

## 22 ANTENNA REQUIREMENT

|               |                                  |
|---------------|----------------------------------|
| Test Standard | 47 CFR Part 15, Subpart E 15.407 |
| Test Method   | N/A                              |

### 22.1 CONCLUSION

Standard Requirement:

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. The use of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The best case gain of the antenna is 3.11dBi.

## 23 APPENDIX

### 23.1 MAXIMUM CONDUCTED OUTPUT POWER

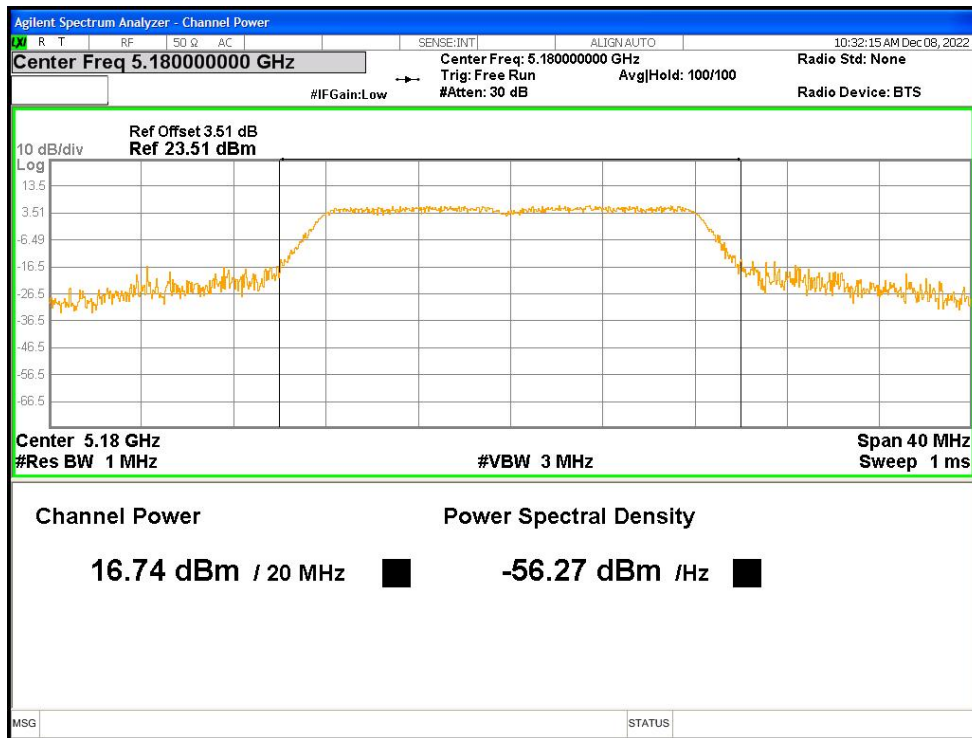
| Condition | Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|-----------|------|-----------------|---------|-----------------------|-------------|---------|
| NVNT      | a    | 5180            | Ant1    | 16.737                | 24          | Pass    |
| NVNT      | a    | 5200            | Ant1    | 16.842                | 24          | Pass    |
| NVNT      | a    | 5240            | Ant1    | 16.959                | 24          | Pass    |
| NVNT      | a    | 5260            | Ant1    | 16.436                | 24          | Pass    |
| NVNT      | a    | 5280            | Ant1    | 16.099                | 24          | Pass    |
| NVNT      | a    | 5320            | Ant1    | 15.753                | 24          | Pass    |
| NVNT      | a    | 5500            | Ant1    | 16.303                | 24          | Pass    |
| NVNT      | a    | 5600            | Ant1    | 16.373                | 24          | Pass    |
