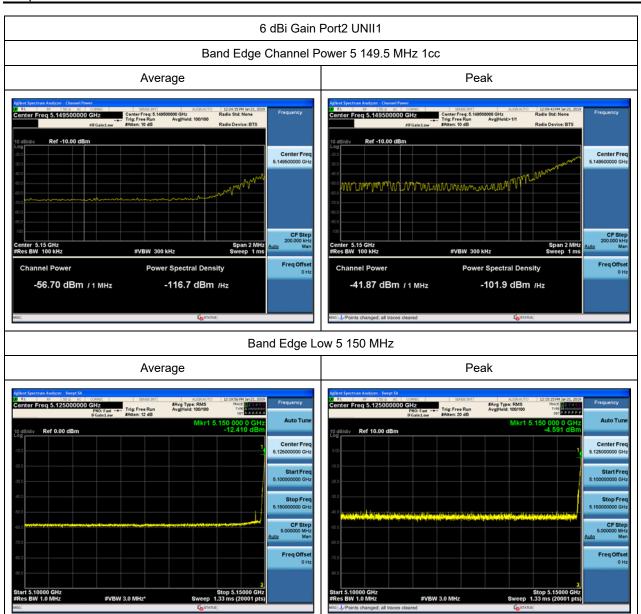


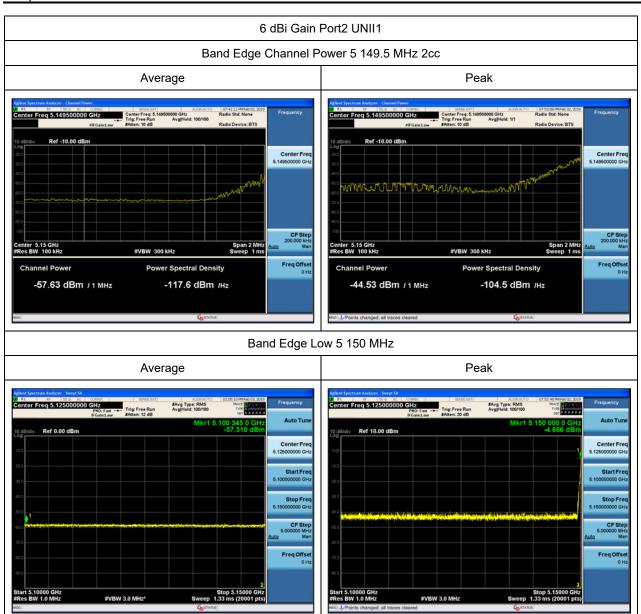
F-TP22-03 (Rev.00) 2 2 1 / 309 **HCT CO.,LTD.**





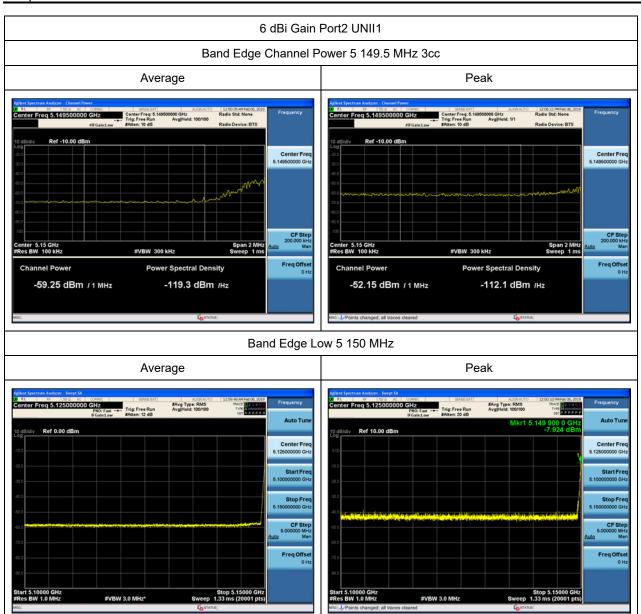
F-TP22-03 (Rev.00) 2 2 2 / 309 **HCT CO.,LTD.**





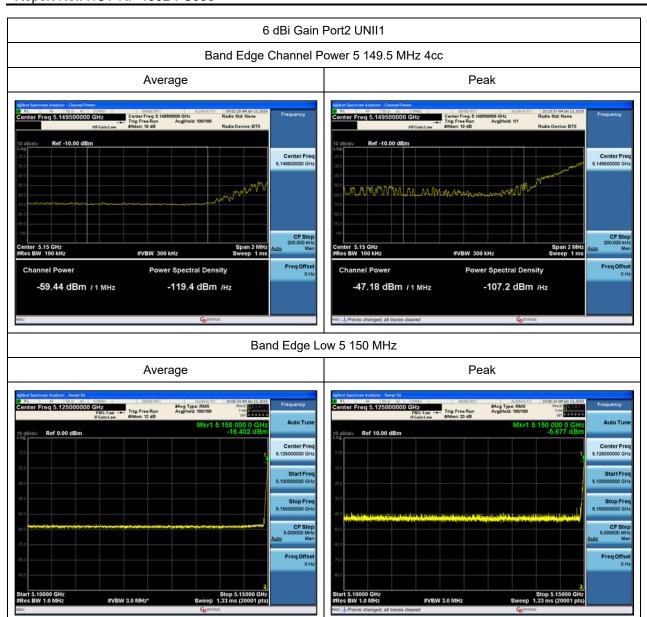
F-TP22-03 (Rev.00) 2 2 3 / 309 **HCT CO.,LTD.**





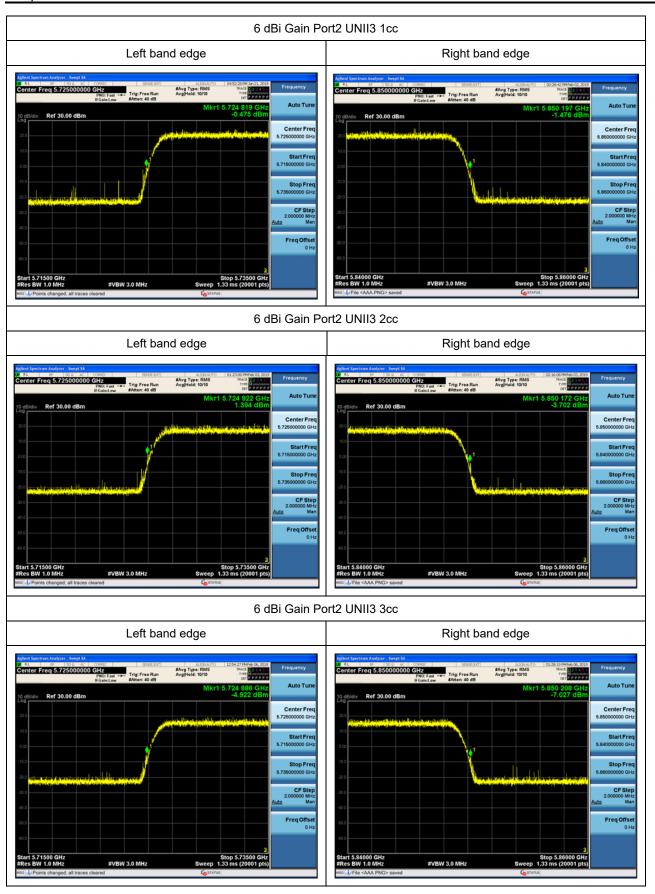
F-TP22-03 (Rev.00) 2 2 4 / 309 **HCT CO.,LTD.**



