

Case No. : CTA24081600401	
Ambient Condition: 22 °C, 51 %RH	
According Standard: ■Part15C	
Test Date: 2024.8.21	Test Engineer: Lushan Kong

Appendix A.1: 20dB Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	20dB EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.867	2401.553	2402.420	---	---
		2441	0.891	2440.541	2441.432	---	---
		2480	0.882	2479.550	2480.432	---	---
2DH1	Ant1	2402	1.395	2401.292	2402.687	---	---
		2441	1.425	2440.262	2441.687	---	---
		2480	1.434	2479.256	2480.690	---	---
3DH1	Ant1	2402	1.488	2401.253	2402.741	---	---
		2441	1.434	2440.262	2441.696	---	---
		2480	1.422	2479.277	2480.699	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



Appendix A.2: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
DH1	Ant1	2402	0.85301	2401.5618	2402.4148	---	---
		2441	0.85102	2440.5643	2441.4153	---	---
		2480	0.85988	2479.5595	2480.4194	---	---
2DH1	Ant1	2402	1.3457	2401.3127	2402.6584	---	---
		2441	1.3421	2440.3139	2441.6560	---	---
		2480	1.3448	2479.3115	2480.6563	---	---
3DH1	Ant1	2402	1.3426	2401.3196	2402.6622	---	---
		2441	1.3408	2440.3190	2441.6598	---	---
		2480	1.3452	2479.3126	2480.6578	---	---

Test Graphs

DH1_Ant1_2402



DH1_Ant1_2441



DH1_Ant1_2480



2DH1_Ant1_2402



2DH1_Ant1_2441



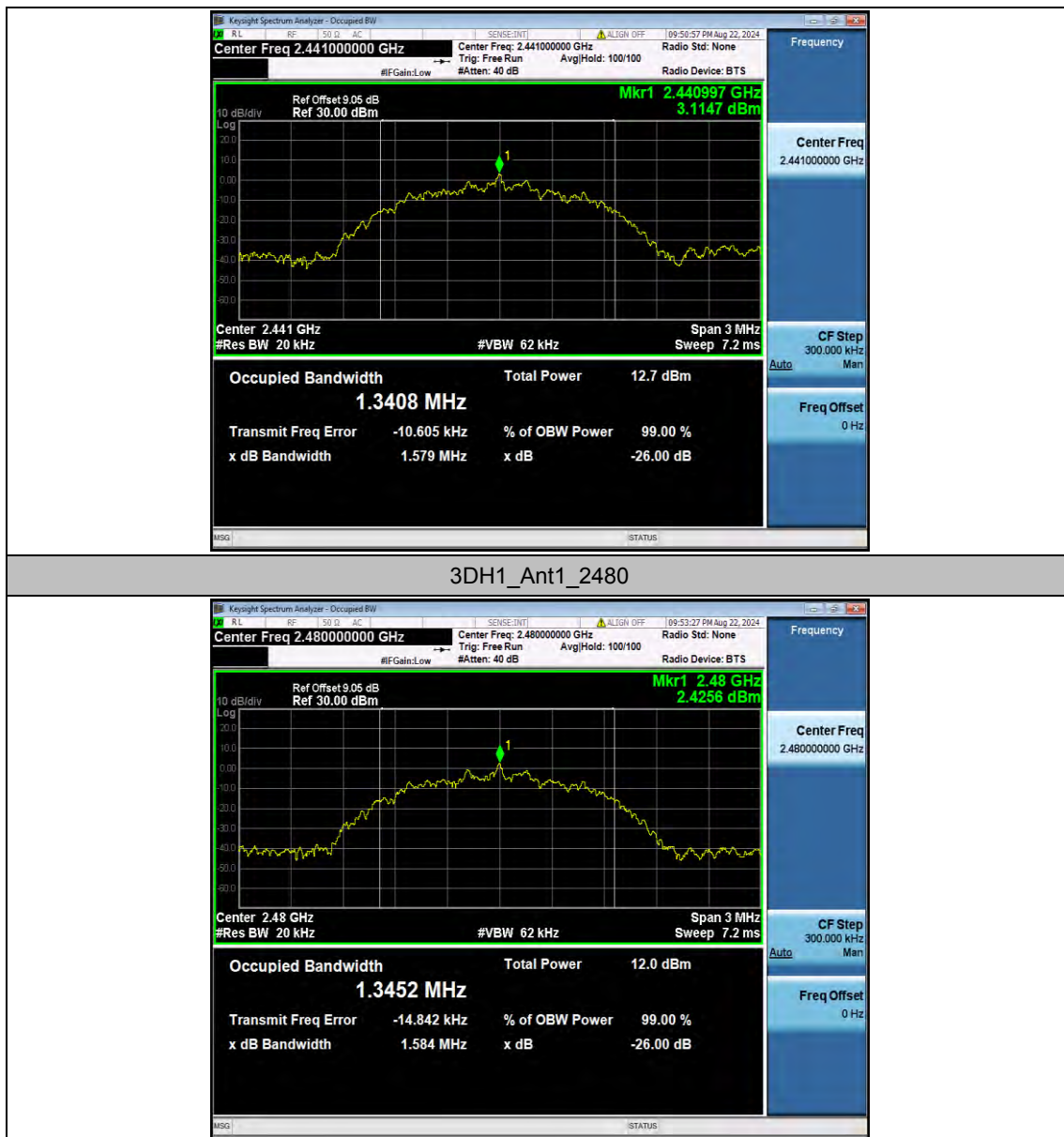
2DH1_Ant1_2480



3DH1_Ant1_2402



3DH1_Ant1_2441



Appendix A.3: Maximum conducted output power

Test Result Peak

Test Mode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
DH1	Ant1	2402	7.78	≤30.00	PASS
		2441	9.76	≤30.00	PASS
		2480	10.96	≤30.00	PASS
2DH1	Ant1	2402	6.28	≤20.97	PASS
		2441	7.70	≤20.97	PASS
		2480	7.46	≤20.97	PASS
3DH1	Ant1	2402	6.42	≤20.97	PASS
		2441	7.78	≤20.97	PASS
		2480	7.64	≤20.97	PASS

Appendix A.4: Carrier frequency separation

Test Result

TestMode	Antenna	Freq(MHz)	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Hop_2402	0.98	≥ 0.891	PASS
		Hop_2441	1.14	≥ 0.891	PASS
		Hop_2480	1.034	≥ 0.891	PASS
2DH1	Ant1	Hop_2402	1.164	≥ 0.956	PASS
		Hop_2441	1.16	≥ 0.956	PASS
		Hop_2480	1.008	≥ 0.956	PASS
3DH1	Ant1	Hop_2402	1.014	≥ 0.992	PASS
		Hop_2441	1.014	≥ 0.992	PASS
		Hop_2480	1.33	≥ 0.992	PASS