| NVNT      | a    | 5700            | Ant1    | 16.933                | 24          | Pass    |
| NVNT      | a    | 5745            | Ant1    | 16.698                | 30          | Pass    |
| NVNT      | a    | 5785            | Ant1    | 16.566                | 30          | Pass    |
| NVNT      | a    | 5825            | Ant1    | 16.489                | 30          | Pass    |
| NVNT      | a    | 5180            | Ant2    | 17.485                | 24          | Pass    |
| NVNT      | a    | 5200            | Ant2    | 16.702                | 24          | Pass    |
| NVNT      | a    | 5240            | Ant2    | 17.109                | 24          | Pass    |
| NVNT      | a    | 5260            | Ant2    | 16.545                | 24          | Pass    |
| NVNT      | a    | 5280            | Ant2    | 16.424                | 24          | Pass    |
| NVNT      | a    | 5320            | Ant2    | 16.29                 | 24          | Pass    |
| NVNT      | a    | 5500            | Ant2    | 17.096                | 24          | Pass    |
| NVNT      | a    | 5600            | Ant2    | 17.294                | 24          | Pass    |
| NVNT      | a    | 5700            | Ant2    | 16.735                | 24          | Pass    |
| NVNT      | a    | 5745            | Ant2    | 16.985                | 30          | Pass    |
| NVNT      | a    | 5785            | Ant2    | 16.999                | 30          | Pass    |
| NVNT      | a    | 5825            | Ant2    | 16.447                | 30          | Pass    |
