7.5	17	2	1.3	AP186516-CT2	162
1710-1990	V	90	7.5	16.1	0	1.3	AP189014-CT0	163
1710-1990	V	90	5.5	18	0	1.8	AP189016-CT0	163
1710-1990	V	90	5.5	18	2	1.8	AP189016-CT2	164
1850-1990	V	65	15	15.1	0	0.6	APL196513-42T0	168
1850-1990	V	65	7	17.5	0	1.3	AP196516-CT0	164
1850-1990	V	65	7	17.5	2	1.3	AP196516-CT2	165
1850-1990	V	65	6	18.1	0	1.6	APL196516-42T0	168
1850-1990	V	65	6	18.1	2	1.6	APL196516-42T2	169
1850-1990	V	90	15	13.6	0	0.6	APL199012-42T0	169
1850-1990	V	90	7	16.1	0	1.2	APL199014-42T0	170
1850-1990	V	90	7	16.1	2	1.2	APL199014-42T2	170
1850-1990	V	90	7.5	15.6	0	1.3	AP199014-CT0	165
1850-1990	V	90	5	17.5	0	1.8	AP199016-CT0	166
1850-1990	V	90	5	17.5	2	1.8	AP199016-CT2	166
1850-1990	V	90	4	18.1	0	1.8	APL199016-42T0	171
1850-1990	V	90	4	18.1	2	1.8	APL199016-42T2	171
1900-2170	V	63	6.5	17.2	0-7	1.3	APV206515-C	172
1710-2170	X	65	13.5-12.5	14.7-14.9	0	0.7	APX18-206513-CT0	154
1710-2170	X	65	13.5-12.5	13.8	6	0.7	APX18-206513-CT6	154
1710-2170	X	65	7-6	17.5-18	0	1.3	APX18-206516L-CT0	155
1710-2170	X	65	7-6	17.5-18	2	1.3	APX18-206516L-CT2	155
1710-2170	X	65	7-6	17.5-18	6	1.3	APX18-206516L-CT6	156
1710-2170	X	65	5-4.5	18.5-19	2	1.8	APX18-206517-CT2	156
1710-2170	X	65	5-4.5	18.5-19	5	1.8	APX18-206517-CT5	157
1710-2170	X	90	8-7.5	15.4-15.9	2	1.2	APX18-209014-CT2	157
1710-2170	X	90	8-7.5	15.4-15.8	5	1.2	APX18-209014-CT5	158
1710-2170	X	90	5-4.5	17.5-17.7	2	1.8	APX18-209015-CT2	158
1710-2170	X	90	5-4.5	17.4-17.5	5	1.8	APX18-209015-CT5	159
1710-2170	X	65	15.3-13.6	14.7-15.1	2-12	0.7	APXV18-206513-C	150
1710-2170	X	65	15.3-13.6	14.9-15.4	0-10	0.7	APXV18-206513T-C	150
1710-2170	X	65	7-6.4	17.6-18	0-10	1.3	APXV18-206516L-C	151
1710-2170	X	65	5-4.6	18.8-19	0-10	1.9	APXV18-206517-C	151
1710-2170	X	90	7-6.4	16.5-16.5	0-10	1.3	APXV18-209014-C	152
1710-2170	X	90	5.1-4.5	17.9-17.7	0-10	1.9	APXV18-209015-C	152