Test Graphs

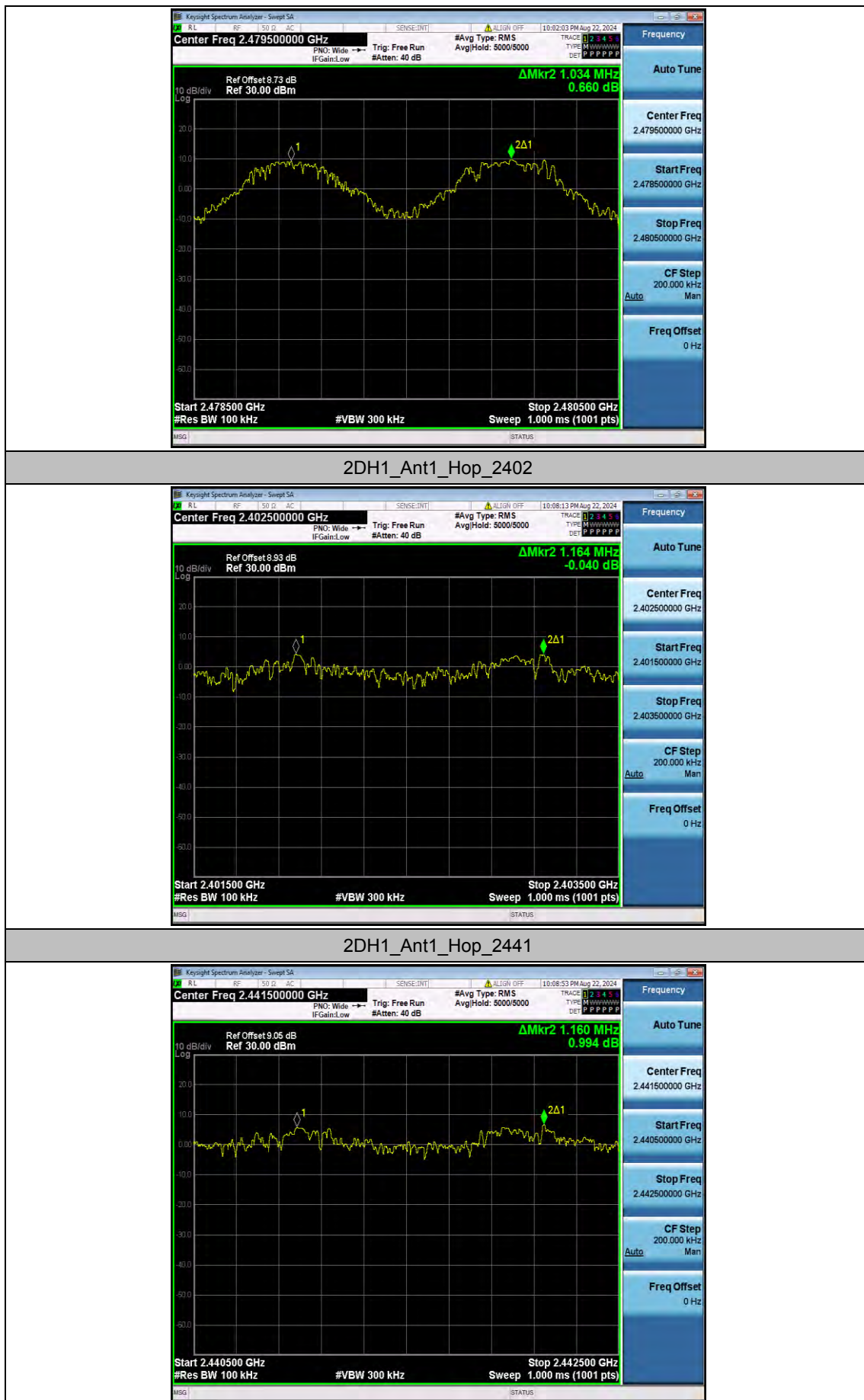
DH1_Ant1_Hop_2402



DH1_Ant1_Hop_2441



DH1_Ant1_Hop_2480



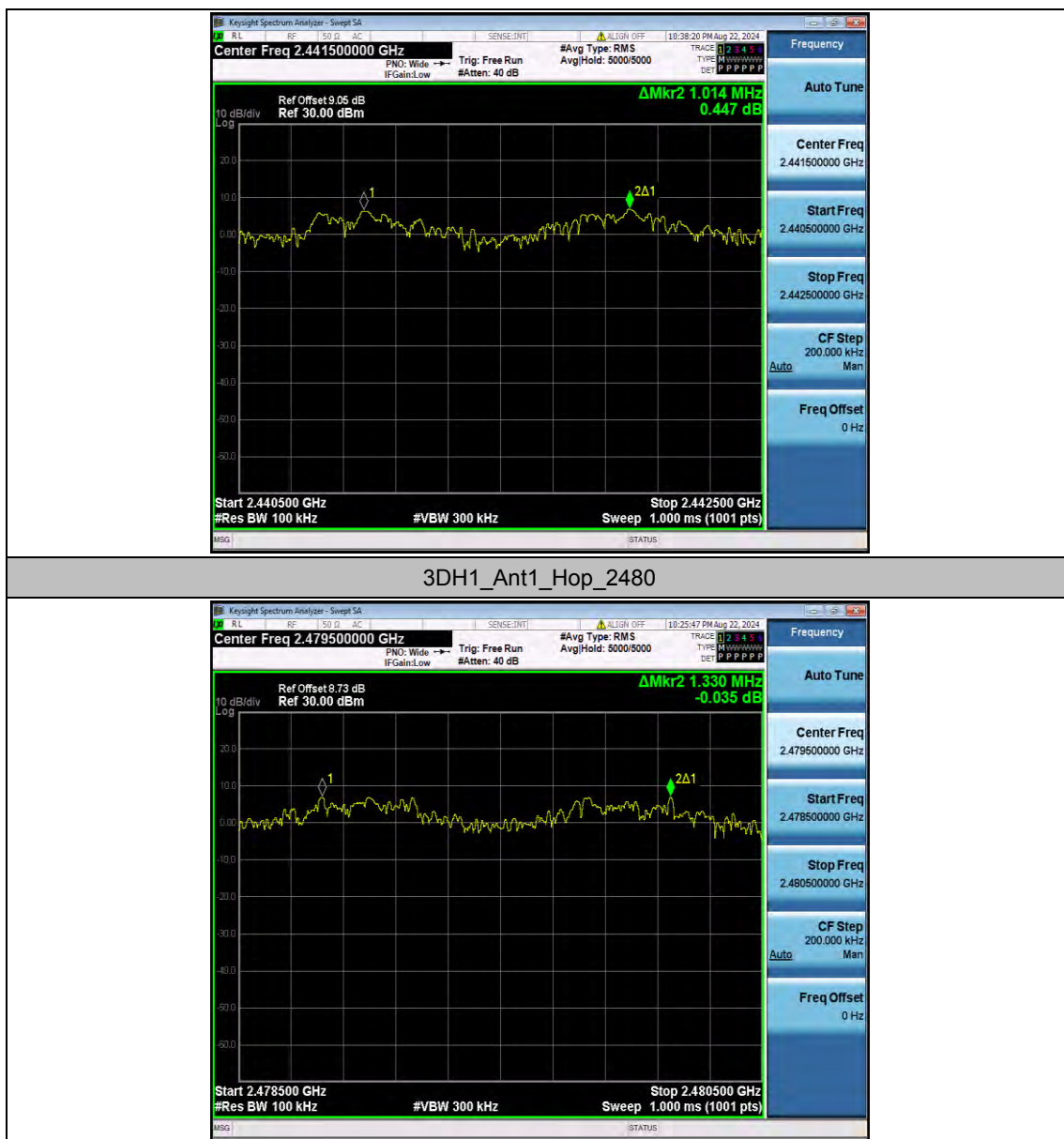
2DH1_Ant1_Hop_2480



3DH1_Ant1_Hop_2402



3DH1_Ant1_Hop_2441

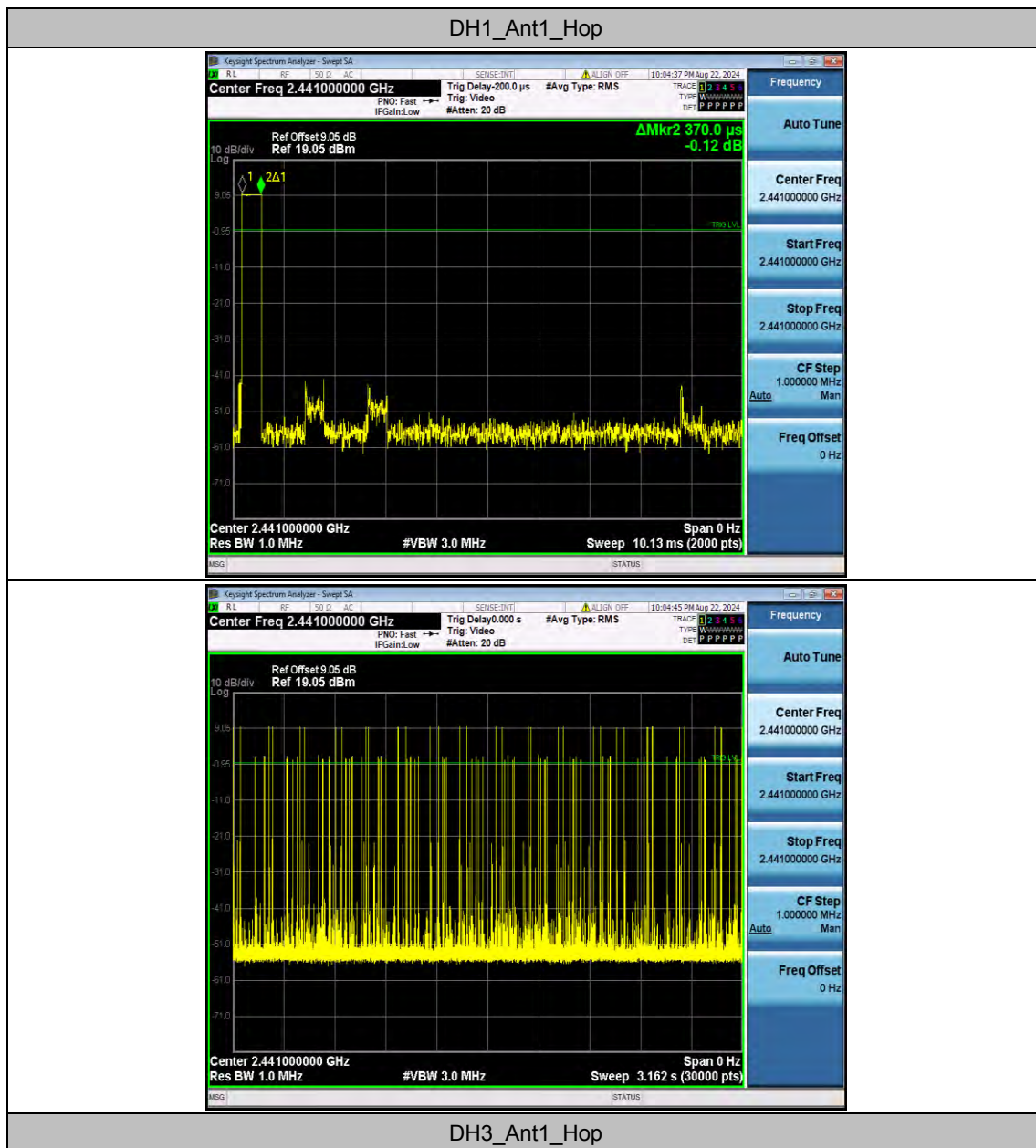


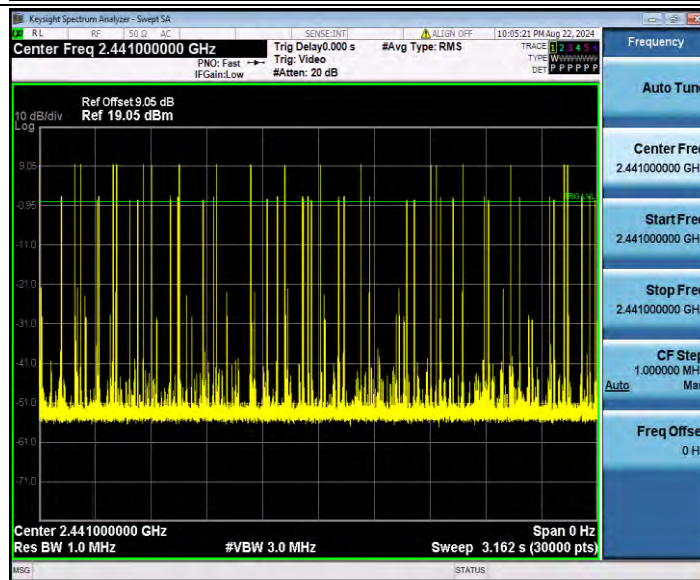
Appendix A.5: Time of occupancy

Test Result

TestMode	Antenna	Freq(MHz)	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Hop	0.370	330	0.122	≤0.4	PASS
DH3	Ant1	Hop	1.626	190	0.309	≤0.4	PASS
DH5	Ant1	Hop	2.878	80	0.23	≤0.4	PASS
2DH1	Ant1	Hop	0.370	330	0.122	≤0.4	PASS
2DH3	Ant1	Hop	1.631	160	0.261	≤0.4	PASS
2DH5	Ant1	Hop	2.878	50	0.144	≤0.4	PASS
3DH1	Ant1	Hop	0.370	330	0.122	≤0.4	PASS
3DH3	Ant1	Hop	1.626	160	0.26	≤0.4	PASS
3DH5	Ant1	Hop	2.878	60	0.173	≤0.4	PASS

