

5. CONDUCTED SPURIOUS EMISSIONS

5.1. Test Equip	nents
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Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.02,23	1Year
2.	RF Cable	eastsheep	141-SMA-JJ -1000	NO.1	Jul.01,22	1Year

5.2. Limit

In any 100kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30dB instead of 20dB.

5.3. Test Procedure

Use the test method descried in ANSI C63.10:

The transmitter output was connected to a spectrum analyzer, The resolution bandwidth is set to 100 kHz, The video bandwidth is set to 300 kHz and measure all the emissions With peak detector.

5.4. Test result

PASS (The testing data was attached in the next pages.)

EUT: DELL Wireless Headset		
M/N: HS2403		
Test date: 2023-05-11	Pressure: 101.3±1.0 kpa	Humidity: 53.5±3.0%
Tested by: lili	Test site: RF site	Temperature:25.4±0.6 ℃







244UIVIIIIZ	244UIVIHZ(1GHZ - 1UGHZ)
Center Freq 2.440000000 GHz PHO: Wide IF Gainztow Frequency AugHeid> tootoo Arg Type: Leg-Pwr Avg[Heid> tootoo tootoo Certer Freq 2.440000000 GHz PHO: Wide IF Gainztow Frequency AugHeid> tootoo Certer Freq 2.440000000 GHz AugHeid> tootoo Certer Freq 2.4400000000 GHz AugHeid> tootoo Certer Freq 2.440000000 GHZ Certer Freq 2.4400000000 GHZ AugHeid> tootoo Certer Freq 2.44000000000 GHZ AugHeid> tootoo Certer Freq 2.440000000000 GHZ AugHeid> tootoo Certer Freq 2.4400000000000000000000000000000000000	Marker 1 4.87900000000 GHz Striker 1 Striker 1 ALIGNANTO 1241-39MMgr11, 2023 Peak Search Marker 1 4.87900000000 GHz Trig: Free Run IFGalatiow Trig: Free Run Atter: 20 dB Aug Heid>100100 Trig: Company Peak Search Peak Search
Ref Offset 10.5 dB Mkr1 2.440 243 GHz 10 dB/div Ref 20.00 dBm 7.657 dBm 100 Center Freq	Ref offset 10.5 dB NIKIT 4.879 GHZ to dBlow Ref 20.00 dBm -50.683 dBm
8 00 2.44000000 GHz 100 9316 10316	000 0010000000000000000000000000000000
400 400 500 500	600 Image: Comparison of the company of t
Center 2.440000 GHz Span 3.000 MHz CF Step 300.000 kHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.533 ms (1001 pts) Man Auto Man	Start 1.000 GHz Stop 10.000 GHz Stop 10.000 GHz #Res BW 100 KHz #VEW 300 KHz Sweep 860.1 ms (1001 pts) MR MORE THE SEL X Y Parction Parction value 1 1 1 4879 GHz 50 893 dBm/ Formula
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2 3 4 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
	More 10 11
Status	und Status
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz)
Agilent Spectrum Analyzer - Swept SA F 1910 ac F 2014 Action 2014 Selecter 1 August 1, 2023 Peak Search	Agilent Spectrum Analyzer - Swept SA
Matricer 1 705.42000000 MH2 PRO-Fast Control Free Run Avg Hold>100/100 PRO-Fast Control Research Avg Hold>100/	Marker 1 25.47200000000 GHz Avg Type: Log-Pur Trace Park Search PN0: Fast Trig: Free Run Avg Type: Log-Pur Type: L
Ref Offset 10.5 dB Mkr1 705.12 MHz 10 dB/div Ref 20.00 dBm -60.148 dBm	Ref Offset 10.5 dB Mkr1 25.472 GHz 10 dBldiv Ref 20.00 dBm -50.857 dBm
100 Next Pk Right	100 Next Pk Right
000 Next Pk Left	200 Next Pk Left
800 600 700 700	800 900 900 900
Start 30.0 MHZ Stop 1.0000 GHZ #VBW 300 KHZ Sweep 92.73 ms (1001 pts) Mkr→CF #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) Mkr→CF	Start 10.000 GHz Stop 26.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 26.001 GHz MkrCF MkrCF
Start 30.0 MHZ Stop 1.0000 GHz Stop 1.0000 GHz Stop 1.0000 GHz Mkr—CF #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) Mkr—CF 1 N 1 r 705.12 MHz -60.149 dBm Runction worth Runction worth Runction worth Runction worth Mkr—CF 3 3 -	Start 10.000 GHz Stop 76.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 76.000 GHz Image: The Society of
Start 30.0 MHZ Stop 1.0000 (Hz Stop 1.0000 (Hz) Mkr—CF #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) Mkr—CF 1 N 1 7 705.12 MHz 60.149 dBm Punction water Punction water Mkr—AFf Lvi 3 1 7 705.12 MHz 60.149 dBm Punction water Punction water Mkr—AFf Lvi 6 1 1 1 1 1 7 705.12 MHz 60.149 dBm Mkr - Ref Lvi Mkr Mkr Mkr 1	Start 10.000 GHz Stop 26.000 GHz #Res BW 100 kHz #VBW 300 kHz BKR MOE FIRST Sweep 1.529 s (1001 pts) Mar MOE FIRST X 1 2 2 1 7 - 8 - 9 - 10 - 11 -