| NVNT      | ac20 | 5180            | Ant1    | 11.636                | 23.88       | Pass    |
| NVNT      | ac20 | 5180            | Ant2    | 13.887                | 23.88       | Pass    |
| NVNT      | ac20 | 5180            | Sum     | 15.916                | 23.88       | Pass    |
| NVNT      | ac20 | 5200            | Ant1    | 12.024                | 23.88       | Pass    |
| NVNT      | ac20 | 5200            | Ant2    | 14.207                | 23.88       | Pass    |
| NVNT      | ac20 | 5200            | Sum     | 16.262                | 23.88       | Pass    |
| NVNT      | ac20 | 5240            | Ant1    | 11.476                | 23.88       | Pass    |
| NVNT      | ac20 | 5240            | Ant2    | 14.144                | 23.88       | Pass    |
| NVNT      | ac20 | 5240            | Sum     | 16.022                | 23.88       | Pass    |
| NVNT      | ac20 | 5260            | Ant1    | 11.156                | 23.88       | Pass    |
| NVNT      | ac20 | 5260            | Ant2    | 14.328                | 23.88       | Pass    |
| NVNT      | ac20 | 5260            | Sum     | 16.036                | 23.88       | Pass    |
| NVNT      | ac20 | 5280            | Ant1    | 11.302                | 23.88       | Pass    |
| NVNT      | ac20 | 5280            | Ant2    | 14.987                | 23.88       | Pass    |
| NVNT      | ac20 | 5280            | Sum     | 16.534                | 23.88       | Pass    |
| NVNT      | ac20 | 5320            | Ant1    | 11.457                | 23.88       | Pass    |