Test Graphs

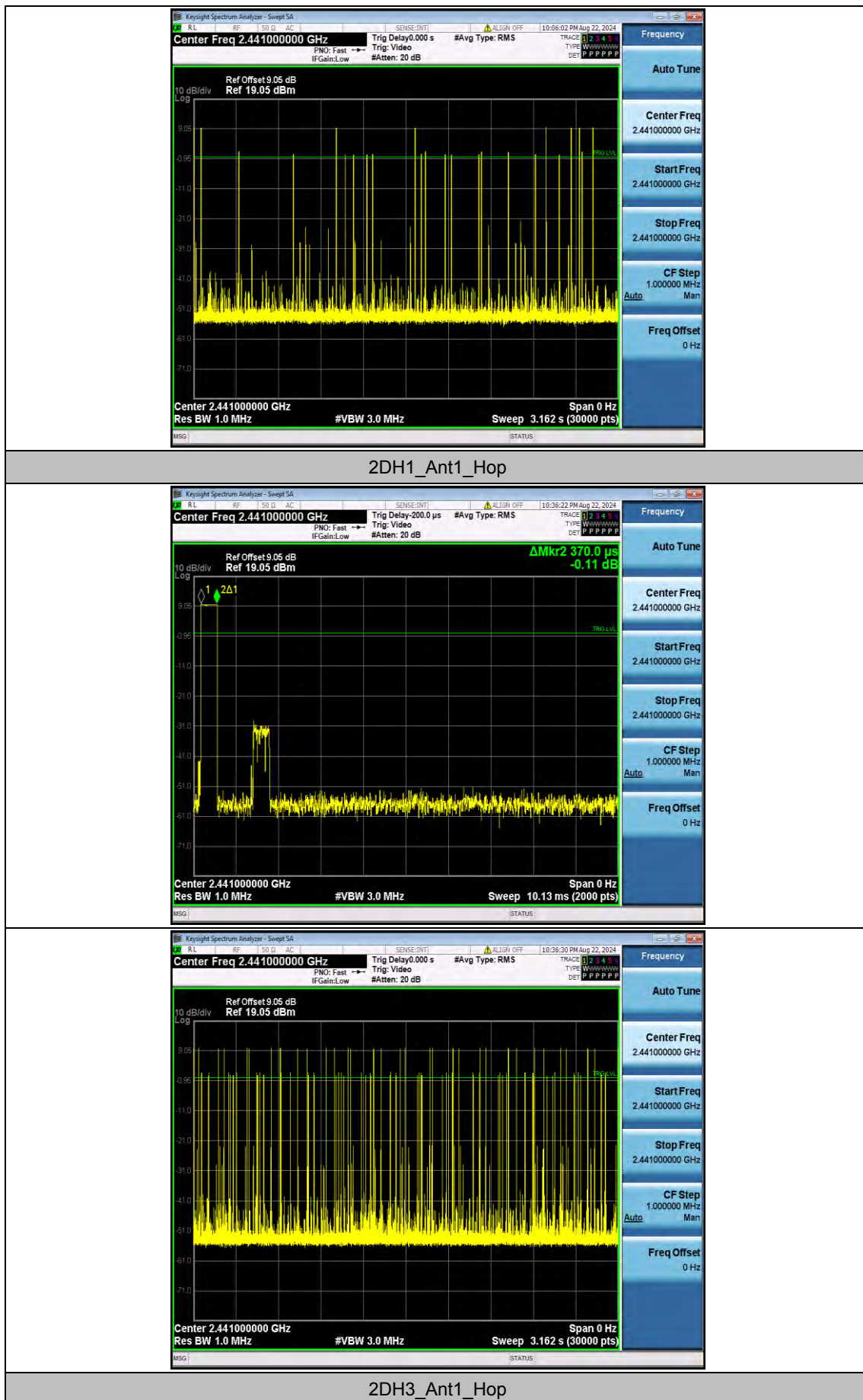


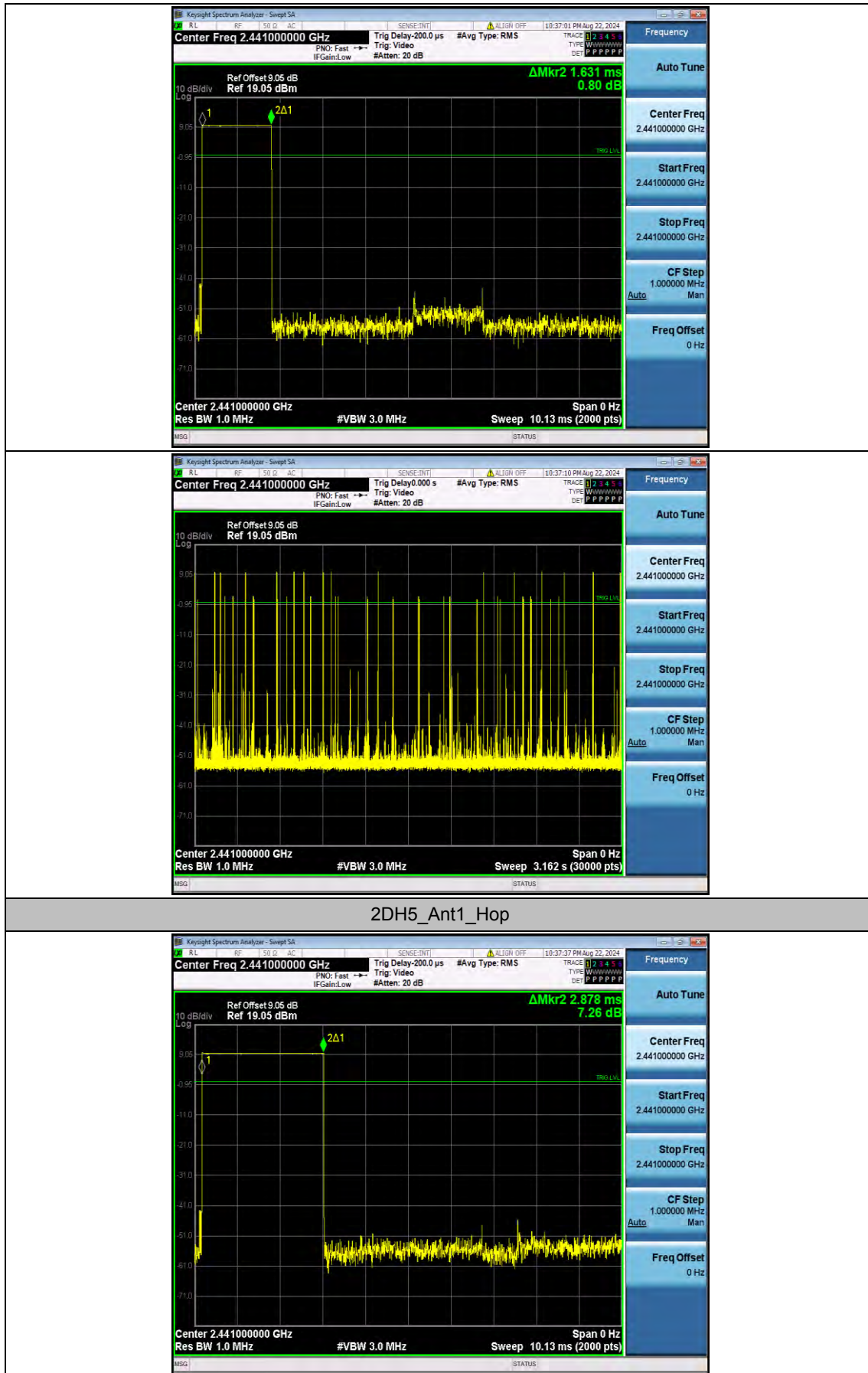


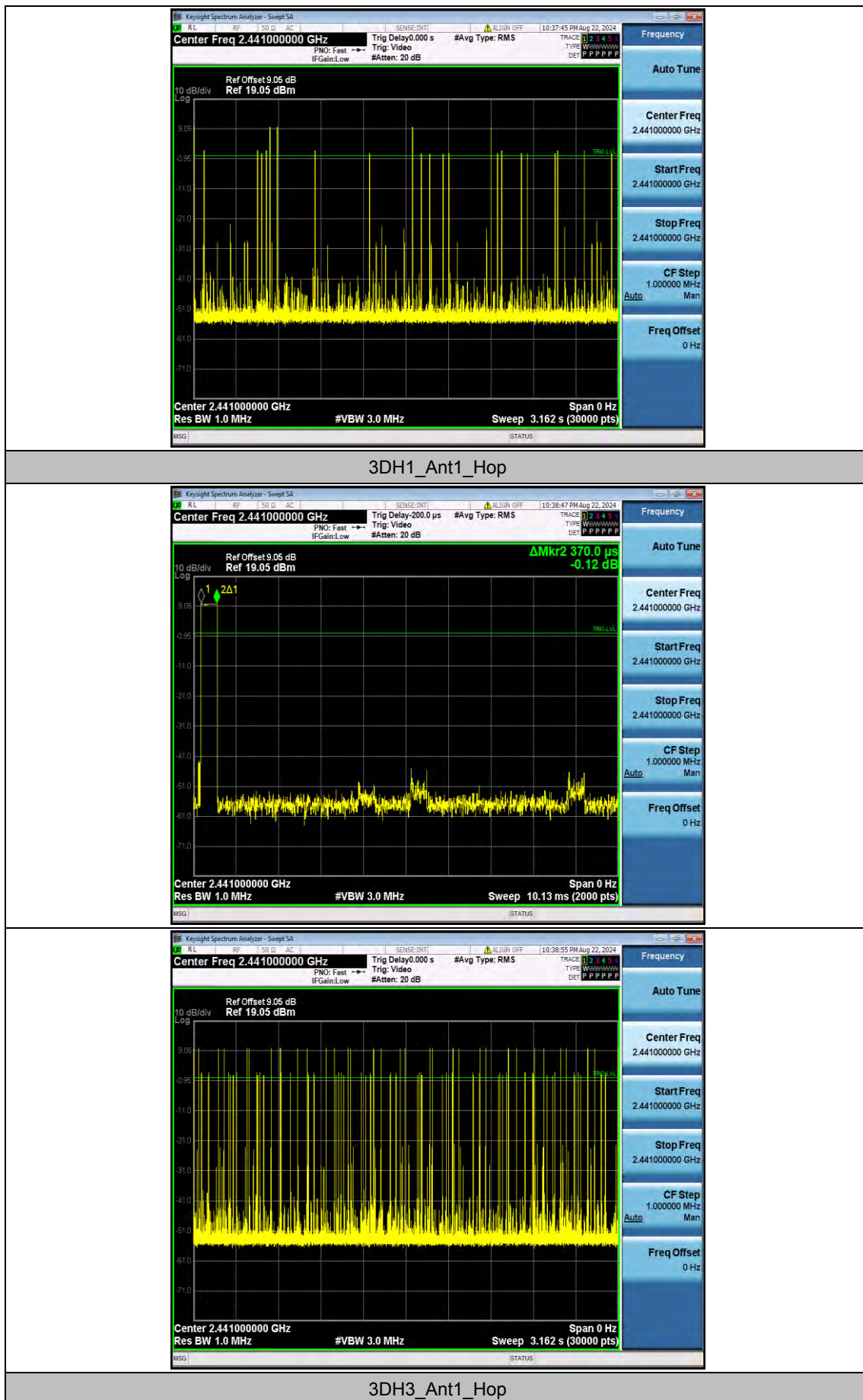
Keysight Spectrum Analyzer - Swept SA

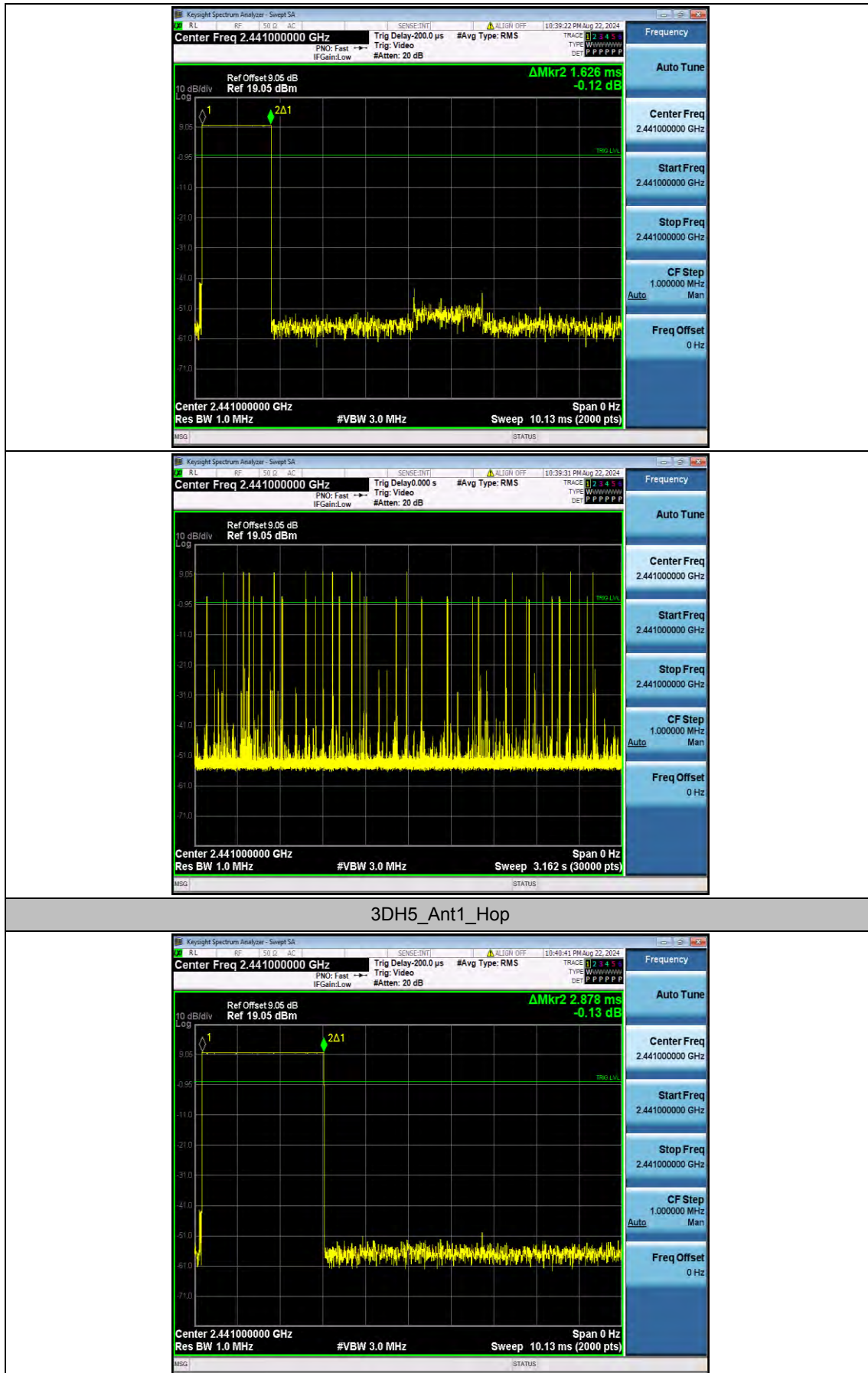
SENSE: TWT | ALIGN: OFF | 10:05:54 PM Aug 23, 2024