2440MHz	2440MHz(1GHz - 10GHz)
Agilent Spectrum Analyzer - Swept SA	Agilent Spectrum Analyzer - Swept SA
Center Freq 2.440000000 GHz PN0: Wide Trig: Free Run Avg[hold>100/100 Type	Marker 1 4.87900000000 GHz PR0: Fast Trig: Free Run Avg Type: Leg-Pwr TACE 1234 50 PR0: Fast Trig: Free Run Avg Hold>100/100 Type
IFGain:Low Atten: 20 dB Certainting Atto Tune	IFGaint.ow Atten: 20 dB Mkr1 4.879 GHz
10 dB/div Ref 20.00 dBm 7.204 dBm	Ref Utiliset 10.5 dB 10 dB/div Ref 20.00 dBm -51.958 dBm
100 Center Freq	100 Next Pk Right
2.44000000 GHz	-100
20.0 Start Freq	-20.0
2.437000000 GHz	
50.0 Stop Fred	500
2.443000000 GHz	
Center 2.440000 GHz CF Step	Start 1.000 GHz Stop 10.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep. 860 1 ms (1001 pts)
HRES BW 100 kHz #VBW 300 kHz Sweep 3,000 ms (1001 pts) 600.000 kHz 600.000 kHz 600.000 kHz 600.000 kHz	
1 N 1 f 2.439 982 GHz 7.204 dBm	2 4/3/9 GH2 40/900 dB/m
3 Freq Onset	4 MKr→RerLvi
6 7	7 More
	10 10 11
11 ≰	S STATUS
MSG STATUS	
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz)
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz)
2440MHz(30MHz - 1GHz)	2440MHz(10GHz - 26GHz) Addref Spectrum Analyzer Swept 5A 22 23 24 24 24 25 26 26 26 26 26 27 28 2900 %
2440MHz(30MHz - 1GHz)	2440MHz(10GHz - 26GHz) Addient Synchron Analyzer Swergt SA Marker 1 26.000000000000 GHz PROF Rate Prof Factor Trigs Free Run Avg Type: Leg-Pur Prof Factor
2440MHz(30MHz - 1GHz)	Addred Spectrum Ausyner Swegt SA State Strift ALSTANTO IC2:06:17 PM Mer 11, 2023 Marker 1 26,000000000000 GHz FRG Fast Cart Trig: Free Run Hr Gaincl.ew Ausyner Swegt SA Avg Type: Leg-Powr Hr Gaincl.ew Peak Search Marker 20:06 GHz Peak Search Ref Offset 105:08 Mkr1 28:000 GHz Next Peak Pd offset 105:08 Mkr1 28:000 GHz Next Peak
2440MHz(30MHz - 1GHz)	Addent Secture Analyzer Swept SA SSM2.5171 AUSHAUTO IC2.6017.0HMrt 11, 2023 Marker 1 26,000000000000 GHz Fig. Free Run Avg Type: Leg.Pur Huid Biol 2013 Peak Search Marker 1 26,000 GHz Fig. Free Run Avg Type: Leg.Pur Huid Biol 2013 Peak Search 10 dBd/v Ref Offset 105 dB Mkr1 28,000 GHz Next Peak 10 dBd/v Ref Offset 105 dB Mkr1 28,000 GHz Next Peak 10 dBd/v Ref Offset 105 dB Mkr1 28,000 GHz Next Peak
2440MHz(30MHz - 1GHz)	2440MHz(10GHz – 26GHz) Address Search Address Search Address Search Address Search Address Search Address Search Marker 126.0000000000000 GHz Process Search Marker 126.0000000000000 GHz Frigs Free Run AvegHeide Top/top Peak Search Marker 126.000 GHz Peak Search Frigs Free Run AvegHeide Top/top Peak Search Next Peak Next Peak Address Search Address Search Next Peak Address Search Next Peak Address Search Next Peak Addr