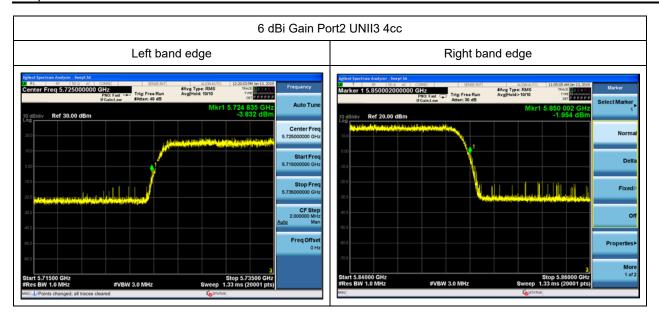


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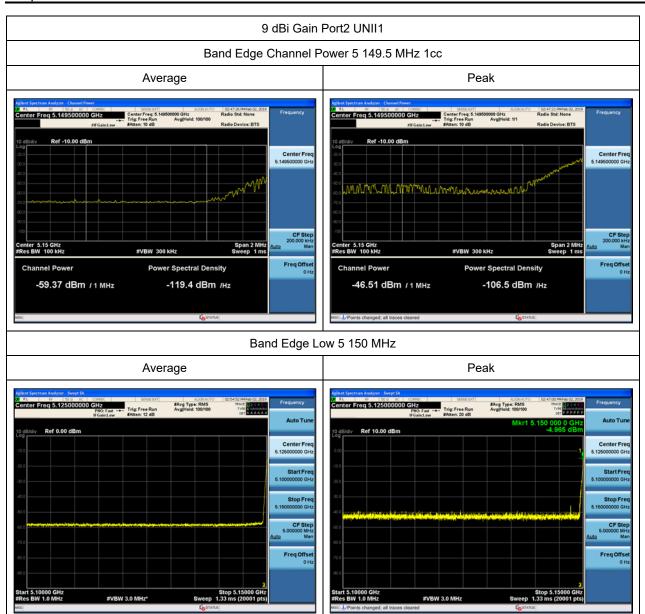






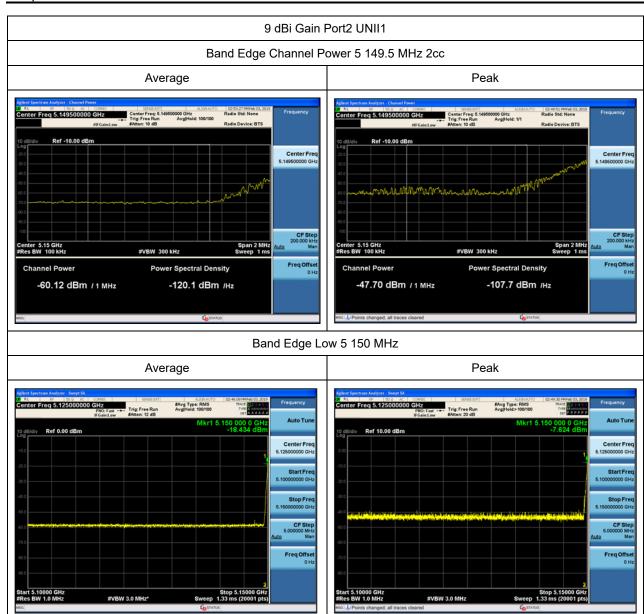
F-TP22-03 (Rev.00) 2 2 7 / 309 **HCT CO.,LTD.**





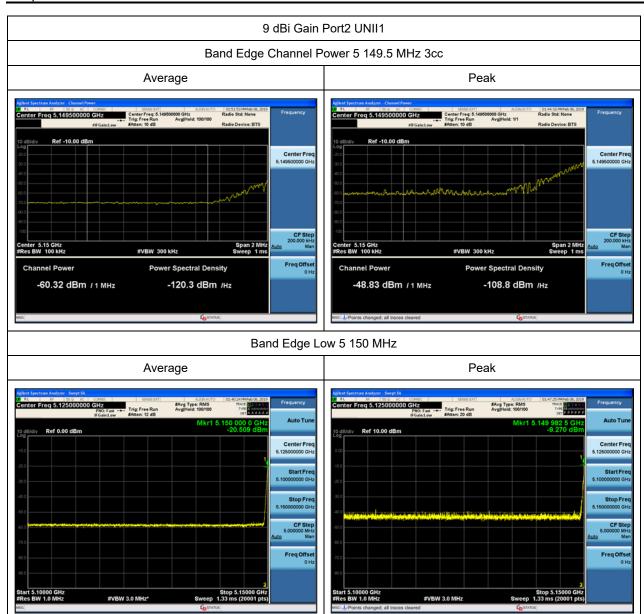
F-TP22-03 (Rev.00) 2 2 8 / 309 **HCT CO.,LTD.**





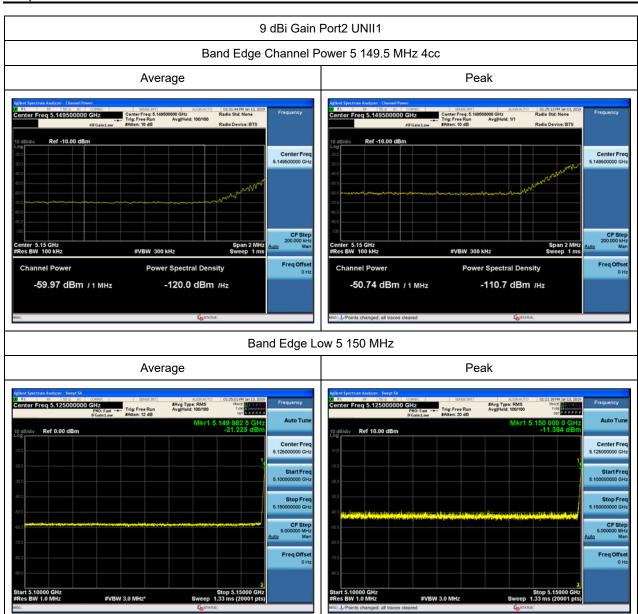
F-TP22-03 (Rev.00) 2 2 9 / 309 **HCT CO.,LTD.**





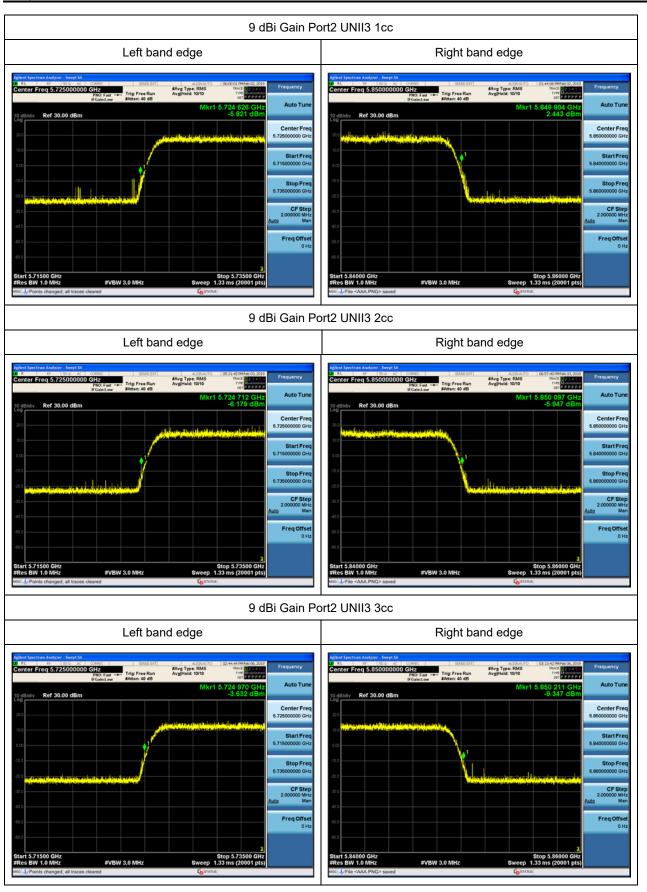
F-TP22-03 (Rev.00) 2 3 0 / 309 **HCT CO.,LTD.**