| NVNT      | ac20 | 5320            | Ant2    | 14.375                | 23.88       | Pass    |

|      |      |      |      |        |       |      |
|------|------|------|------|--------|-------|------|
| NVNT | ac20 | 5320 | Sum  | 16.167 | 23.88 | Pass |
| NVNT | ac20 | 5500 | Ant1 | 11.237 | 23.88 | Pass |
| NVNT | ac20 | 5500 | Ant2 | 14.649 | 23.88 | Pass |
| NVNT | ac20 | 5500 | Sum  | 16.28  | 23.88 | Pass |
| NVNT | ac20 | 5600 | Ant1 | 12.252 | 23.88 | Pass |
| NVNT | ac20 | 5600 | Ant2 | 14.133 | 23.88 | Pass |
| NVNT | ac20 | 5600 | Sum  | 16.304 | 23.88 | Pass |
| NVNT | ac20 | 5700 | Ant1 | 13.282 | 23.88 | Pass |
| NVNT | ac20 | 5700 | Ant2 | 13.658 | 23.88 | Pass |
| NVNT | ac20 | 5700 | Sum  | 16.484 | 23.88 | Pass |
| NVNT | ac20 | 5745 | Ant1 | 12.995 | 29.88 | Pass |
| NVNT | ac20 | 5745 | Ant2 | 13.884 | 29.88 | Pass |
| NVNT | ac20 | 5745 | Sum  | 16.473 | 29.88 | Pass |
| NVNT | ac20 | 5785 | Ant1 | 12.094 | 29.88 | Pass |
| NVNT | ac20 | 5785 | Ant2 | 13.98  | 29.88 | Pass |
| NVNT | ac20 | 5785 | Sum  | 16.149 | 29.88 | Pass |
| NVNT | ac20 | 5825 | Ant1 | 12.405 | 29.88 | Pass |
| NVNT | ac20 | 5825 | Ant2 | 13.99  | 29.88 | Pass |
| NVNT | ac20 | 5825 | Sum  | 16.28  | 29.88 | Pass |
| NVNT | ac40 | 5190 | Ant1 | 11.945 | 23.88 | Pass |
| NVNT | ac40 | 5190 | Ant2 | 14.471 | 23.88 | Pass |
| NVNT | ac40 | 5190 | Sum  | 16.399 | 23.88 | Pass |
| NVNT | ac40 | 5230 | Ant1 | 11.824 | 23.88 | Pass |
| NVNT | ac40 | 5230 | Ant2 | 14.142 | 23.88 | Pass |