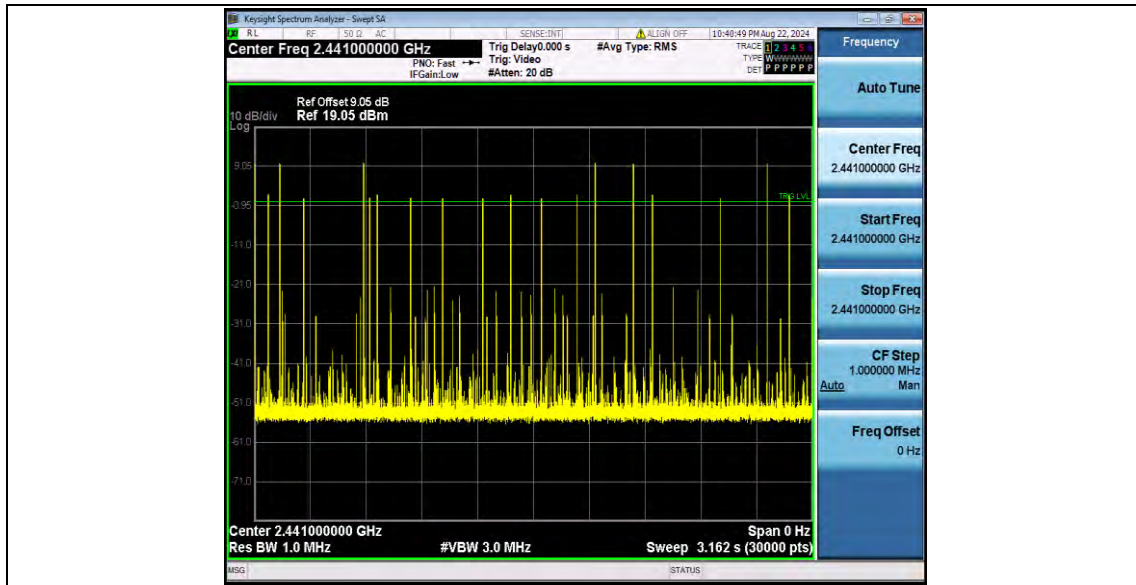
Center Freq 2.441000000 GHz | Trig Delay: 200.0 μ s | #Avg Type: RMS | TRACE 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 8









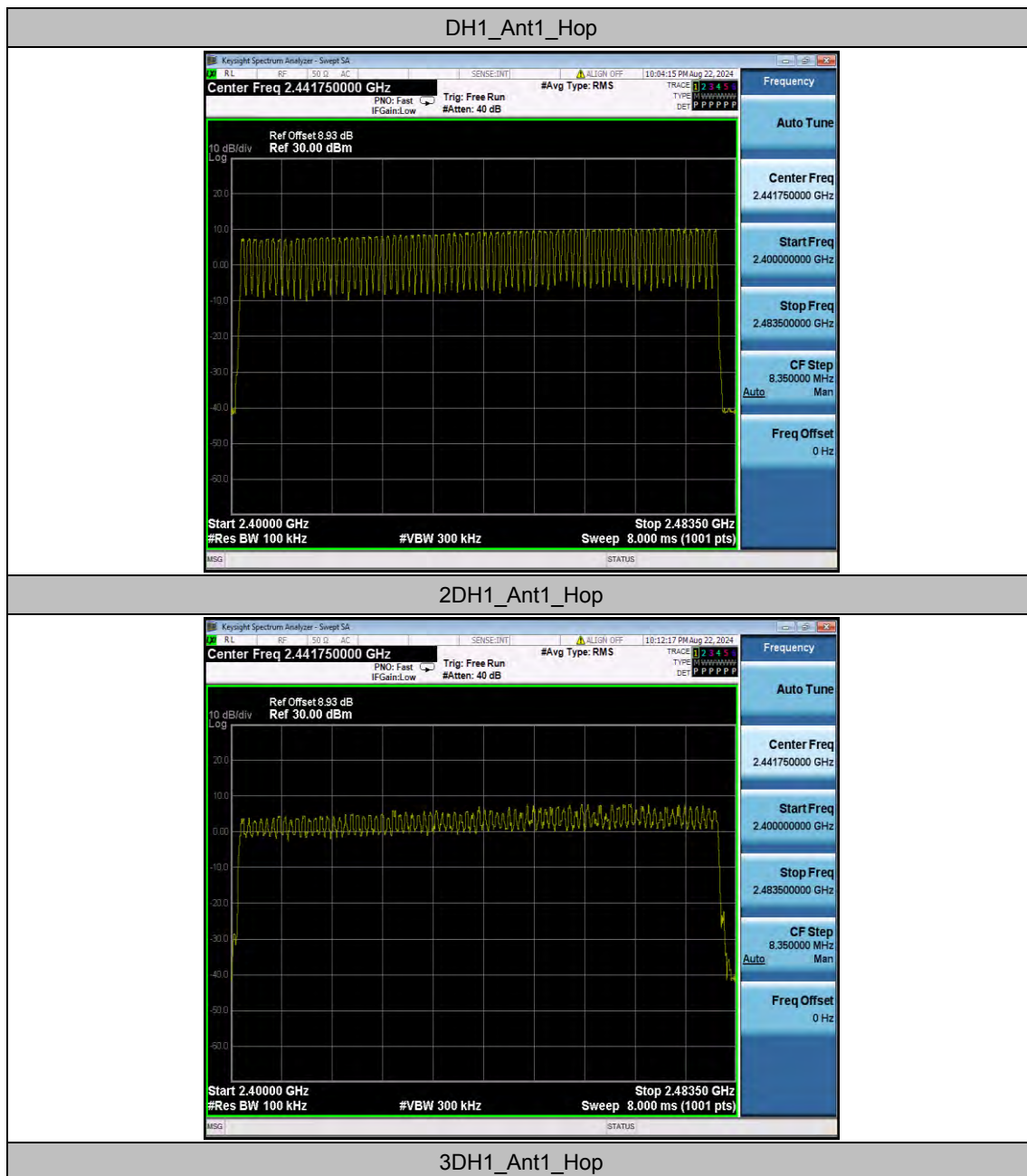


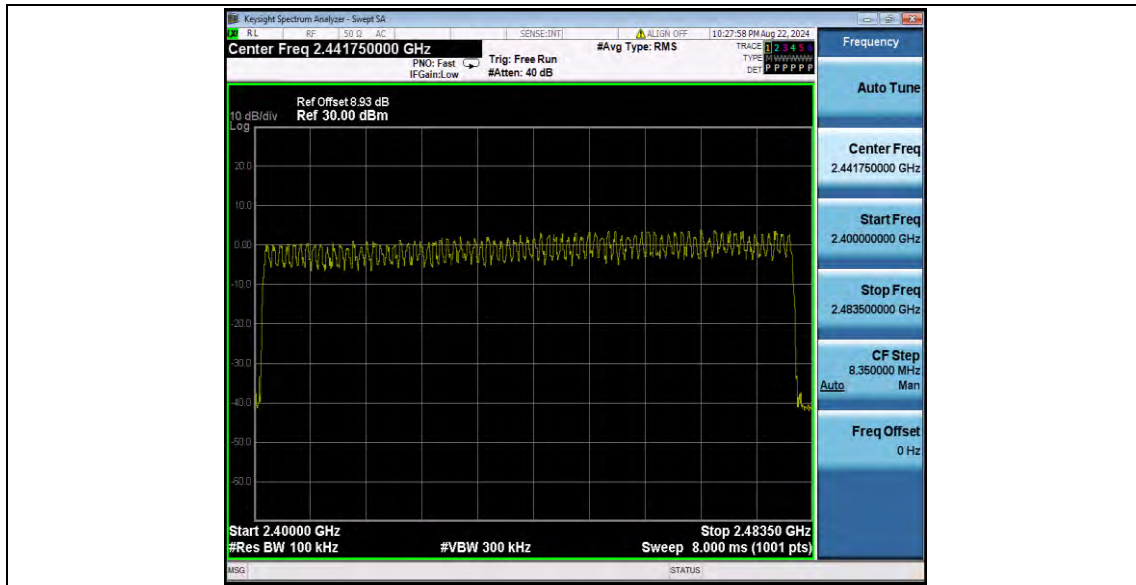
Appendix A.6: Number of hopping channels