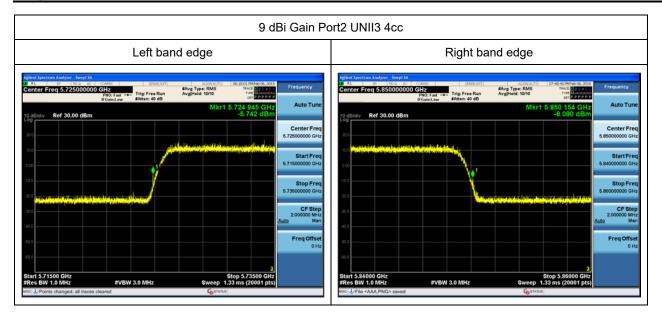


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10.9 FREQUENCY STABILITY. 10.9.1 20MHz BW

[Port1]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5160000147	147
100%		-30	5160000213	213
100%		-20	5160000065	65
100%		-10	5160000061	61
100%	42	0	5160000135	135
100%		10	5160000233	233
100%		30	5160000233	233
100%		40	5160000119	119
100%		50	5160000154	154
115%	48.3	20	5160000217	217
End. Point	35.7	20	5160000146	146

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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42 VDC

OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE:

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000158	158
100%		-30	5735000191	191
100%		-20	5735000246	246
100%		-10	5735000047	47
100%	42	0	5735000174	174
100%		10	5735000216	216
100%		30	5735000230	230
100%		40	5735000216	216
100%		50	5735000203	203
115%	48.3	20	5735000205	205
End. Point	35.7	20	5735000187	187

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5160000081	81
100%		-30	5160000135	135
100%		-20	5160000097	97
100%		-10	5160000097	97
100%	42	0	5160000117	117
100%		10	5160000028	28
100%		30	5160000227	227
100%		40	5160000027	27
100%		50	5160000048	48
115%	48.3	20	5160000213	213
End. Point	35.7	20	5160000250	250

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 3 6 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000246	246
100%		-30	5735000146	146
100%		-20	5735000154	154
100%		-10	5735000025	25
100%	42	0	5735000112	112
100%		10	5735000041	41
100%		30	5735000099	99
100%		40	5735000062	62
100%		50	5735000172	172
115%	48.3	20	5735000228	228
End. Point	35.7	20	5735000129	129

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5160000093	93
100%		-30	5160000124	124
100%		-20	5160000029	29
100%		-10	5160000201	201
100%	42	0	5160000114	114
100%		10	5160000148	148
100%		30	5160000097	97
100%		40	5160000175	175
100%		50	5160000067	67
115%	48.3	20	5160000124	124
End. Point	35.7	20	5160000005	5

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 3 8 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000182	182
100%		-30	5735000160	160
100%		-20	5735000042	42
100%		-10	5735000228	228
100%	42	0	5735000195	195
100%		10	5735000020	20
100%		30	5735000232	232
100%		40	5735000151	151
100%		50	5735000013	13
115%	48.3	20	5735000119	119
End. Point	35.7	20	5735000193	193

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 3 9 / 309 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(kHz)	Error (kHz)
100%		+20(Ref)	5160000051	51
100%		-30	5160000143	143
100%		-20	5160000108	108
100%		-10	5160000240	240
100%	42	0	5160000240	240
100%		10	5160000049	49
100%		30	5160000180	180
100%		40	5160000105	105
100%		50	5160000023	23
115%	48.3	20	5160000112	112
End. Point	35.7	20	5160000090	90

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 4 0 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000070	70
100%		-30	5735000019	19
100%		-20	5735000061	61
100%		-10	5735000178	178
100%	42	0	5735000221	221
100%		10	5735000106	106
100%		30	5735000008	8
100%		40	5735000192	192
100%		50	5735000083	83
115%	48.3	20	5735000002	2
End. Point	35.7	20	5735000005	5

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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[Port2]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(kHz)	Error (kHz)
100%		+20(Ref)	5160000046	46
100%		-30	5160000200	200
100%		-20	5160000029	29
100%		-10	5160000155	155
100%	42	0	5160000048	48
100%		10	5160000086	86
100%		30	5160000161	161
100%		40	5160000082	82
100%		50	5160000109	109
115%	48.3	20	5160000112	112
End. Point	35.7	20	5160000149	149

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 4 2 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000076	76
100%		-30	5735000080	80
100%		-20	5735000163	163
100%		-10	5735000073	73
100%	42	0	5735000021	21
100%		10	5735000083	83
100%		30	5735000226	226
100%		40	5735000149	149
100%		50	5735000146	146
115%	48.3	20	5735000144	144
End. Point	35.7	20	5735000058	58

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 4 3 / 309 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(kHz)	Error (kHz)
100%		+20(Ref)	5160000239	239
100%		-30	5160000248	248
100%		-20	5160000002	2
100%		-10	5160000170	170
100%	42	0	5160000038	38
100%		10	5160000217	217
100%		30	5160000084	84
100%		40	5160000094	94
100%		50	5160000026	26
115%	48.3	20	5160000026	26
End. Point	35.7	20	5160000064	64

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 4 4 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000141	141
100%		-30	5735000131	131
100%		-20	5735000015	15
100%		-10	5735000108	108
100%	42	0	5735000175	175
100%		10	5735000208	208
100%		30	5735000107	107
100%		40	5735000152	152
100%		50	5735000106	106
115%	48.3	20	5735000236	236
End. Point	35.7	20	5735000153	153

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(kHz)	Error (kHz)
100%		+20(Ref)	5160000183	183
100%		-30	5160000172	172
100%		-20	5160000088	88
100%		-10	5160000233	233
100%	42	0	5160000019	19
100%		10	5160000223	223
100%		30	5160000233	233
100%		40	5160000231	231
100%		50	5160000044	44
115%	48.3	20	5160000089	89
End. Point	35.7	20	5160000226	226

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000104	104
100%		-30	5735000063	63
100%		-20	5735000223	223
100%		-10	5735000032	32
100%	42	0	5735000108	108
100%		10	5735000109	109
100%		30	5735000106	106
100%		40	5735000145	145
100%		50	5735000019	19
115%	48.3	20	5735000209	209
End. Point	35.7	20	5735000015	15

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,160,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(kHz)	Error (kHz)
100%		+20(Ref)	5160000108	108
100%		-30	5160000093	93
100%		-20	5160000230	230
100%		-10	5160000089	89
100%	42	0	5160000028	28
100%		10	5160000137	137
100%		30	5160000070	70
100%		40	5160000138	138
100%		50	5160000031	31
115%	48.3	20	5160000118	118
End. Point	35.7	20	5160000018	18

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,735,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5735000034	34
100%		-30	5735000189	189
100%		-20	5735000095	95
100%		-10	5735000236	236
100%	42	0	5735000059	59
100%		10	5735000042	42
100%		30	5735000098	98
100%		40	5735000042	42
100%		50	5735000043	43
115%	48.3	20	5735000229	229
End. Point	35.7	20	5735000201	201