| NVNT | ac40 | 5230 | Sum  | 16.146 | 23.88 | Pass |
| NVNT | ac40 | 5270 | Ant1 | 11.313 | 23.88 | Pass |
| NVNT | ac40 | 5270 | Ant2 | 14.873 | 23.88 | Pass |
| NVNT | ac40 | 5270 | Sum  | 16.458 | 23.88 | Pass |
| NVNT | ac40 | 5310 | Ant1 | 11.471 | 23.88 | Pass |
| NVNT | ac40 | 5310 | Ant2 | 14.789 | 23.88 | Pass |
| NVNT | ac40 | 5310 | Sum  | 16.45  | 23.88 | Pass |
| NVNT | ac40 | 5510 | Ant1 | 11.833 | 23.88 | Pass |
| NVNT | ac40 | 5510 | Ant2 | 14.921 | 23.88 | Pass |
| NVNT | ac40 | 5510 | Sum  | 16.656 | 23.88 | Pass |
| NVNT | ac40 | 5590 | Ant1 | 12.275 | 23.88 | Pass |
| NVNT | ac40 | 5590 | Ant2 | 14.853 | 23.88 | Pass |
| NVNT | ac40 | 5590 | Sum  | 16.763 | 23.88 | Pass |
| NVNT | ac40 | 5670 | Ant1 | 13.239 | 23.88 | Pass |
| NVNT | ac40 | 5670 | Ant2 | 13.52  | 23.88 | Pass |
| NVNT | ac40 | 5670 | Sum  | 16.392 | 23.88 | Pass |
| NVNT | ac40 | 5755 | Ant1 | 12.46  | 29.88 | Pass |
| NVNT | ac40 | 5755 | Ant2 | 13.625 | 29.88 | Pass |
| NVNT | ac40 | 5755 | Sum  | 16.092 | 29.88 | Pass |
| NVNT | ac40 | 5795 | Ant1 | 12.318 | 29.88 | Pass |
| NVNT | ac40 | 5795 | Ant2 | 14.109 | 29.88 | Pass |
| NVNT | ac40 | 5795 | Sum  | 16.315 | 29.88 | Pass |
| NVNT | ac80 | 5210 | Ant1 | 11.72  | 23.88 | Pass |

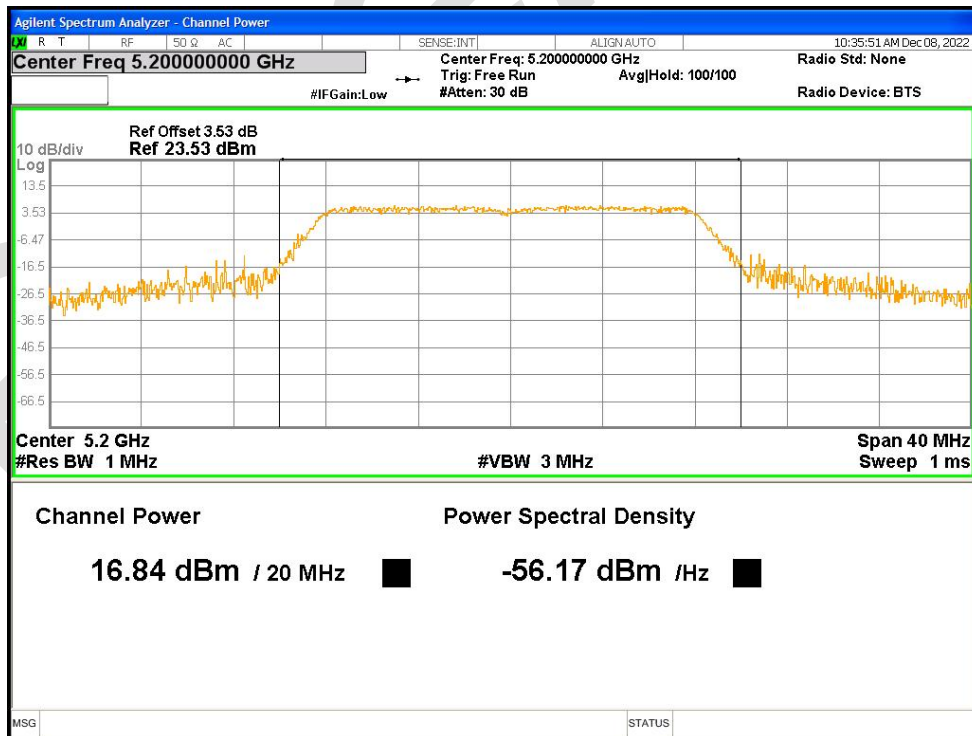
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| NVNT | ac80 | 5210 | Ant2 | 14.048 | 23.88 | Pass |
| NVNT | ac80 | 5210 | Sum  | 16.048 | 23.88 | Pass |
| NVNT | ac80 | 5290 | Ant1 | 10.999 | 23.88 | Pass |