2440MHz(30MHz - 1GHz)	2440MHz(10GHz - 26GHz) Address function of the second of th
2440MHz(30MHz – 1GHz) Altern Spectrum Analyzer - Sweyt SA BE September - ALSMAUTO CE305 PMMpr11, 203 Marker 1 820.550000000 MHz PHC: Latr C Trig: Free Run Avg Type: Log-Pwr Marker 1 820.55 MHzr C Peak Search Next Peak Search Marker 1 820.550000000 MHz PHC: Latr C Trig: Free Run Avg Holdo-100/100 Trig: Free Run Avg Holdo-100/100 Marker 1 820.55 MHzr C Peak Search Next Peak Search Marker 1 820.550 MHzr C Marker 1 820.55 MHzr C Next Peak Search Marker 1 820.55 MHzr C MHzr C Next Pk Right Next Pk Right Next Pk Left	2440MHz(10GHz - 26GHz) Advert Several Analyzer Swigt SM Advert Several Analyzer Swigt SM Marker 126.0000000000 CHz CH20100000000000 CHz Marker 126.0000000000 CHz CH20100000000000000000000000000000000000
2440MHz(30MHz - 1GHz)	2440MHz(10GHz - 26GHz) Address Search Marker 125.0000000000 CHz CH201010 CH2020 Presk Search Marker 125.000000000 CHz Presk Search Marker 125.000000000 CHz Presk Search Marker 125.000 GHz Presk Search Mkr1 25.000 GHz Next Peak OU Next Peak Marker 126.000 GHz Next Peak Mkr1 25.000 GHz Next Peak OU Next Peak Next Pk Right Next Pk Left Next Pk Left
2440MHz(30MHz – 1GHz)	2440MHz(10GHz - 26GHz) Address Sector
2440MHz(30MHz – 1GHz)	2440MHz(10GHz - 26GHz) Address Section Advances Marker 1 28,000000000 CHz Processor Processor Marker 1 28,000000000 CHz Processor Marker 1 28,000000000 CHz Processor Marker 1 28,000 CHz Next Pk Right Stop 26,000 CHz Stop 26,000 CHz Stop 26,000 CHz
2440MHz(30MHz – 1GHz)	2440MHz(10GHz - 26GHz) Address Sector & Sector
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz) Addrest Section Andrew Section 2000 CHz Narker 1 26.0000000000 CHz Procession 2000 CHz Stop 26.000 CHz Stop 26.000 CHz #VEW 300 KHz Sweep 1.320 S (1001 pts) Million 2000 CHz Stop 26.000 CHz #VEW 300 KHz Sweep 1.320 S (1001 pts) Million 2000 CHz Stop 26.000 CHz Million 2000 CHz Stop 26.000 CHz #VEW 300 KHz Sweep 1.320 S (1001 pts) Million 2000 CHz Stop 26.000 CHz
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz) Address Sector
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz) Addent sectors and address anddress and address and address and address an
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz)
2440MHz(30MHz – 1GHz)	2440MHz(10GHz – 26GHz)