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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10.9.2 40MHz BW

[Port1]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000029	29
100%		-30	5170000109	109
100%		-20	5170000068	68
100%		-10	5170000226	226
100%	42	0	5170000120	120
100%		10	5170000039	39
100%		30	5170000002	2
100%		40	5170000214	214
100%		50	5170000011	11
115%	48.3	20	5170000238	238
End. Point	35.7	20	5170000222	222

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,745,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000165	165
100%		-30	5745000026	26
100%		-20	5745000010	10
100%		-10	5745000238	238
100%	42	0	5745000225	225
100%		10	5745000225	225
100%		30	5745000106	106
100%		40	5745000203	203
100%		50	5745000104	104
115%	48.3	20	5745000140	140
End. Point	35.7	20	5745000118	118

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000158	158
100%		-30	5170000148	148
100%		-20	5170000023	23
100%		-10	5170000163	163
100%	42	0	5170000122	122
100%		10	5170000133	133
100%		30	5170000186	186
100%		40	5170000190	190
100%		50	5170000085	85
115%	48.3	20	5170000214	214
End. Point	35.7	20	5170000202	202

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 2 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,745,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000246	246
100%		-30	5745000093	93
100%		-20	5745000140	140
100%		-10	5745000176	176
100%	42	0	5745000089	89
100%		10	5745000108	108
100%		30	5745000241	241
100%		40	5745000156	156
100%		50	5745000145	145
115%	48.3	20	5745000146	146
End. Point	35.7	20	5745000176	176

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 3 / 309 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000120	120
100%		-30	5170000201	201
100%		-20	5170000209	209
100%		-10	5170000056	56
100%	42	0	5170000247	247
100%		10	5170000037	37
100%		30	5170000117	117
100%		40	5170000186	186
100%		50	5170000010	10
115%	48.3	20	5170000031	31
End. Point	35.7	20	5170000218	218

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 4 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,745,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000235	235
100%		-30	5745000122	122
100%		-20	5745000006	6
100%		-10	5745000108	108
100%	42	0	5745000156	156
100%		10	5745000132	132
100%		30	5745000137	137
100%		40	5745000241	241
100%		50	5745000174	174
115%	48.3	20	5745000144	144
End. Point	35.7	20	5745000147	147

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 5 / 309 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000013	13
100%		-30	5170000167	167
100%		-20	5170000250	250
100%		-10	5170000085	85
100%	42	0	5170000081	81
100%		10	5170000014	14
100%		30	5170000039	39
100%		40	5170000244	244
100%		50	5170000241	241
115%	48.3	20	5170000046	46
End. Point	35.7	20	5170000177	177

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 6 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,745,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000070	70
100%		-30	5745000036	36
100%		-20	5745000061	61
100%		-10	5745000226	226
100%	42	0	5745000217	217
100%		10	5745000164	164
100%		30	5745000064	64
100%		40	5745000169	169
100%		50	5745000099	99
115%	48.3	20	5745000042	42
End. Point	35.7	20	5745000207	207

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 7 / 309 **HCT CO.,LTD.**



[Port2]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000211	211
100%		-30	5170000027	27
100%		-20	5170000147	147
100%		-10	5170000006	6
100%	42	0	5170000061	61
100%		10	5170000205	205
100%		30	5170000007	7
100%		40	5170000231	231
100%		50	5170000059	59
115%	48.3	20	5170000035	35
End. Point	35.7	20	5170000008	8

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 8 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,745,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000135	135
100%		-30	5745000033	33
100%		-20	5745000112	112
100%		-10	5745000033	33
100%	42	0	5745000234	234
100%		10	5745000059	59
100%		30	5745000131	131
100%		40	5745000245	245
100%		50	5745000236	236
115%	48.3	20	5745000138	138
End. Point	35.7	20	5745000167	167

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 5 9 / 309 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000194	194
100%		-30	5170000135	135
100%		-20	5170000198	198
100%		-10	5170000003	3
100%	42	0	5170000058	58
100%		10	5170000079	79
100%		30	5170000185	185
100%		40	5170000058	58
100%		50	5170000111	111
115%	48.3	20	5170000170	170
End. Point	35.7	20	5170000066	66

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 0 / 309 **HCT CO.,LTD.**



5,745,000,000 Hz

OPERATING BAND: UNII Band 3

REFERENCE VOLTAGE: 42 VDC

OPERATING FREQUENCY:

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000135	135
100%		-30	5745000033	33
100%		-20	5745000112	112
100%		-10	5745000033	33
100%	42	0	5745000234	234
100%		10	5745000059	59
100%		30	5745000131	131
100%		40	5745000245	245
100%		50	5745000236	236
115%	48.3	20	5745000138	138
End. Point	35.7	20	5745000167	167

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 1 / 309 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000082	82
100%		-30	5170000186	186
100%		-20	5170000169	169
100%		-10	5170000208	208
100%	42	0	5170000038	38
100%		10	5170000131	131
100%		30	5170000019	19
100%		40	5170000097	97
100%		50	5170000077	77
115%	48.3	20	5170000216	216
End. Point	35.7	20	5170000235	235

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 2 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,745,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000157	157
100%		-30	5745000225	225
100%		-20	5745000096	96
100%		-10	5745000088	88
100%	42	0	5745000142	142
100%		10	5745000099	99
100%		30	5745000068	68
100%		40	5745000175	175
100%		50	5745000139	139
115%	48.3	20	5745000231	231
End. Point	35.7	20	5745000130	130

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 3 / 309 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,170,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5170000010	10
100%		-30	5170000017	17
100%		-20	5170000225	225
100%		-10	5170000137	137
100%	42	0	5170000168	168
100%		10	5170000092	92
100%		30	5170000153	153
100%		40	5170000150	150
100%		50	5170000115	115
115%	48.3	20	5170000062	62
End. Point	35.7	20	5170000050	50

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 4 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,745,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5745000113	113
100%		-30	5745000071	71
100%		-20	5745000181	181
100%		-10	5745000161	161
100%	42	0	5745000144	144
100%		10	5745000068	68
100%		30	5745000164	164
100%		40	5745000141	141
100%		50	5745000101	101
115%	48.3	20	5745000105	105
End. Point	35.7	20	5745000068	68

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

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10.9.3 60MHz BW

[Port1]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (kz)
100%		+20(Ref)	5180000228	228
100%		-30	5180000095	95
100%		-20	5180000098	98
100%		-10	5180000211	211
100%	42	0	5180000114	114
100%		10	5180000078	78
100%		30	5180000069	69
100%		40	5180000003	3
100%		50	5180000101	101
115%	48	20	5180000135	135
End. Point	36	20	5180000091	91

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 6 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,755,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000109	109
1		-30	5755000071	71
1		-20	5755000223	223
1		-10	5755000171	171
1	42	0	5755000014	14
1		10	5755000234	234
1		30	5755000103	103
1		40	5755000237	237
1		50	5755000047	47
1	48	20	5755000068	68
End. Point	36	20	5755000161	161

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 7 / 309 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5180000191	191
100%		-30	5180000234	234
100%		-20	5180000026	26
100%		-10	5180000002	2
100%	42	0	5180000156	156
100%		10	5180000211	211
100%		30	5180000061	61
100%		40	5180000129	129
100%		50	5180000133	133
115%	48	20	5180000138	138
End. Point	36	20	5180000013	13

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 8 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,755,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000049	49
1		-30	5755000006	6
1		-20	5755000062	62
1		-10	5755000019	19
1	42	0	5755000156	156
1		10	5755000154	154
1		30	5755000244	244
1		40	5755000094	94
1		50	5755000040	40
1	48	20	5755000194	194
End. Point	36	20	5755000108	108