| NVNT | ac80 | 5290 | Ant2 | 14.708 | 23.88 | Pass |
| NVNT | ac80 | 5290 | Sum  | 16.248 | 23.88 | Pass |
| NVNT | ac80 | 5530 | Ant1 | 11.13  | 23.88 | Pass |
| NVNT | ac80 | 5530 | Ant2 | 14.376 | 23.88 | Pass |
| NVNT | ac80 | 5530 | Sum  | 16.06  | 23.88 | Pass |
| NVNT | ac80 | 5610 | Ant1 | 12.022 | 23.88 | Pass |
| NVNT | ac80 | 5610 | Ant2 | 14.023 | 23.88 | Pass |
| NVNT | ac80 | 5610 | Sum  | 16.147 | 23.88 | Pass |
| NVNT | ac80 | 5690 | Ant1 | 13.136 | 23.88 | Pass |
| NVNT | ac80 | 5690 | Ant2 | 13.465 | 23.88 | Pass |
| NVNT | ac80 | 5690 | Sum  | 16.314 | 23.88 | Pass |
| NVNT | ac80 | 5775 | Ant1 | 12.338 | 29.88 | Pass |
| NVNT | ac80 | 5775 | Ant2 | 13.83  | 29.88 | Pass |
| NVNT | ac80 | 5775 | Sum  | 16.158 | 29.88 | Pass |
| NVNT | n20  | 5180 | Ant1 | 12.252 | 23.88 | Pass |
| NVNT | n20  | 5180 | Ant2 | 15.156 | 23.88 | Pass |
| NVNT | n20  | 5180 | Sum  | 16.953 | 23.88 | Pass |
| NVNT | n20  | 5200 | Ant1 | 12.781 | 23.88 | Pass |
| NVNT | n20  | 5200 | Ant2 | 15.179 | 23.88 | Pass |
| NVNT | n20  | 5200 | Sum  | 17.154 | 23.88 | Pass |
| NVNT | n20  | 5240 | Ant1 | 12.621 | 23.88 | Pass |
| NVNT | n20  | 5240 | Ant2 | 15.097 | 23.88 | Pass |
| NVNT | n20  | 5240 | Sum  | 17.043 | 23.88 | Pass |
| NVNT | n20  | 5260 | Ant1 | 12.1   | 23.88 | Pass |
| NVNT | n20  | 5260 | Ant2 | 15.183 | 23.88 | Pass |
| NVNT | n20  | 5260 | Sum  | 16.92  | 23.88 | Pass |
| NVNT | n20  | 5280 | Ant1 | 11.513 | 23.88 | Pass |
| NVNT | n20  | 5280 | Ant2 | 15.213 | 23.88 | Pass |