\* Gain is specified as an AVERAGE value over the whole frequency band

# Base Station Antennas

## Availability List / Panel Portfolio Summary

Frequency, MHz	Polarization	Horizontal B-width, deg	Vertical B-width, deg	Gain*, dBi	Tilt, deg	Length, m (ft)	Model Number	Page No.
<b>SIDE BY SIDE (QUAD POLE) ANTENNAS (1710-2170 MHZ)</b>								
1710-2170	X	65	15.3-13.6	14.7-15.1	2-12	0.7	APX13DWV-13DWV-C	174
1710-2170	X	65	15.3-13.6	14.9-15.4	0-10	0.7	APX13DWV-13DWVT-C	174
1710-2170	X	65	7-6.4	17.6-18	0-10	1.3	APX16DWV-16DWVL-C	175
1710-2170	X	65	5.5-5	18.8-19	0-10	1.9	APX17DWV-17DWV-C	175
<b>DUAL BAND LOW-HIGH BAND</b>								
806-894 & 1850-1990	V	65	15.5-7	15.1-17.2	0 & 0	1.2	AV6B13C0-15P0-2	191-192
870-960 & 1710-1880	X	65	13.5-7	14.4-16.6	0 & 2	1.3	APX13G0-15D2L-C	184
870-960 & 1710-1880	X	65	13.5-7	14.6-16.8	0 & 2	1.3	APX13G0-15D2BL-C	184
870-960 & 1710-1880	X	65	14-7	14.4-16.6	8 & 6	1.3	APX13G8-15D6L-C	185
870-960 & 1710-1880	X	65	14-7	14.6-16.8	8 & 6	1.3	APX13G8-15D6BL-C	185
870-960 & 1710-1880	X	65	9-5	15.8-17.6	0 & 2	2	APX15G0-16D2-C	186
870-960 & 1710-2170	X	65	9-5	16-17.8	0 & 2	2	APX15G0-16DW2B-C	186
870-960 & 1710-1880	X	65	9-5	16.3-17.4	6 & 6	2	APX15G6-16D6-C	189
870-960 & 1710-2170	X	65	9-5	16.5-17.6	6 & 6	2	APX15G6-16DW6B-C	189
870-960 & 1710-1880	X	65	9-5	16.3-17.8	2 & 2	2	APX15G2-16D2-C	187
870-960 & 1710-2170	X	65	9-5	16.5 / 18-18.3	2 & 2	2	APX15G2-16DW2B-C	187
870-960 & 1710-1880	X	65	9-5	16.4-17.8	6 & 2	2	APX15G6-16D2-C	188
870-960 & 1710-2170	X	65	9-5	16.6 / 18-18.3	6 & 2	2	APX15G6-16DW2B-C	188
870-960 & 1710-1880	X	65	14.7-7	13.9-16.5	0-10 & 0-10	1.3	APX13GV-15DV-C	178
870-960 & 1710-1880	X	65	14.7-7	14.4-17	0-10 & 0-10	1.3	APX13GV-15DVB-C	178
824-894 & 1850-1990	X	65	14-7	14-17	0-10 & 0-10	1.3	APX13CV-15PVB-C	182
870-960 & 1710-2170	X	65	14.7-7	13.9-16.7	0-10 & 2-10	1.3	APX13GV-15DWV-C	179
870-960 & 1710-2170	X	65	14.7-7	14.4-17	0-10 & 2-10	1.3	APX13GV-15DWVB-C	179
870-960 & 1710-1880	X	65	9-5	15.9-17.5	0-10 & 0-10	2	APX15GV-15DV-C	180
870-960 & 1710-1880	X	65	9-5	16-18	0-10 & 0-10	2	APX15GV-15DVB-C	180
824-894 & 1850-1990	X	65	9-5	15.5-17.5	0-10 & 0-10	1.3	APX15CV-15PVB-C	182
870-960 & 1710-2170	X	65	9-5-5	15.5-17.7	0-10 & 2-10	2	APX15GV-15DWV-C	181
870-960 & 1710-2170	X	65	9-5-5	16 & 18.3-18.5	0-10 & 2-10	2	APX15GV-15DWVB-C	181
<b>TRIPLE BAND GSM / DCS / UMTS ANTENNAS</b>								
870-960 & 1710-1880 & 1920-2170	X	65	10-7.5-6.5	15.5-16.5-16.5	2 & 2 & 2	1.9	APX15G2-15D2-15W2B-C	194
870-960 & 1710-1880 & 1920-2170	X	65	10-7.5-6.5	15.5-16.5-16.5	6 & 2 & 2	1.9	APX15G6-15D2-15W2B-C	194
870-960 & 1900-2170 & 1900-2170	X	X	8-6.5-6	15.2-16.8-17.5	2-10	2.1	APX13GV-15DWV-15DWVB-C	195
870-960 & 1900-2170 & 1900-2170	X	X	6.8-6.5-6	16-16.9-17.5	2-10	2.6	APX14GV-15DWV-15DWVB-C	195
<b>CLUSTER ANTENNA SYSTEMS (1710-2170 MHZ)</b>								
1710-2170	X	65	15.3-13.6	14.7-15.1	2-12	0.7	ACXV18-206513	198
1710-2170	X	65	15.3-13.6	14.9-15.4	0-10	0.7	ACXV18-206513T	198
1710-2170	X	65	7-6.4	17.6-18	0-10	1.3	ACXV18-206516L	199
1710-2170	X	65	5-4.6	18.8-19	0-10	1.9	ACXV18-206517	199
1710-2170	X	65	7-6.4	17.6-18	0-10	1.3	ACX16DWV-16DWVL	200
1710-2170	X	65	5.5-5	18.8-19	0-10	1.9	ACX17DWV-17DWV	200

\* Gain is specified as an AVERAGE value over the whole frequency band