Test Result

TestMode	Antenna	Freq(MHz)	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Hop	79	≥15	PASS
2DH1	Ant1	Hop	79	≥15	PASS
3DH1	Ant1	Hop	79	≥15	PASS

Test Graphs





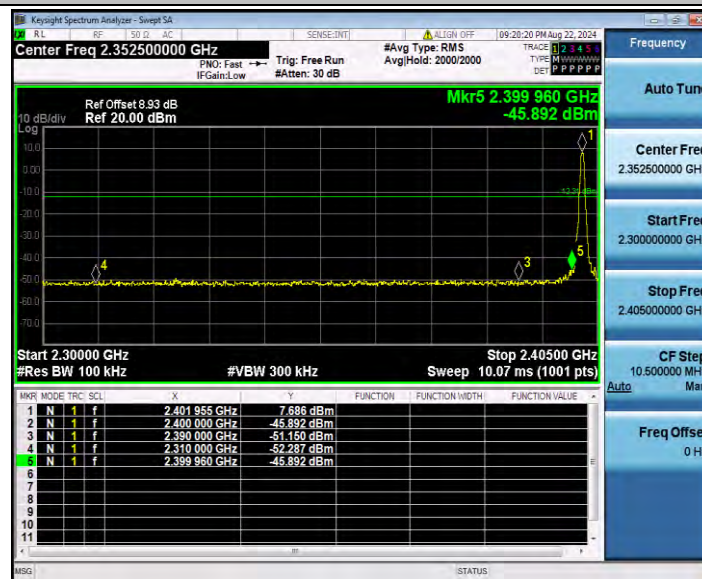
Appendix A.7: Band edge measurements

Test Result

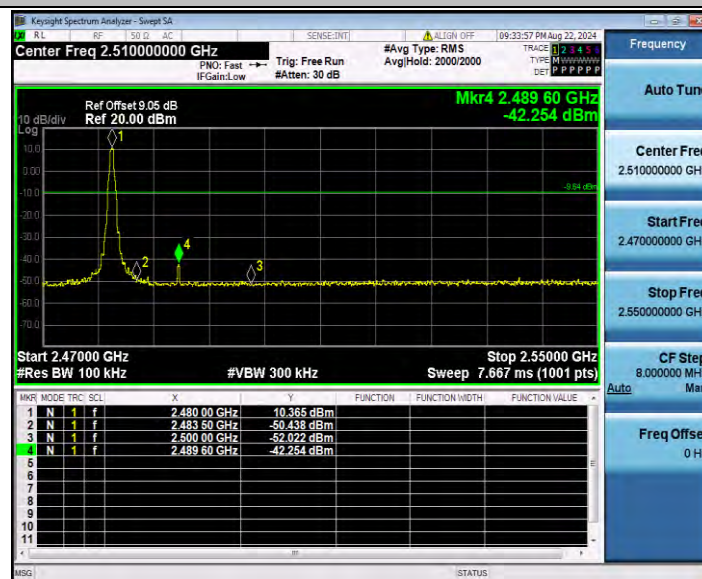
TestMode	Antenna	ChName	Freq(MHz)	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	Low	2402	7.69	-45.89	≤ -12.31	PASS
		High	2480	10.37	-42.25	≤ -9.64	PASS
		Low	Hop_2402	7.04	-48.52	≤ -12.96	PASS
		High	Hop_2480	10.12	-47.21	≤ -9.88	PASS
2DH1	Ant1	Low	2402	4.50	-40.48	≤ -15.5	PASS
		High	2480	5.32	-43.36	≤ -14.68	PASS
		Low	Hop_2402	3.82	-44.84	≤ -16.18	PASS
		High	Hop_2480	7.31	-44.83	≤ -12.69	PASS
3DH1	Ant1	Low	2402	4.52	-39.91	≤ -15.48	PASS
		High	2480	5.28	-43.45	≤ -14.72	PASS
		Low	Hop_2402	4.28	-46.73	≤ -15.72	PASS
		High	Hop_2480	6.56	-48.62	≤ -13.44	PASS

Test Graphs

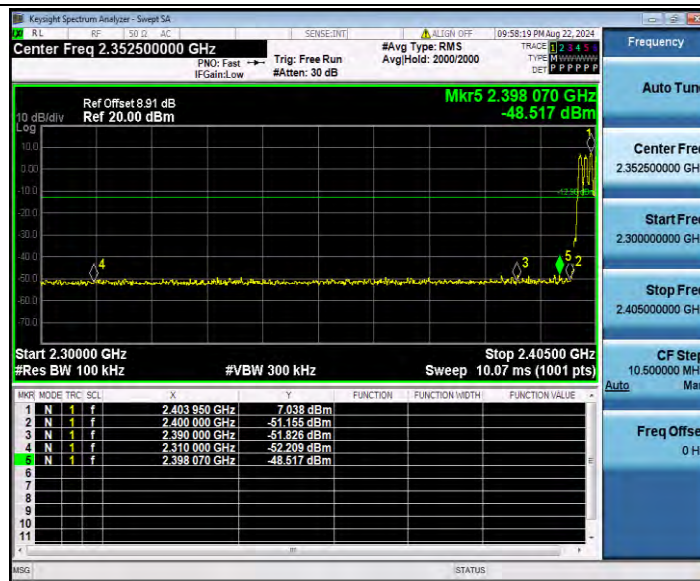
DH1_Ant1_Low_2402



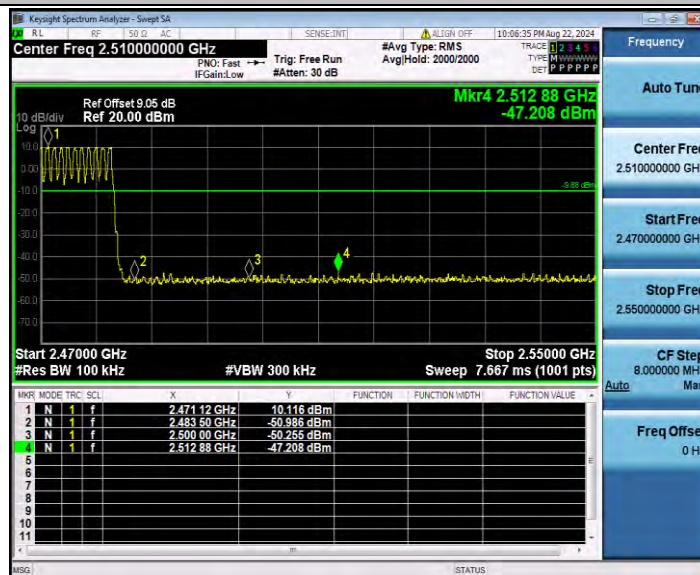
DH1_Ant1_High_2480



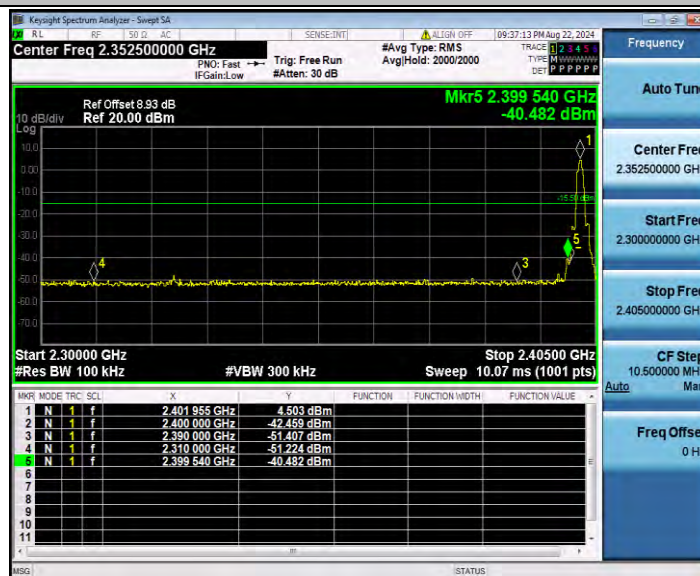
DH1_Ant1_Low_Hop_2402



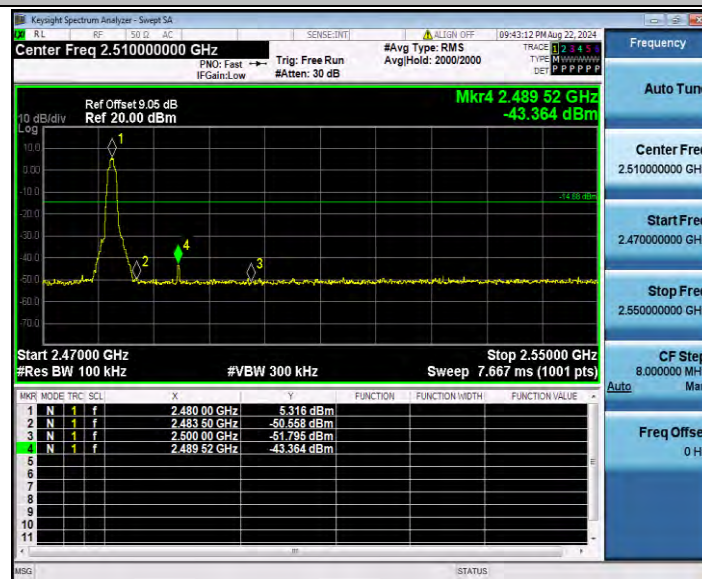
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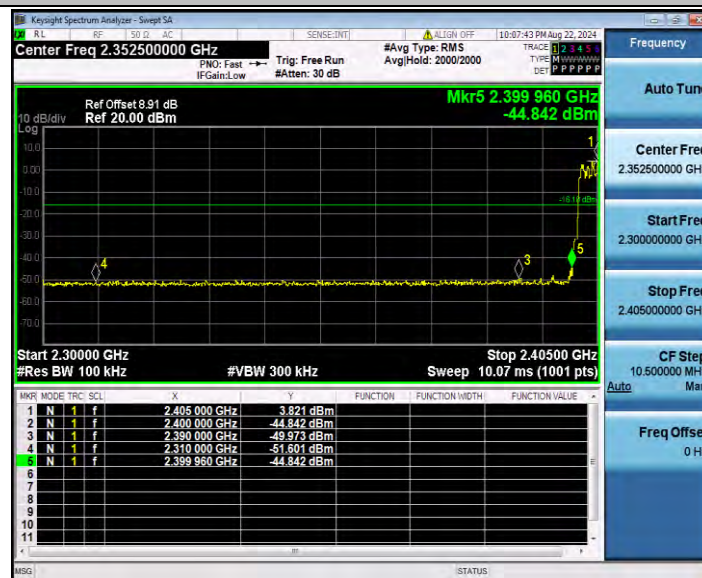
2DH1_Ant1_Low_2402