| NVNT | n20  | 5280 | Sum  | 16.756 | 23.88 | Pass |
| NVNT | n20  | 5320 | Ant1 | 11.89  | 23.88 | Pass |
| NVNT | n20  | 5320 | Ant2 | 15.164 | 23.88 | Pass |
| NVNT | n20  | 5320 | Sum  | 16.839 | 23.88 | Pass |
| NVNT | n20  | 5500 | Ant1 | 11.958 | 23.88 | Pass |
| NVNT | n20  | 5500 | Ant2 | 15.436 | 23.88 | Pass |
| NVNT | n20  | 5500 | Sum  | 17.047 | 23.88 | Pass |
| NVNT | n20  | 5600 | Ant1 | 13.365 | 23.88 | Pass |
| NVNT | n20  | 5600 | Ant2 | 15.097 | 23.88 | Pass |
| NVNT | n20  | 5600 | Sum  | 17.327 | 23.88 | Pass |
| NVNT | n20  | 5700 | Ant1 | 14.353 | 23.88 | Pass |
| NVNT | n20  | 5700 | Ant2 | 14.503 | 23.88 | Pass |
| NVNT | n20  | 5700 | Sum  | 17.439 | 23.88 | Pass |
| NVNT | n20  | 5745 | Ant1 | 13.953 | 29.88 | Pass |
| NVNT | n20  | 5745 | Ant2 | 14.686 | 29.88 | Pass |
| NVNT | n20  | 5745 | Sum  | 17.345 | 29.88 | Pass |

|      |     |      |      |        |       |      |
|------|-----|------|------|--------|-------|------|
| NVNT | n20 | 5785 | Ant1 | 13.233 | 29.88 | Pass |
| NVNT | n20 | 5785 | Ant2 | 14.897 | 29.88 | Pass |
| NVNT | n20 | 5785 | Sum  | 17.155 | 29.88 | Pass |
| NVNT | n20 | 5825 | Ant1 | 12.978 | 29.88 | Pass |
| NVNT | n20 | 5825 | Ant2 | 14.729 | 29.88 | Pass |
| NVNT | n20 | 5825 | Sum  | 16.951 | 29.88 | Pass |
| NVNT | n40 | 5190 | Ant1 | 11.475 | 23.88 | Pass |
| NVNT | n40 | 5190 | Ant2 | 14.354 | 23.88 | Pass |
| NVNT | n40 | 5190 | Sum  | 16.159 | 23.88 | Pass |
| NVNT | n40 | 5230 | Ant1 | 11.509 | 23.88 | Pass |
| NVNT | n40 | 5230 | Ant2 | 13.99  | 23.88 | Pass |