6. 6DB & 99% BANDWIDTH TEST

6.1.	Test Equipments
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Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.02,23	1 Year
2.	RF Cable	eastsheep	141-SMA-J J-1000	NO.1	Jul.01,22	1Year

6.2. Block Diagram of Test Setup

Please reference to section 2.4.

6.3. Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

6.4. Test Procedure

Use the test method descried in ANSI C63.10 clause 11.8.2:

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW \ge 3 × RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be \ge 6 dB.

Use the test method descried in ANSI C63.10 clause 6.9.2:

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.



- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

6.5. Test Results

EUT: DELL Wireless Headset		
M/N: HS2403		
Test date: 2023-04-28~05-09	Pressure: 102.1±1.0 kpa	Humidity: 52.2±3.0%
Tested by: lili	Test Site: RF site	Temperature:23.3±0.6°C

1Mbps:

Pot			
Test Mode	Frequency	-6dB Bandwidth	Limit
	(MHz)	(KHz)	(KHz)
GFSK	2402	711.9	≥500
	2440	625.8	≥500
	2480	649.9	≥500
Conclusion : PA	ASS		

Test Mode	Frequency	-6dB Bandwidth	Limit
	(MHz)	(MHz)	(KHz)
	2404	1.259	≥500
GFSK	2440	1.253	≥500
	2478	1.255	≥500
Conclusion : P.	ASS		











EUT: DELL Wireless Headset		
M/N: HS2403		
Test date: 2023-04-28~05-09	Pressure: 102.1±1.0 kpa	Humidity: 52.2±3.0%
Tested by: lili	Test Site: RF site	Temperature:23.3±0.6℃

1Mbps:

L			
Test	Frequency	99%Bandwidth	Limit
Mode	(MHz)	(MHz)	(MHz)
	2402	1.0379	
GFSK	2440	1.0369	N/A
	2480	1.0400	
Conclusion:Pass			

Test	Frequency	99%Bandwidth	Limit
Mode	(MHz)	(MHz)	(MHz)
	2402	2.0715	
GFSK	2440	2.0718	N/A
	2478	2.0712	
Conclusion:Pass			







2440MHz
Image: Compare law Center Freq 2.44000000 GHz Center Freq 2.44000000 GHz MFE MFE Center Freq 2.44000000 GHz Center Freq 2.44000000 GHz Center Freq 2.44000000 GHz Center Freq 2.44000000 GHz Center Freq 2.4400000 GHz Center Freq 2.4400000 GHz Center Freq 2.4400000 GHz Center Freq 2.4400000 GHz Span 5.000 MHz Center Freq 2.4400000 GHz Span 5.000 MHz Center 2.4400000 GHz Span 5.000 MHz Center Freq 2.400000 GHz Transmit Freq Error 20.705 KHz % of OBW Power
Occupied Bandwidth Total Power 14.9 dBm 2.0718 MHz 2.0718 MHz Transmit Freq Error 20.705 kHz % of OBW Power 99.00 % x dB Bandwidth 2.509 MHz x dB -26.00 dB



7. MAXIMUM PEAK OUTPUT POWER TEST

7.1. Test Equipments

It	tem	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	•	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.01,23	1 Year
2	•	Power meter	Anritsu	ML2487A	6K00002472	Jul.01,22	1 Year
3	•	Power sensor	Anritsu	MA2491A	033005	Jul.01,22	1 Year
4	•	RF Cable	eastsheep	141-SMA-J J-1000	NO.1	Jul.01,22	1 Year

7.2. Limit

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm).

7.3. Test Procedure

Use the test method descried in ANSI C63.10 clause 11.9.1.1:

7.4. Test Results

EUT: DELL Wireless Headset					
M/N: HS2403					
Test date: 2023-05-10	Pressure: 102.1±1.0 kpa	Humidity: 52.2±3.0%			
Tested by: lili	Test Site: RF site	Temperature:23.3±0.6°C			

1Mbps:

Test Mode	Frequency (MHz)	Peak output Power (dBm)	Limit (dBm)
	2402	7.342	30
GFSK	2440	7.207	30
	2480	7.107	30
Conclusion:	PASS		

Test Mode	Frequency (MHz)	Peak output Power (dBm)	Limit (dBm)
	2404	7.159	30
GFSK	2440	7.089	30
	2478	7.059	30
Conclusion:	PASS		