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 6 9 / 309 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5180000154	154
100%		-30	5180000114	114
100%		-20	5180000217	217
100%		-10	5180000209	209
100%	42	0	5180000082	82
100%		10	5180000147	147
100%		30	5180000094	94
100%		40	5180000048	48
100%		50	5180000094	94
115%	48	20	5180000101	101
End. Point	36	20	5180000250	250

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 0 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,755,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000238	238
1		-30	5755000130	130
1		-20	5755000103	103
1		-10	5755000217	217
1	42	0	5755000110	110
1		10	5755000208	208
1		30	5755000102	102
1		40	5755000094	94
1		50	5755000171	171
1	48	20	5755000053	53
End. Point	36	20	5755000213	213

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 1 / 309 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5180000022	22
100%		-30	5180000173	173
100%		-20	5180000096	96
100%		-10	5180000113	113
100%	42	0	5180000151	151
100%		10	5180000148	148
100%		30	5180000116	116
100%		40	5180000016	16
100%		50	5180000175	175
115%	48	20	5180000082	82
End. Point	36	20	5180000110	110

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 2 / 309 **HCT CO.,LTD.**



5,755,000,000 Hz

OPERATING BAND: UNII Band 3

REFERENCE VOLTAGE: 42 VDC

OPERATING FREQUENCY:

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000153	153
1		-30	5755000115	115
1		-20	5755000007	7
1		-10	5755000031	31
1	42	0	5755000110	110
1		10	5755000058	58
1		30	5755000047	47
1		40	5755000211	211
1		50	5755000102	102
1	48	20	5755000173	173
End. Point	36	20	5755000082	82

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 3 / 309 **HCT CO.,LTD.**



[Port2]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5180000053	53
100%		-30	5180000205	205
100%		-20	5180000055	55
100%		-10	5180000025	25
100%	42	0	5180000221	221
100%		10	5180000078	78
100%		30	5180000180	180
100%		40	5180000224	224
100%		50	5180000227	227
115%	48	20	5180000186	186
End. Point	36	20	5180000076	76

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 4 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,755,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000041	41
1		-30	5755000126	126
1		-20	5755000222	222
1		-10	5755000238	238
1	42	0	5755000088	88
1		10	5755000038	38
1		30	5755000138	138
1		40	5755000100	100
1		50	5755000097	97
1	48	20	5755000055	55
End. Point	36	20	5755000186	186

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 5 / 309 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5180000151	151
100%		-30	5180000225	225
100%		-20	5180000025	25
100%		-10	5180000016	16
100%	42	0	5180000101	101
100%		10	5180000005	5
100%		30	5180000219	219
100%		40	5180000124	124
100%		50	5180000111	111
115%	48	20	5180000227	227
End. Point	36	20	5180000099	99

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 6 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,755,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000233	233
1		-30	5755000098	98
1		-20	5755000130	130
1		-10	5755000217	217
1	42	0	5755000037	37
1		10	5755000221	221
1		30	5755000104	104
1		40	5755000026	26
1		50	5755000027	27
1	48	20	5755000205	205
End. Point	36	20	5755000136	136

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 7 / 309 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5180000044	44
100%		-30	5180000077	77
100%		-20	5180000063	63
100%		-10	5180000124	124
100%	42	0	5180000029	29
100%		10	5180000002	2
100%		30	5180000230	230
100%		40	5180000076	76
100%		50	5180000210	210
115%	48	20	5180000074	74
End. Point	36	20	5180000225	225

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 8 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,755,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000106	106
1		-30	5755000196	196
1		-20	5755000169	169
1		-10	5755000027	27
1	42	0	5755000082	82
1		10	5755000109	109
1		30	5755000083	83
1		40	5755000038	38
1		50	5755000205	205
1	48	20	5755000247	247
End. Point	36	20	5755000230	230

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 7 9 / 309 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,180,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5180000197	197
100%		-30	5180000246	246
100%		-20	5180000169	169
100%		-10	5180000050	50
100%	42	0	5180000130	130
100%		10	5180000148	148
100%		30	5180000126	126
100%		40	5180000102	102
100%		50	5180000067	67
115%	48	20	5180000059	59
End. Point	36	20	5180000131	131

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 0 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,755,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5755000231	231
1		-30	5755000007	7
1		-20	5755000130	130
1		-10	5755000028	28
1	42	0	5755000141	141
1		10	5755000113	113
1		30	5755000083	83
1		40	5755000143	143
1		50	5755000101	101
1	48	20	5755000102	102
End. Point	36	20	5755000016	16

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 1 / 309 **HCT CO.,LTD.**



10.9.4 80MHz BW

[Port1]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000067	67
1		-30	5190000172	172
1		-20	5190000148	148
1		-10	5190000115	115
1	42	0	5190000174	174
1		10	5190000139	139
1		30	5190000179	179
1		40	5190000092	92
1		50	5190000177	177
1	48	20	5190000232	232
End. Point	36	20	5190000165	165

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 2 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,765,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000048	48
100%		-30	5765000105	105
100%		-20	5765000162	162
100%		-10	5765000028	28
100%	42	0	5765000225	225
100%		10	5765000201	201
100%		30	5765000176	176
100%		40	5765000084	84
100%		50	5765000245	245
115%	48.3	20	5765000158	158
End. Point	35.7	20	5765000005	5

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 3 / 309 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000202	202
1		-30	5190000027	27
1		-20	5190000128	128
1		-10	5190000021	21
1	42	0	5190000133	133
1		10	5190000241	241
1		30	5190000181	181
1		40	5190000155	155
1		50	5190000216	216
1	48	20	5190000138	138
End. Point	36	20	5190000204	204

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 4 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,765,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000216	216
100%		-30	5765000064	64
100%		-20	5765000169	169
100%		-10	5765000192	192
100%	42	0	5765000203	203
100%		10	5765000196	196
100%		30	5765000234	234
100%		40	5765000144	144
100%		50	5765000165	165
115%	48.3	20	5765000054	54
End. Point	35.7	20	5765000243	243

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 5 / 309 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000196	196
1		-30	5190000217	217
1		-20	5190000182	182
1		-10	5190000089	89
1	42	0	5190000107	107
1		10	5190000001	1
1		30	5190000211	211
1		40	5190000161	161
1		50	5190000187	187
1	48	20	5190000148	148
End. Point	36	20	5190000234	234

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 6 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,765,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000127	127
100%		-30	5765000024	24
100%		-20	5765000210	210
100%		-10	5765000102	102
100%	42	0	5765000055	55
100%		10	5765000045	45
100%		30	5765000080	80
100%		40	5765000242	242
100%		50	5765000007	7
115%	48.3	20	5765000046	46
End. Point	35.7	20	5765000249	249

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 7 / 309 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000202	202
1		-30	5190000216	216
1		-20	5190000070	70
1		-10	5190000162	162
1	42	0	5190000201	201
1		10	5190000037	37
1		30	5190000232	232
1		40	5190000109	109
1		50	5190000080	80
1	48	20	5190000092	92
End. Point	36	20	5190000136	136

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 8 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,765,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000220	220
100%		-30	5765000059	59
100%		-20	5765000057	57
100%		-10	5765000094	94
100%	42	0	5765000183	183
100%		10	5765000126	126
100%		30	5765000067	67
100%		40	5765000042	42
100%		50	5765000029	29
115%	48.3	20	5765000191	191
End. Point	35.7	20	5765000155	155