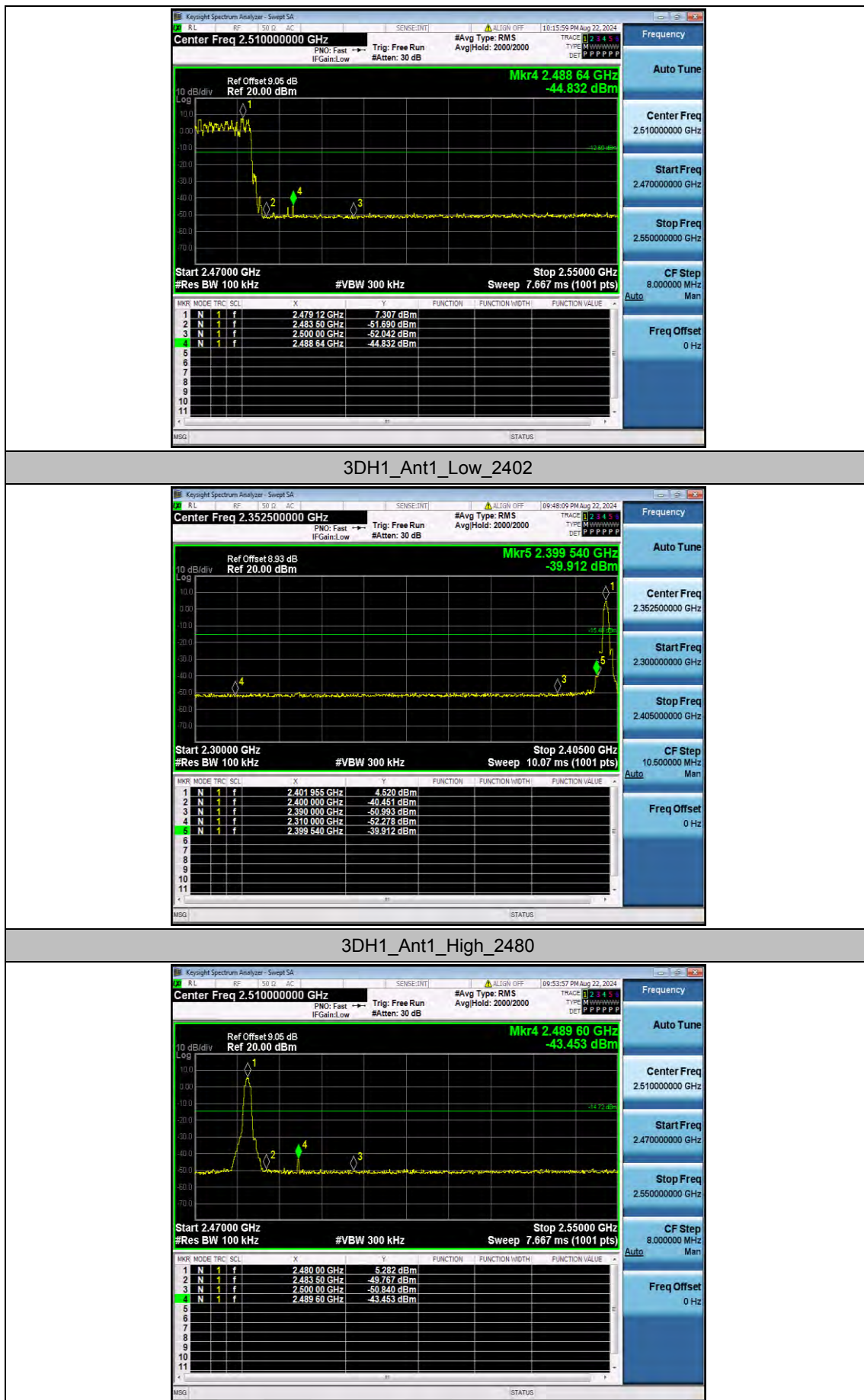
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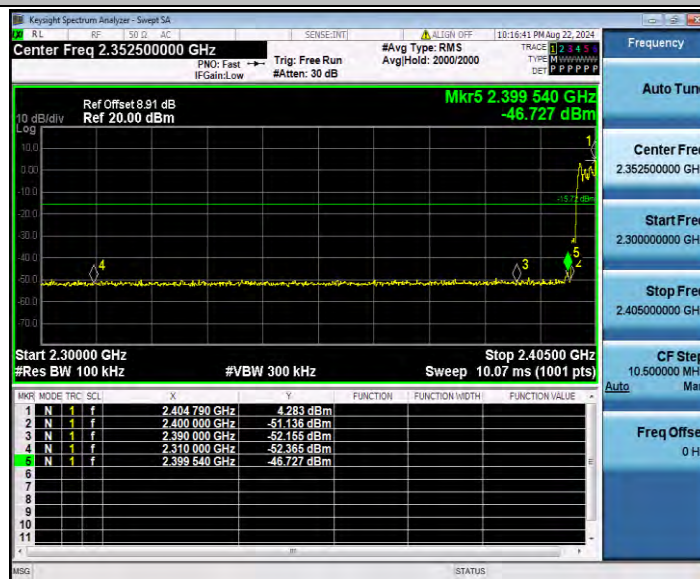
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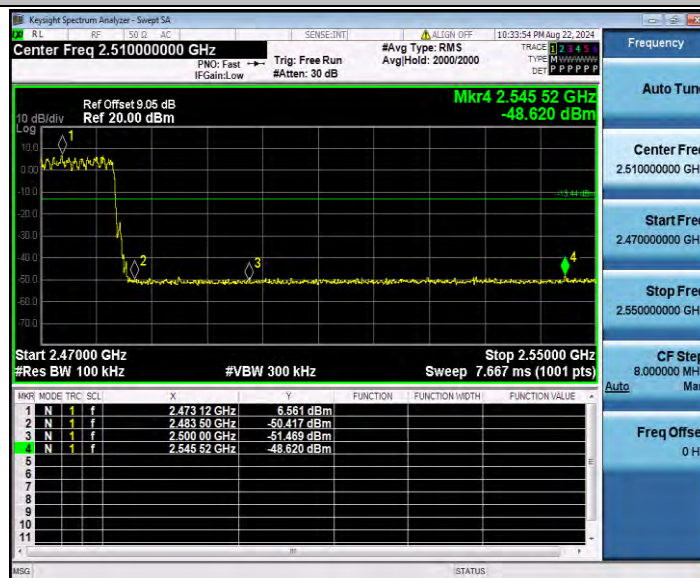
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3DH1_Ant1_Low_Hop_2402