1Mbps:						
GFSK						
2402MHz			2440MH	Z		
Keynight Spectrum Analyzer - Swept SA RE 50.0, AC Marker 1 2.402006000000 C NFE	SENSE:INT PNO: Fast IFGain:Low #Atten: 20 dB	ALIGN AUTO 02:44:20 PM May 10, 2023 Avg Type: Log-Pwr Avg Hold:>100/100 Der 2000000	Keysight Spectrum Analyzer - Swe tak Search Marker 1 2.44000000	AC SENSE:INT DODOOD CH2 NFE PN0: Fast IFGain:Low #Atten: 20 dB	ALIGN AUTO 02:44:34 PM May 10, 2023 Avg Type: Log-Pwr TRACE 12:3 0	Peak Search
Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm	T T	Mkr1 2.402 006 GHz 7.342 dBm	10 dB/div Ref Offset 10.	5 dB IBm	Mkr1 2.440 000 GHz 7.207 dBm	NextPeak
10.0	1		ext Pk Right	1		Next Pk Right
-10.0			Next Pk Left			Next Pk Left
-20.0			-20.0 -20.0 -30.0			Marker Delta
-40.0			40.0 50.0			Mkr→CF
-60.0		M	/kr→RefLvl =00			Mkr→RefLvl
-70.0 Center 2,402000 GHz		Span 6.000 MHz	70 0 More 1 of 2 Center 2.440000 GHz		Span 6.000 MHz	More 1 of 2
#Res BW 2.0 MHz	#VBW 6.0 MHz	Sweep 1.000 ms (1001 pts)	#Res BW 2.0 MHz	#VBW 6.0 MHz	Sweep 1.000 ms (1001 pts)	
2480MHz				-		
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	SENSE:INT	ALIGN AUTO 02:44:47 PM May 10, 2023	nak Search			
Marker 1 2.479922000000 0	PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB	Avg Type: Log-Pwr Trace T2 34 5 0 Avg/Hold:>100/100 Type				
Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm		Mkr1 2.479 922 GHz 7.107 dBm	NEXTFEAK			
10.0		Ne	ext Pk Right			
-10.0			Next Pk Left			
-20.0			Marker Detta			
-30.0			Mkr→CF			
-50.0						
-60.0			lkr→RefLvl			
Center 2.480000 GHz		Span 6.000 MHz	More 1 of 2			
	HOLDING C O BALLS	Duran 4 000 ma (4004 mts)				



2Mbps:							
GFSK							
2404MHz				2440MHz			
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Marker 1 2.4035760000000 (NFE	GHz PN0: Fast	ALIGN AUTO 02:45:48 PM May 10, 2023 Avg Type: Log-Pwr TRACE 2.3.4 Avg Hold:>100/100 Type	Peak Search	Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Marker 1 2.4396400000000 NFE	GHz SENSE:INT PNO: Fast C Trig: Free Run A	ALIGN AUTO 02:45:37 PM May 10, 2023 Avg Type: Log-Pwr TRuce 23 4 5 vg Hold:>100/100 TYPE	Peak Search
Ref Offset 10.5 dB	IFGain:Low #Atten: 20 dB	Mkr1 2.403 576 GHz 7.159 dBm	Next Peak	Ref Offset 10.5 dB	IFGain:Low #Atten: 20 dB	Mkr1 2.439 640 GHz 7.089 dBm	NextPeak
10.0	↓ ¹		Next Pk Right	10.0	1		Next Pk Right
-10.0			Next Pk Left	-10.0			Next Pk Left
-20.0			Marker Delta	-20.0			Marker Delta
-40.0			Mkr→CF	-40.0			Mkr→CF
-60.0			Mkr→RefLvl	-60.0			Mkr→RefLvl
Center 2.404000 GHz		Span 8.000 MHz	More 1 of 2	-70 0 Center 2.440000 GHz		Span 8.000 MHz	More 1 of 2
#Res BW 2.4 MHz	#VBW 8.0 MHz	Sweep 1.000 ms (1001 pts) STATUS		#Res BW 2.4 MHz	#VBW 8.0 MHz	Sweep 1.000 ms (1001 pts)	
2478MHz							
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	SENSE:INT	ALIGN AUTO 02:45:25 PM May 10, 2023	Pask Saarch				
Marker 1 2.477632000000 (NFE	PNO: Fast Trig: Free Run IFGain:Low #Atten: 20 dB	Avg Type: Log-Pwr TRACE 2 3 4 5 Avg Hold:>100/100 Type M					
Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm		Mkr1 2.477 632 GHz 7.059 dBm	Next Peak				
10.0	1		Next Pk Right				
0.00			Next Pk Left				
-10.0							
-20.0			Marker Delta				
-40.0			Mkr→CF				
-60.0			Mkr→RefLvl				
-70.0			More				
Center 2.478000 GHz		Span 8.00 <u>0 MHz</u>	1 of 2				