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 8 9 / 309 **HCT CO.,LTD.**



[Port2]

Startup after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000072	72
1		-30	5190000213	213
1		-20	5190000010	10
1		-10	5190000052	52
1	42	0	5190000107	107
1		10	5190000069	69
1		30	5190000066	66
1		40	5190000039	39
1		50	5190000196	196
1	48	20	5190000025	25
End. Point	36	20	5190000096	96

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 0 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,765,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000200	200
100%		-30	5765000181	181
100%		-20	5765000109	109
100%		-10	5765000045	45
100%	42	0	5765000091	91
100%		10	5765000077	77
100%		30	5765000222	222
100%		40	5765000136	136
100%		50	5765000099	99
115%	48.3	20	5765000168	168
End. Point	35.7	20	5765000044	44

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 1 / 309 **HCT CO.,LTD.**



2 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000078	78
1		-30	5190000142	142
1		-20	5190000204	204
1		-10	5190000223	223
1	42	0	5190000162	162
1		10	5190000210	210
1		30	5190000022	22
1		40	5190000008	8
1		50	5190000169	169
1	48	20	5190000236	236
End. Point	36	20	5190000032	32

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 2 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,765,000,000 Hz
REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000060	60
100%		-30	5765000100	100
100%		-20	5765000198	198
100%		-10	5765000093	93
100%	42	0	5765000182	182
100%		10	5765000189	189
100%		30	5765000246	246
100%		40	5765000124	124
100%		50	5765000021	21
115%	48.3	20	5765000192	192
End. Point	35.7	20	5765000134	134

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 3 / 309 **HCT CO.,LTD.**



5 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000086	86
1		-30	5190000106	106
1		-20	5190000236	236
1		-10	5190000013	13
1	42	0	5190000005	5
1		10	5190000244	244
1		30	5190000036	36
1		40	5190000047	47
1		50 5190000115		115
1	48	20	5190000025	25
End. Point	36	20	5190000214	214

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 4 / 309 **HCT CO.,LTD.**



OPERATING BAND: UNII Band 3
OPERATING FREQUENCY: 5,765,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000177	177
100%		-30	5765000150	150
100%		-20	5765000086	86
100%		-10	5765000050	50
100%	42	42 0 5765000115		115
100%		10	5765000249	249
100%		30	5765000072	72
100%		40	5765000217	217
100%		50	5765000103	103
115%	48.3	20	5765000125	125
End. Point	35.7	20	5765000191	191

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 5 / 309 **HCT CO.,LTD.**



10 minutes after the EUT is energized

OPERATING BAND: UNII Band 1

OPERATING FREQUENCY: 5,190,000,000 Hz

REFERENCE VOLTAGE: 42 VDC

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
1		+20(Ref)	5190000147	147
1		-30	5190000155	155
1		-20	5190000140	140
1		-10	5190000250	250
1	42	0	5190000003	3
1		10	5190000143	143
1		30	5190000170	170
1		40	5190000079	79
1		50	5190000216	216
1	48	20	5190000245	245
End. Point	36	20	5190000010	10

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 6 / 309 **HCT CO.,LTD.**



42 VDC

OPERATING BAND: UNII Band 3

OPERATING FREQUENCY: 5,765,000,000 Hz

REFERENCE VOLTAGE:

Voltage	Power	Temp.	Frequency	Frequency
(%)	(VDC)	()	(Hz)	Error (Hz)
100%		+20(Ref)	5765000014	14
100%		-30	5765000105	105
100%		-20	5765000229	229
100%		-10	5765000029	29
100%	42	0	5765000016	16
100%		10	5765000198	198
100%		30	5765000115	115
100%		40	5765000107	107
100%		50	5765000200	200
115%	48.3	20	5765000008	8
End. Point	35.7	20	5765000073	73

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

F-TP22-03 (Rev.00) 2 9 7 / 309 **HCT CO.,LTD.**



10.10 RADIATED SPURIOUS EMISSIONS

Frequency Range: 9 kHz - 30MHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin	
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB	
No Critical peaks found								

Note:

- 1. The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
- 2. Distance extrapolation factor = 40*log (specific distance / test distance) (dB)
- 3. Limit line = specific Limits (dBuV) + Distance extrapolation factor
- 4. The test results for below 30 MHz is correlated to an open site.

The result on OFTS is about 2 dB higher than semi-anechoic chamber(10 m chamber)

Frequency Range: Below 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin	
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB	
No Critical peaks found								

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode

Frequency Range: Above 1 GHz

Frequency	Reading	Ant. factor	Cable loss	Ant. POL	Total	Limit	Margin		
MHz	dBuV/m	dBm/m	dBm	(H/V)	dBuV/m	dBuV/m	dB		
	No Critical peaks found								

F-TP22-03 (Rev.00) 2 9 8 / 309 **HCT CO.,LTD.**

FCC ID: A3LRT2201-46A

10.11 POWERLINE CONDUCTED EMISSIONS

Conducted Emissions (Line 1)

LAA_L1 1/2

HCT TEST Report

Common Information

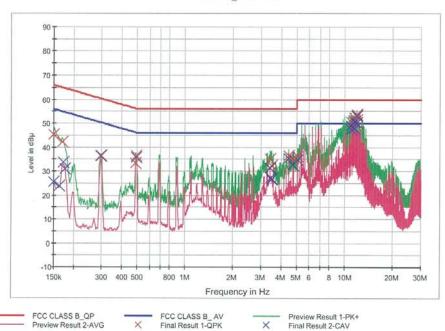
EUT: LAA

Manufacturer: SAMSUNG

Test Site: - SHIELD ROOM

Operating Conditions: LAA TX mode_L1

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	45.3	9.000	Off	L1	9.7	20.7	66.0
0.170000	42.0	9.000	Off	L1	9.7	22.9	65.0
0.298000	36.4	9.000	Off	L1	9.7	23.9	60.3
0.488000	33.5	9.000	Off	L1	9.8	22.7	56.2
0.492000	36.4	9.000	Off	L1	9.8	19.7	56.1
0.496000	36.5	9.000	Off	L1	9.8	19.6	56.1
3.420000	35.2	9.000	Off	L1	9.9	20.8	56.0
3.476000	32.5	9.000	Off	L1	9.9	23.5	56.0
4.458000	36.6	9.000	Off	L1	10.0	19.4	56.0
4.754000	35.3	9.000	Off	L1	10.0	20.7	56.0
5.050000	36.2	9.000	Off	L1	10.0	23.8	60.0
5.054000	36.2	9.000	Off	L1	10.0	23.8	60.0
10.996000	50.8	9.000	Off	L1	10.3	9.2	60.0
11.552000	52.3	9.000	Off	L1	10.3	7.7	60.0
11.556000	51.5	9.000	Off	L1	10.3	8.5	60.0
11.854000	53.3	9.000	Off	L1	10.3	6.7	60.0
11.858000	53.8	9.000	Off	L1	10.3	6.2	60.0
11.862000	51.2	9.000	Off	L1	10.3	8.8	60.0

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F-TP22-03 (Rev.00) 2 9 9 / 309 **HCT CO.,LTD.**