3DH1_Ant1_High_Hop_2480

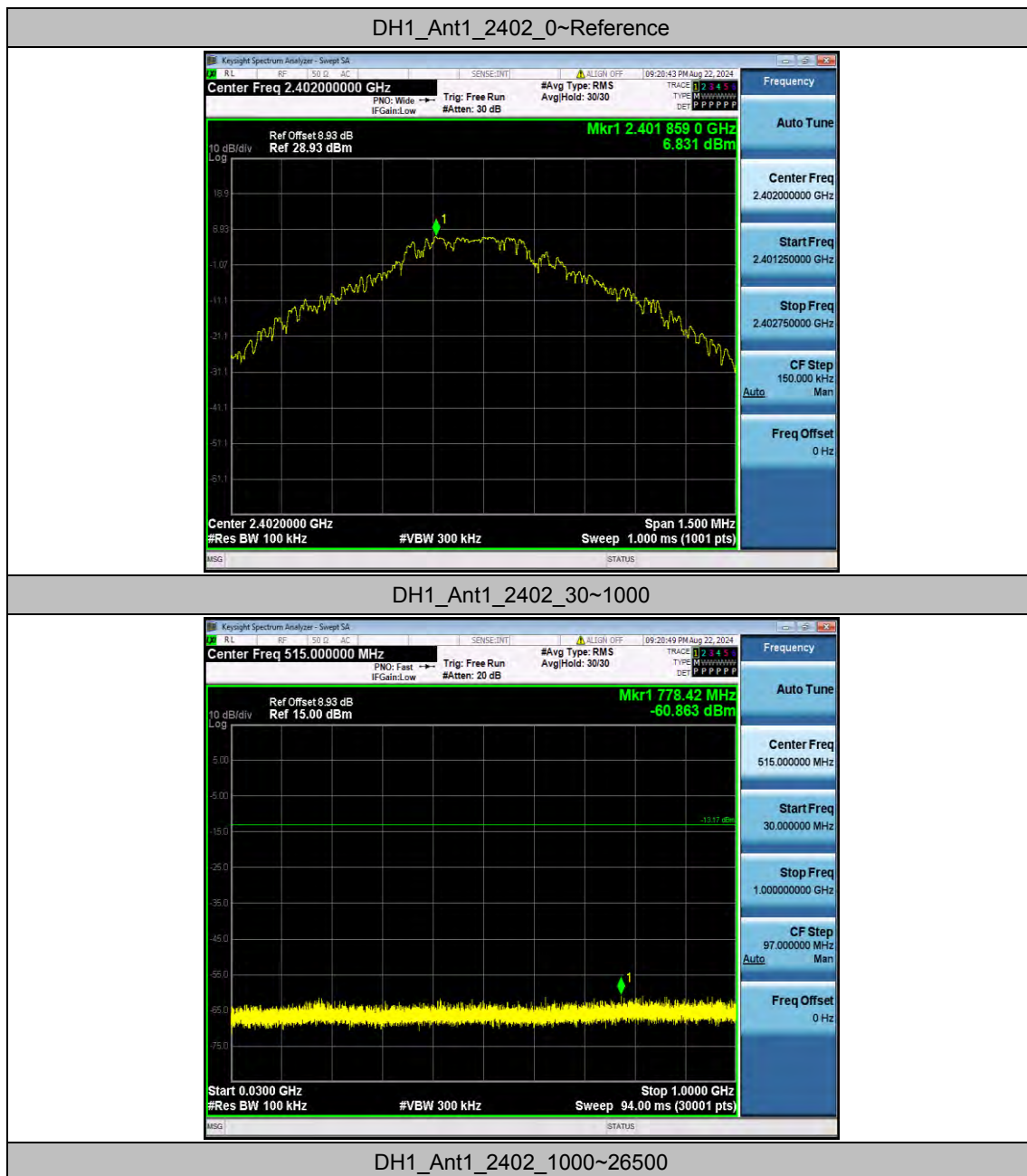


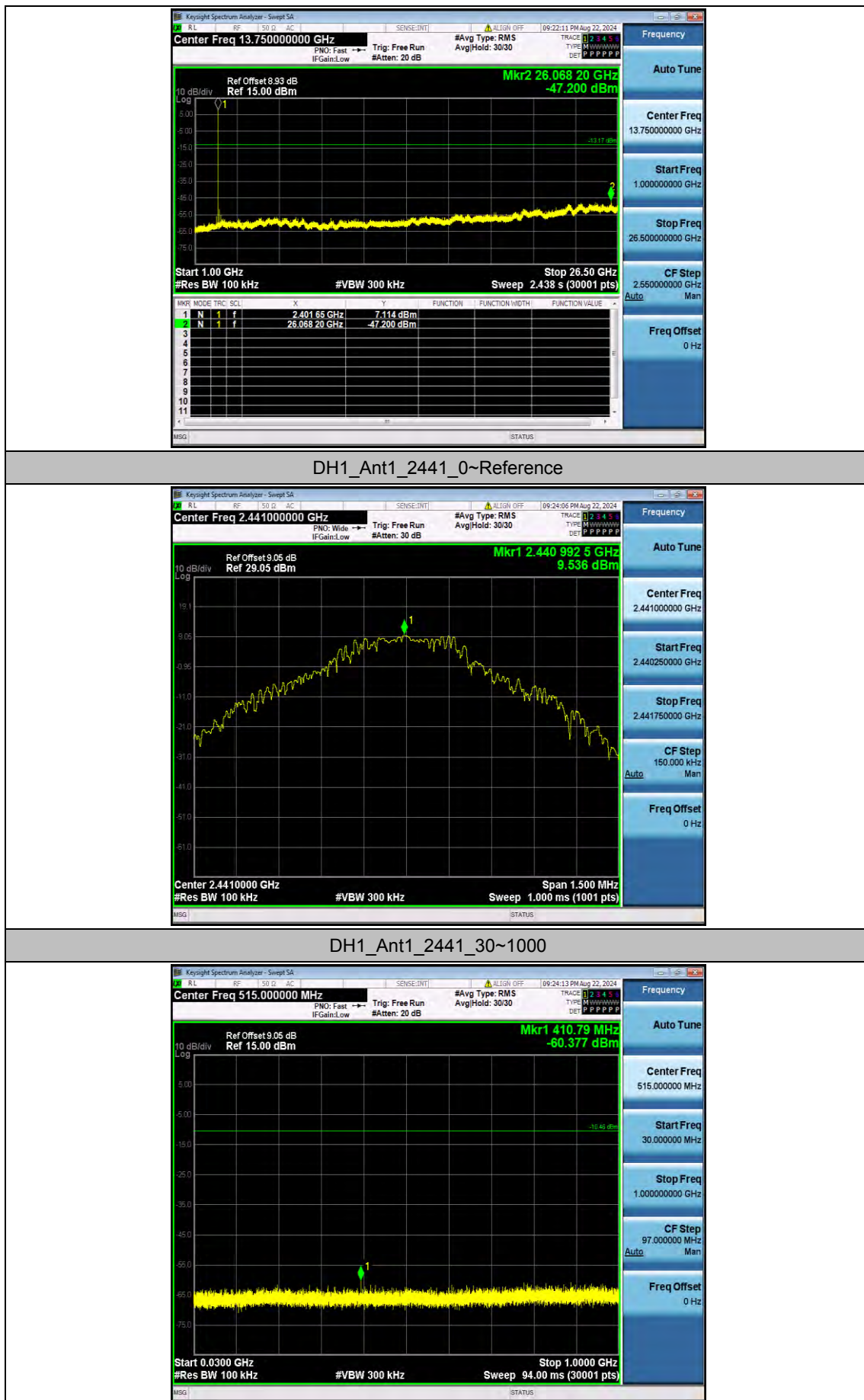
Appendix A.8: Conducted Spurious Emission

Test Result

TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH1	Ant1	2402	Reference	6.83	6.83	---	PASS
			30~1000	6.83	-60.86	≤-13.17	PASS
			1000~26500	6.83	-47.2	≤-13.17	PASS
		2441	Reference	9.54	9.54	---	PASS
			30~1000	9.54	-60.38	≤-10.46	PASS
			1000~26500	9.54	-48.08	≤-10.46	PASS
		2480	Reference	9.81	9.81	---	PASS
			30~1000	9.81	-43.77	≤-10.19	PASS
			1000~26500	9.81	-47.59	≤-10.19	PASS
2DH1	Ant1	2402	Reference	4.17	4.17	---	PASS
			30~1000	4.17	-43.99	≤-15.83	PASS
			1000~26500	4.17	-48.3	≤-15.83	PASS
		2441	Reference	5.78	5.78	---	PASS
			30~1000	5.78	-59.53	≤-14.22	PASS
			1000~26500	5.78	-48.18	≤-14.22	PASS
		2480	Reference	4.61	4.61	---	PASS
			30~1000	4.61	-60.71	≤-15.39	PASS
			1000~26500	4.61	-47.91	≤-15.39	PASS
3DH1	Ant1	2402	Reference	3.68	3.68	---	PASS
			30~1000	3.68	-60.92	≤-16.32	PASS
			1000~26500	3.68	-48.16	≤-16.32	PASS
		2441	Reference	5.76	5.76	---	PASS
			30~1000	5.76	-60.66	≤-14.24	PASS
			1000~26500	5.76	-47.42	≤-14.24	PASS
		2480	Reference	5.14	5.14	---	PASS
			30~1000	5.14	-60.86	≤-14.86	PASS
			1000~26500	5.14	-47.7	≤-14.86	PASS