8. BAND EDGE COMPLIANCE TEST

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.01,23	1 Year
2.	Amplifier	Agilent	8449B	3008A02495	Apr.02,23	1 Year
3.	Horn Antenna	ETC	MCTD 1209	DRH15F03006	Aug.12,22	1 Year
4.	RF Cable	eastsheep	141-SMA-JJ-1000	NO.1	Jul.01,22	1Year

8.2. Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

8.3. Test Produce

Use the test method descried in ANSI C63.10 clause 6.10:

For upper band emissions that are up to two bandwidths(2MHz) away (2483.5MHz to 2485.5MHz) from the band-edge use below produce:

- 1. Choose a spectrum analyzer span that encompasses both the peak of the fundamental emission and the band-edge emission under investigation. Set the analyzer RBW to 100KHz and with a video bandwidth 300KHz. Record the peak levels of the fundamental emission and the relevant band-edge emission, Observe the stored trace and measure the amplitude delta between the peak of the fundamental and the peak of the band-edge emission. This is not a field strength measurement, it is only a relative measurement to determine the amount by which the emission drops at the band edge relative to the highest fundamental emission level.
- Subtract the delta measured in step (1) from the maximum field strengths measured in clause
 The resultant field strengths are then used to determine band-edge compliance as required by Section 15.205

For emissions above two bandwidths away from the band-edge use below produce:

- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
 - (a) PEAK: RBW=1MHz ;VBW=3MHz, PK detector, Sweep=AUTO
 - (b) This is pulse Modulation device a duty cycle factor was used to calculate average level based measured peak level.
- 8.4. Test Results

Pass (The testing data was attached in the next pages.)

Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.



































9. POWER SPECTRAL DENSITY TEST

9.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.02,23	1 Year
2.	RF Cable	eastsheep	141-SMA-JJ-1000	NO.1	Jul.01,22	1 Year

9.2. Block Diagram of Test Setup

Please reference to section 2.4.

9.3. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

9.4. Test Procedure

Use the test method descried in ANSI C63.10 clause 11.10.2:

a) Set analyzer center frequency to DTS channel center frequency.

- b) Set the span to 1.5 times the DTS bandwidth.
- c) Set the RBW to 3 kHz \leq RBW \leq 100 kHz.
- d) Set the VBW \geq [3 × RBW].
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.
- j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.



9.5. Test Results

EUT: DELL Wireless Headset		
M/N: HS2403		
Test date: 2023-05-10	Pressure: 102.1±1.0 kpa	Humidity: 52.2±3.0%
Tested by: lili	Test Site: RF site	Temperature:23.3±0.6°C

1Mbps:

Test Mode	Frequency (MHz)	Power Spectral Density (dBm/3KHz)	Limit (dBm/MHz)
GFSK	2402	-8.260	8
	2440	-8.392	8
	2480	-8.472	8
Conclusion : P.	ASS		

Test Mode	Frequency (MHz)	Power Spectral Density (dBm/3KHz)	Limit (dBm/MHz)
GFSK	2404	-10.317	8
	2440	-10.411	8
	2478	-10.440	8
Conclusion : P.	ASS		











10.ANTENNA REQUIREMENT

10.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

10.2. ANTENNA CONNECTED CONSTRUCTION

The antennas used for this product are Dipole Antenna that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is 2.87dBi.



11. DEVIATION TO TEST SPECIFICATIONS

[NONE]

THE END

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