LAA_L1

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	25.4	9.000	Off	L1	9.7	30.6	56.0
0.162000	24.0	9.000	Off	L1	9.7	31.4	55.4
0.172000	33.6	9.000	Off	L1	9.7	21.2	54.9
0.176000	30.9	9.000	Off	L1	9.7	23.7	54.7
0.296000	36.3	9.000	Off	L1	9.7	14.0	50.4
0.494000	35.8	9.000	Off	L1	9.8	10.3	46.1
3.418000	31.3	9.000	Off	L1	9.9	14.7	46.0
3.460000	27.1	9.000	Off	L1	9.9	18.9	46.0
3.476000	26.8	9.000	Off	L1	9.9	19.2	46.0
4.458000	35.4	9.000	Off	L1	10.0	10.6	46.0
4.754000	32.6	9.000	Off	L1	10.0	13.4	46.0
5.052000	34.7	9.000	Off	L1	10.0	15.3	50.0
10.946000	47.7	9.000	Off	L1	10.3	2.3	50.0
10.996000	49.0	9.000	Off	L1	10.3	1.0	50.0
11.442000	48.1	9.000	Off	L1	10.3	1.9	50.0
11.552000	50.8	9.000	Off	L1	10.3	-0.8	50.0
11.858000	53.1	9.000	Off	L1	10.3	-3.1	50.0
11.890000	50.2	9.000	Off	L1	10.3	-0.2	50.0

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LAA_L1_1 1/2

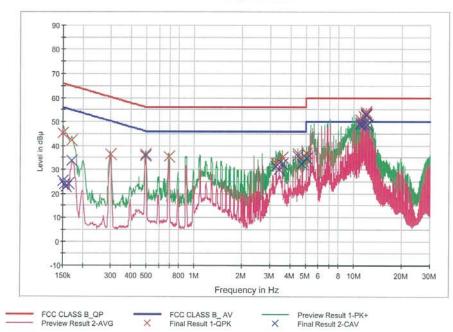
HCT TEST Report

Common Information

EUT: LAA

Manufacturer: SAMSUNG
Test Site: SHIELD ROOM
Operating Conditions: LAA TX(off) mode_L1

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	45.2	9.000	Off	L1	9.7	20.8	66.0
0.170000	42.1	9.000	Off	L1	9.7	22.9	65.0
0.298000	36.5	9.000	Off	L1	9.7	23.8	60.3
0.496000	36.4	9.000	Off	L1	9.8	19.6	56.1
0.692000	35.5	9.000	Off	L1	9.8	20.5	56.0
0.696000	35.5	9.000	Off	L1	9.8	20.5	56.0
3.270000	32.7	9.000	Off	L1	9.9	23.3	56.0
3.416000	32.7	9.000	Off	L1	9.9	23.3	56.0
3.564000	35.2	9.000	Off	L1	9.9	20.8	56.0
4.456000	36.6	9.000	Off	L1	10.0	19.4	56.0
4.754000	35.0	9.000	Off	L1	10.0	21.0	56.0
5.050000	36.9	9.000	Off	L1	10.0	23.1	60.0
10.940000	50.9	9.000	Off	L1	10.3	9.1	60.0
10.944000	50.1	9.000	Off	L1	10.3	9.9	60.0
10.992000	51.2	9.000	Off	L1	10.3	8.8	60.0
11.554000	52.5	9.000	Off	L1	10.3	7.5	60.0
11.854000	54.0	9.000	Off	L1	10.3	6.0	60.0
11.880000	53.3	9.000	Off	L1	10.3	6.7	60.0

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LAA_L1_1

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Final Result 2

Frequency (MHz)	(dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	25.3	9.000	Off	L1	9.7	30.7	56.0
0.154000	24.0	9.000	Off	L1	9.7	31.8	55.8
0.158000	22.9	9.000	Off	L1	9.7	32.7	55.6
0.162000	24.2	9.000	Off	L1	9.7	31.1	55.4
0.170000	33.7	9.000	Off	L1	9.7	21.2	55.0
0.494000	35.7	9.000	Off	L1	9.8	10.4	46.1
3.268000	31.5	9.000	Off	L1	9.9	14.5	46.0
3.416000	30.1	9.000	Off	L1	9.9	15.9	46.0
3.566000	32.2	9.000	Off	L1	9.9	13.8	46.0
4.456000	35.7	9.000	Off	L1	10.0	10.3	46.0
4.754000	32.5	9.000	Off	L1	10.0	13.5	46.0
5.050000	34.8	9.000	Off	L1	10.0	15.2	50.0
10.940000	48.6	9.000	Off	L1	10.3	1.4	50.0
10.992000	49.4	9.000	Off	L1	10.3	0.6	50.0
11.552000	49.0	9.000	Off	L1	10.3	1.0	50.0
11.854000	53.1	9.000	Off	L1	10.3	-3.1	50.0
11.880000	52.6	9.000	Off	L1	10.3	-2.6	50.0
12.178000	48.6	9.000	Off	L1	10.3	1.4	50.0

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Conducted Emissions (Line 2)

LAA_N

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HCT TEST Report

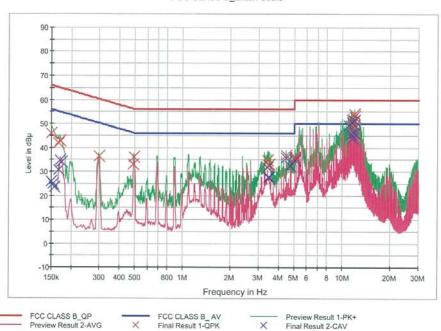
Common Information

EUT: Manufacturer: LAA

Test Site: Operating Conditions:

SAMSUNG SHIELD ROOM LAA TX mode_N

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	45.8	9.000	Off	N	9.8	20.2	66.0
0.166000	41.7	9.000	Off	N	9.8	23.5	65.2
0.170000	43.0	9.000	Off	N	9.8	22.0	65.0
0.298000	36.5	9.000	Off	N	9.9	23.8	60.3
0.488000	33.1	9.000	Off	N	9.9	23.1	56.2
0.494000	36.0	9.000	Off	N	9.9	20.1	56.1
3.420000	34.6	9.000	Off	N	10.1	21.4	56.0
3.456000	32.8	9.000	Off	N	10.1	23.2	56.0
3.468000	32.9	9.000	Off	N	10.1	23.1	56.0
4.458000	36.7	9.000	Off	N	10.2	19.3	56.0
5.050000	36.0	9.000	Off	N	10.2	24.0	60.0
5.054000	35.3	9.000	Off	N	10.2	24.7	60.0
11.400000	49.4	9.000	Off	N	10.5	10.6	60.0
11.548000	51.6	9.000	Off	N	10.5	8.4	60.0
11.552000	51.8	9.000	Off	N	10.5	8.2	60.0
11.854000	54.1	9.000	Off	N	10.5	5.9	60.0
11.858000	49.4	9.000	Off	N	10.5	10.6	60.0
11.888000	53.0	9.000	Off	N	10.5	7.0	60.0

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LAA_N

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	26.0	9.000	Off	N	9.8	30.0	56.0
0.154000	24.8	9.000	Off	N	9.8	31.0	55.8
0.158000	23.6	9.000	Off	N	9.8	32.0	55.6
0.166000	30.6	9.000	Off	N	9.8	24.6	55.2
0.170000	34.6	9.000	Off	N	9.8	20.3	55.0
0.174000	33.9	9.000	Off	N	9.8	20.8	54.8
3.418000	31.5	9.000	Off	N	10.1	14.5	46.0
3.444000	27.7	9.000	Off	N	10.1	18.3	46.0
3.468000	27.5	9.000	Off	N	10.1	18.5	46.0
4.458000	35.8	9.000	Off	N	10.2	10.2	46.0
4.754000	32.5	9.000	Off	N	10.2	13.5	46.0
5.050000	34.7	9.000	Off	N	10.2	15.3	50.0
10.994000	49.3	9.000	Off	N	10.5	0.7	50.0
11.400000	45.6	9.000	Off	N	10.5	4.4	50.0
11.550000	50.8	9.000	Off	N	10.5	-0.8	50.0
11.586000	43.9	9.000	Off	N	10.5	6.1	50.0
11.856000	46.0	9.000	Off	N	10.5	4.0	50.0
11.888000	51.3	9.000	Off	N	10.5	-1.3	50.0