Test Graphs





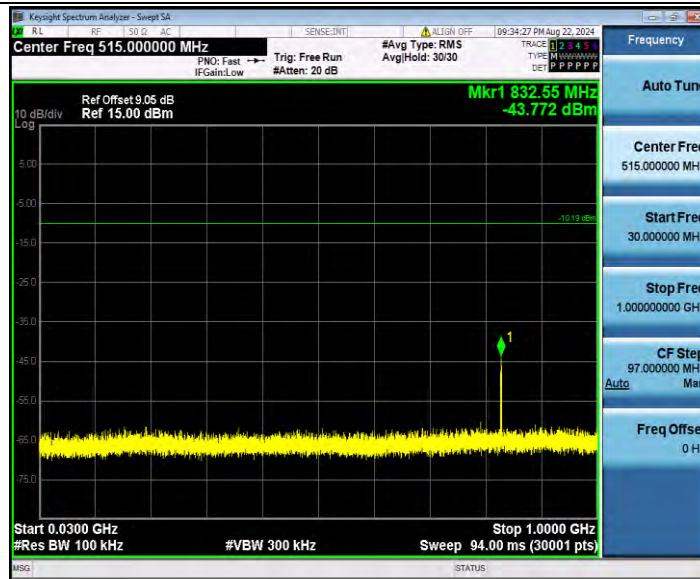
DH1_Ant1_2441_1000~26500



DH1_Ant1_2480_0~Reference



DH1_Ant1_2480_30~1000

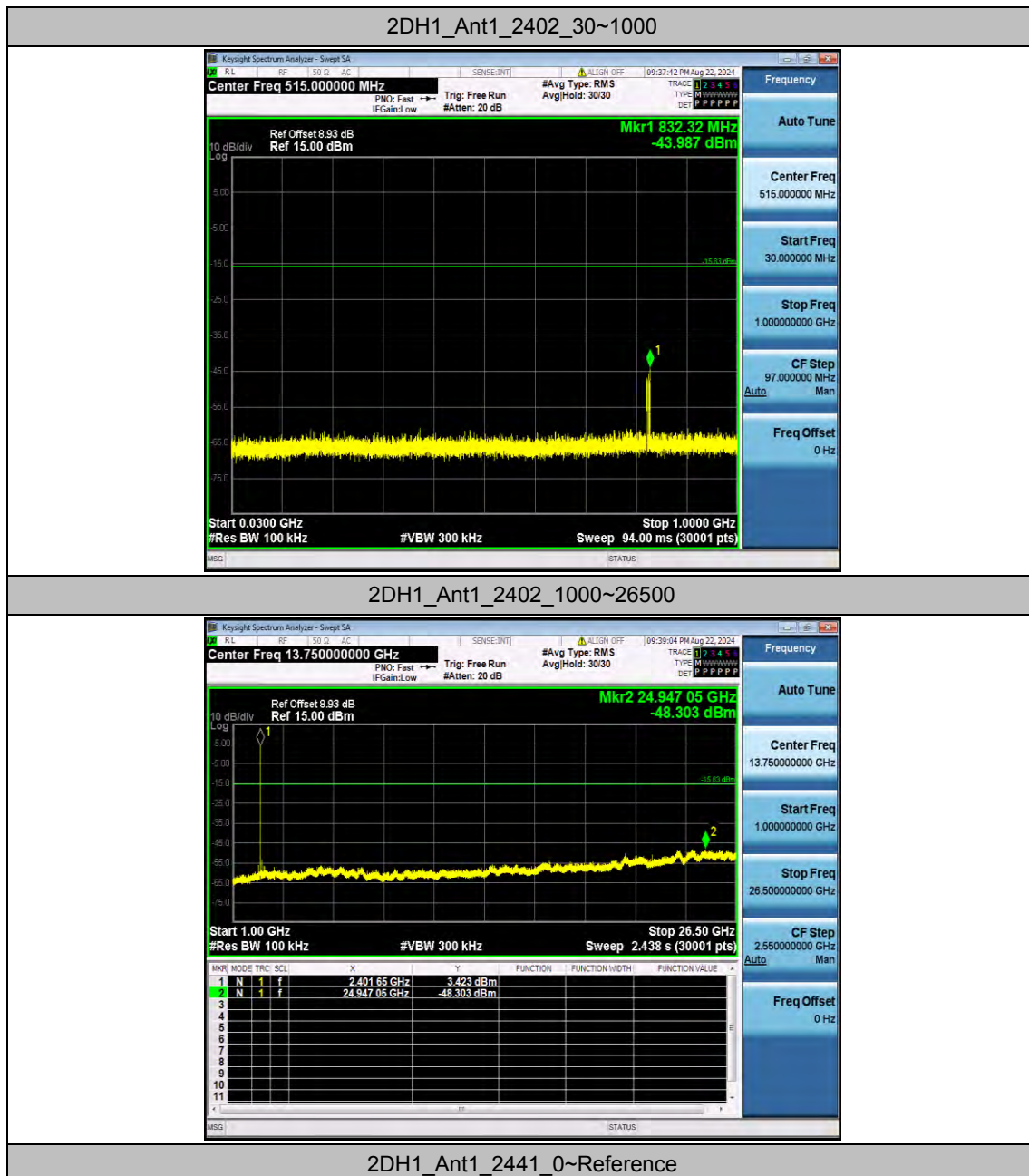


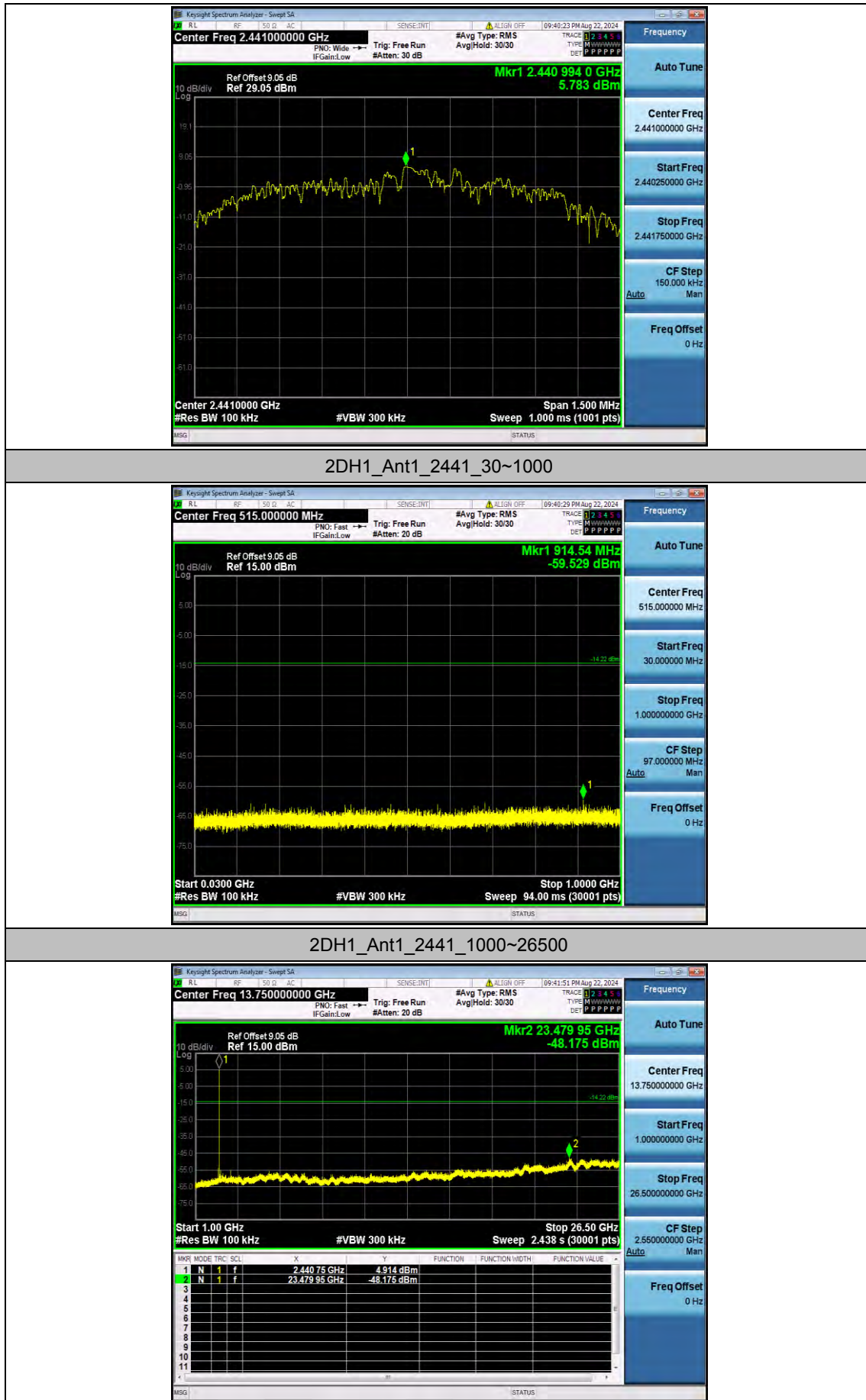
DH1_Ant1_2480_1000~26500



2DH1_Ant1_2402_0~Reference



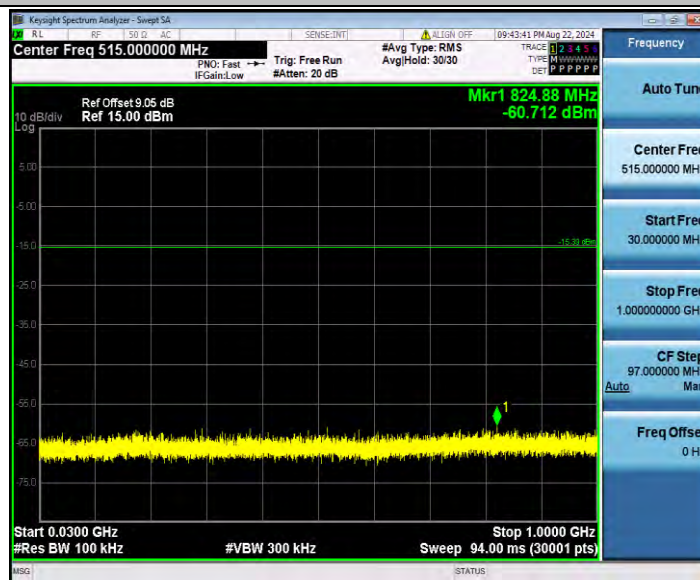




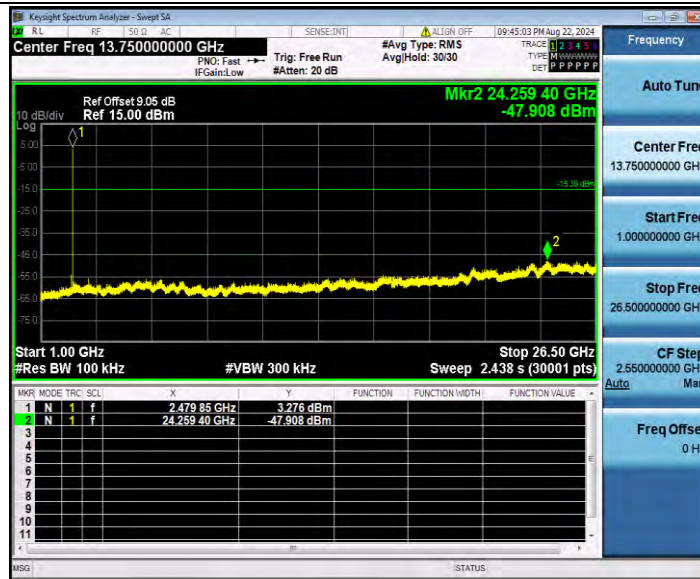
2DH1_Ant1_2480_0~Reference



2DH1_Ant1_2480_30~1000



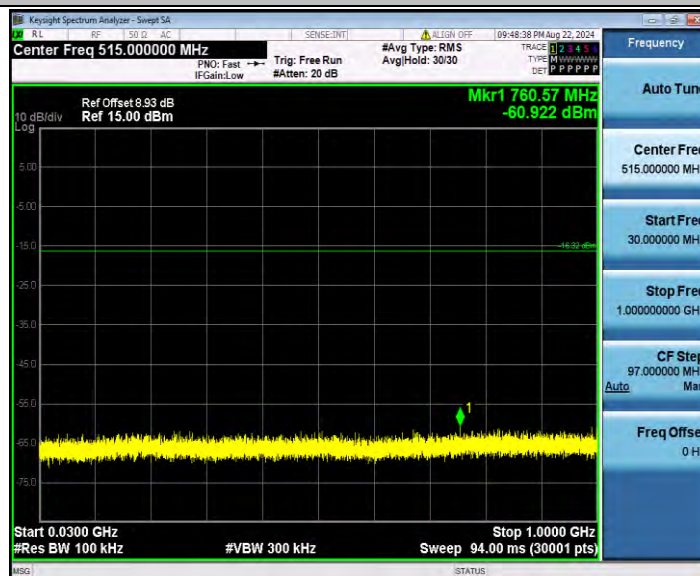
2DH1_Ant1_2480_1000~26500



3DH1_Ant1_2402_0~Reference



3DH1_Ant1_2402_30~1000



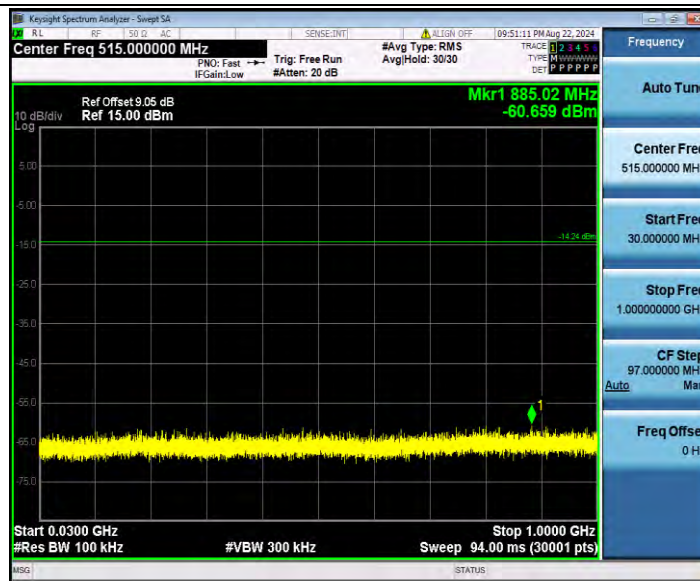
3DH1_Ant1_2402_1000~26500



3DH1_Ant1_2441_0~Reference



3DH1_Ant1_2441_30~1000



3DH1_Ant1_2441_1000~26500



3DH1_Ant1_2480_0~Reference