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HCT TEST Report

Common Information

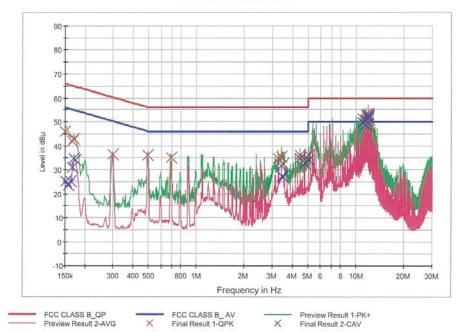
EUT: LAA

Manufacturer: SAMSUNG

Test Site: SHIELD ROOM

Operating Conditions: LAA TX(off) mode_N

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.150000	45.9	9.000	Off	N	9.8	20.1	66.0
0.166000	41.7	9.000	Off	N	9.8	23.4	65.2
0.170000	43.0	9.000	Off	N	9.8	22.0	65.0
0.298000	36.5	9.000	Off	N	9.9	23.8	60.3
0.494000	36.0	9.000	Off	N	9.9	20.1	56.1
0.696000	35.1	9.000	Off	N	9.9	20.9	56.0
3.268000	34.9	9.000	Off	N	10.1	21.1	56.0
3.420000	35.3	9.000	Off	N	10.1	20.7	56.0
3.482000	32.4	9.000	Off	N	10.1	23.6	56.0
4.460000	36.2	9.000	Off	N	10.2	19.8	56.0
4.756000	34.9	9.000	Off	N	10.2	21.1	56.0
5.054000	36.2	9.000	Off	N	10.2	23.8	60.0
10.996000	51.2	9.000	Off	N	10.5	8.8	60.0
11.544000	50.9	9.000	Off	N	10.5	9.1	60.0
11.548000	52.9	9.000	Off	N	10.5	7.1	60.0
11.846000	47.9	9.000	Off	N	10.5	12.1	60.0
11.852000	53.5	9.000	Off	N	10.5	6.5	60.0
11.884000	52.4	9.000	Off	N	10.5	7.6	60.0

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LAA_N_1

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.152000	25.2	9.000	Off	N	9.8	30.7	55.9
0.158000	23.7	9.000	Off	N	9.8	31.9	55.6
0.162000	25.1	9.000	Off	N	9.8	30.2	55.4
0.166000	30.9	9.000	Off	N	9.8	24.3	55.2
0.170000	34.9	9.000	Off	N	9.8	20.1	55.0
0.174000	34.0	9.000	Off	N	9.8	20.7	54.8
3.418000	31.6	9.000	Off	N	10.1	14.4	46.0
3.434000	27.1	9.000	Off	N	10.1	18.9	46.0
3.482000	26.9	9.000	Off	N	10.1	19.1	46.0
4.460000	34.9	9.000	Off	N	10.2	11.1	46.0
4.756000	32.7	9.000	Off	N	10.2	13.3	46.0
5.054000	34.0	9.000	Off	N	10.2	16.0	50.0
10.996000	49.7	9.000	Off	N	10.5	0.3	50.0
11.442000	48.8	9.000	Off	N	10.5	1.2	50.0
11.548000	50.6	9.000	Off	N	10.5	-0.6	50.0
11.852000	52.6	9.000	Off	N	10.5	-2.6	50.0
11.886000	51.4	9.000	Off	N	10.5	-1.4	50.0
11.890000	52.2	9.000	Off	N	10.5	-2.2	50.0

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11. LIST OF TEST EQUIPMENT

Conducted Test

Manufacturer	Model / Equipment	Calibration Date	Calibration Interval	Serial No.	
Rohde & Schwarz	ENV216 / LISN	12/12/2018	Annual	102245	
Rohde & Schwarz	ESCI / Test Receiver	06/27/2018	Annual	100033	
ESPAC	SU-642 /Temperature Chamber	03/30/2018	Annual	0093008124	
Agilent	N9020A / Signal Analyzer	06/08/2018	Annual	MY51110085	
Agilent	N9030A / Signal Analyzer	11/20/2018	Annual	MY49431210	
Agilent	N1911A / Power Meter	04/16/2018	Annual	MY45100523	
Agilent	N1921A / Power Sensor	04/16/2018	Annual	MY52260025	
Agilent	87300B / Directional Coupler	11/20/2018	Annual	3116A03621	
Hewlett Packard	11667B / Power Splitter	06/07/2018	Annual	05001	
Hewlett Packard	E3632A / DC Power Supply	06/26/2018	Annual	KR75303960	
Agilent	8493C / Attenuator(10 dB)	07/10/2018	Annual	07560	
Rohde & Schwarz	EMC32 / Software	N/A	N/A	N/A	
LICT CO. LTD.	FCC WLAN&BT&BLE Conducted Test Software	N/A	11/4	NI/A	
HCT CO., LTD.	v3.0	IN/A	N/A	N/A	
Rohde & Schwarz	CBT / Bluetooth Tester	05/17/2018	Annual	100422	

Note:

- 1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
- 2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

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Radiated Test

Manufacturer	Model / Equipment	Calibration Calibration Date Interval		Serial No.
Innco system	CO3000 / Controller(Antenna mast)	N/A	N/A	CO3000-4p
Innco system	MA4640/800-XP-EP / Antenna Position Tower	N/A	N/A	N/A
Audix	EM1000 / Controller	N/A	N/A	060520
Audix	Turn Table	N/A	N/A	N/A
Rohde & Schwarz	Loop Antenna	08/23/2018	Biennial	1513-175
Schwarzbeck	VULB 9168 / Hybrid Antenna	04/06/2017	Biennial	760
Schwarzbeck	VULB 9168 / Hybrid Antenna	08/09/2018	Annual	3368
Schwarzbeck	BBHA 9120D / Horn Antenna	06/30/2017	Biennial	1300
Schwarzbeck	BBHA9170 / Horn Antenna(15 GHz ~ 40 GHz)	12/04/2017	Biennial	BBHA9170541
Rohde & Schwarz	FSP(9 kHz ~ 40 GHz) / Spectrum Analyzer	07/24/2018	Annual	100843
Wainwright Instruments	WHK3.0/18G-10EF / High Pass Filter	01/03/2019	Annual	F6
Wainwright Instruments	WHFX7.0/18G-8SS / High Pass Filter	05/09/2018	Annual	29
Wainwright Instruments	WRCJV5100/5850-40/50-8EEK / Band Reject Filter	01/03/2019	Annual	2
Weinschel	2-3 / Attenuator (3 dB)	10/10/2018	Annual	BR0617
H+S	5910-N-50-010 / Attenuator(10 dB)	11/08/2018	Annual	NONE
CERNEX	CBLU1183540B-01 / Power Amplifier	12/21/2018	Annual	25540
CERNEX	CBL06185030 / Power Amplifier	03/28/2018	Annual	28550
CERNEX	CBL18265035 / Power Amplifier	01/03/2019	Annual	22966
CERNEX	CBL26405040 / Power Amplifier	06/29/2018	Annual	25956

Note:

- 1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
- 2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

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12. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-1902-FC056-P

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