| NVNT | n40 | 5230 | Sum  | 15.935 | 23.88 | Pass |
| NVNT | n40 | 5270 | Ant1 | 11.298 | 23.88 | Pass |
| NVNT | n40 | 5270 | Ant2 | 14.763 | 23.88 | Pass |
| NVNT | n40 | 5270 | Sum  | 16.378 | 23.88 | Pass |
| NVNT | n40 | 5310 | Ant1 | 11.867 | 23.88 | Pass |
| NVNT | n40 | 5310 | Ant2 | 15.525 | 23.88 | Pass |
| NVNT | n40 | 5310 | Sum  | 17.081 | 23.88 | Pass |
| NVNT | n40 | 5510 | Ant1 | 12.194 | 23.88 | Pass |
| NVNT | n40 | 5510 | Ant2 | 15.384 | 23.88 | Pass |
| NVNT | n40 | 5510 | Sum  | 17.086 | 23.88 | Pass |
| NVNT | n40 | 5590 | Ant1 | 12.573 | 23.88 | Pass |
| NVNT | n40 | 5590 | Ant2 | 15.272 | 23.88 | Pass |
| NVNT | n40 | 5590 | Sum  | 17.139 | 23.88 | Pass |
| NVNT | n40 | 5670 | Ant1 | 14.35  | 23.88 | Pass |
| NVNT | n40 | 5670 | Ant2 | 14.612 | 23.88 | Pass |
| NVNT | n40 | 5670 | Sum  | 17.493 | 23.88 | Pass |
| NVNT | n40 | 5755 | Ant1 | 13.624 | 29.88 | Pass |
| NVNT | n40 | 5755 | Ant2 | 14.743 | 29.88 | Pass |
| NVNT | n40 | 5755 | Sum  | 17.23  | 29.88 | Pass |
| NVNT | n40 | 5795 | Ant1 | 13.094 | 29.88 | Pass |
| NVNT | n40 | 5795 | Ant2 | 14.984 | 29.88 | Pass |
| NVNT | n40 | 5795 | Sum  | 17.151 | 29.88 | Pass |

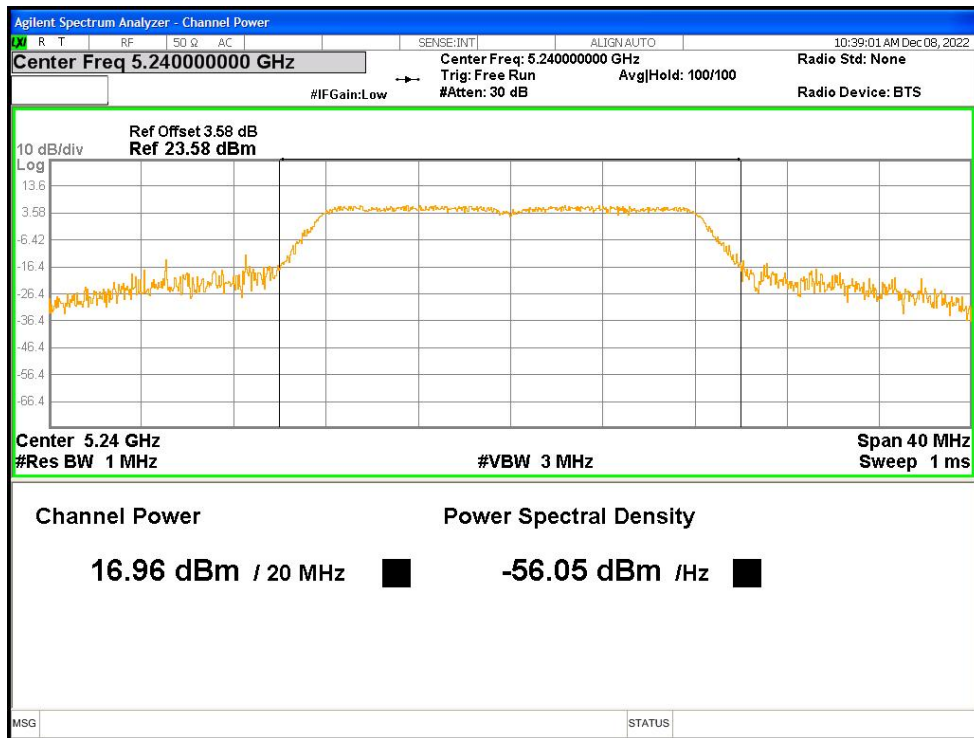
### Power NVNT a 5180MHz Ant1



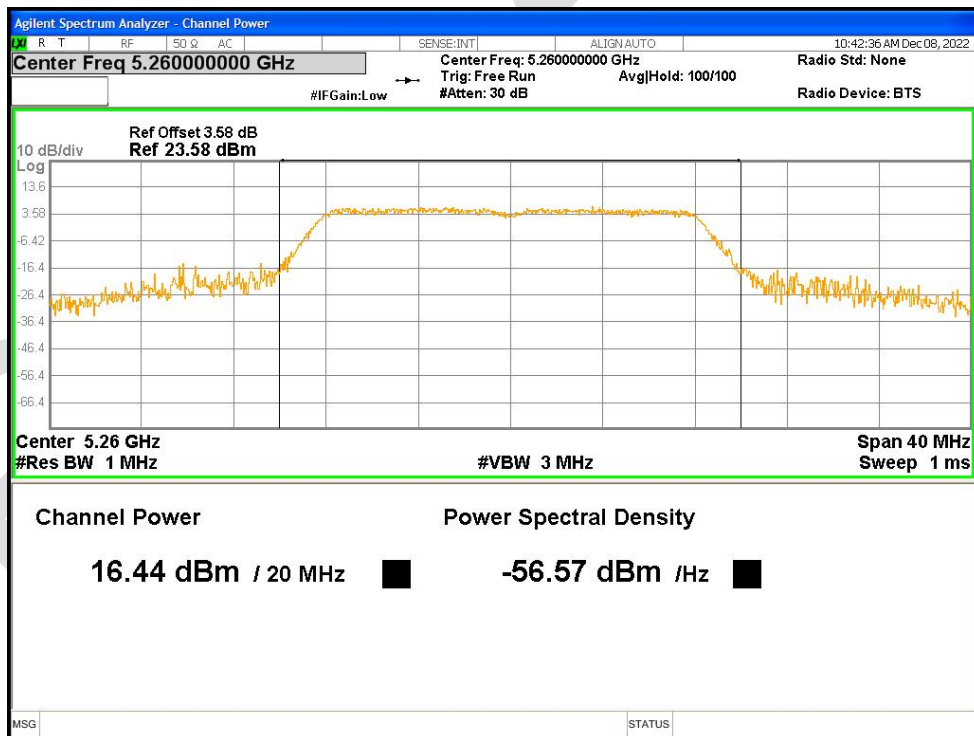
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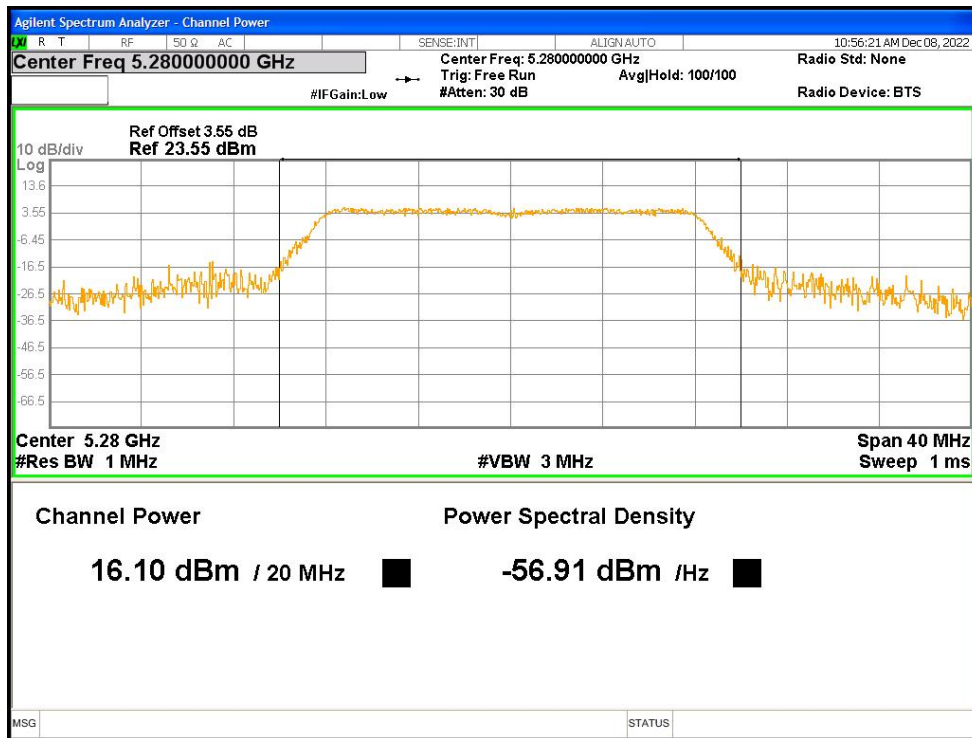
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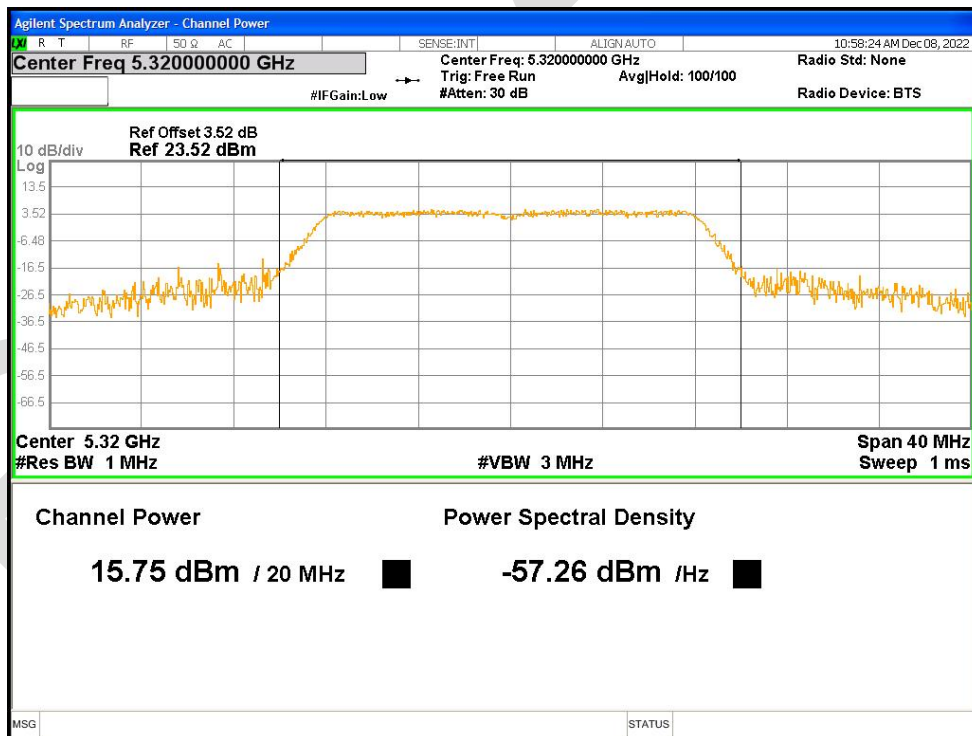
Power NVNT a 5260MHz Ant1



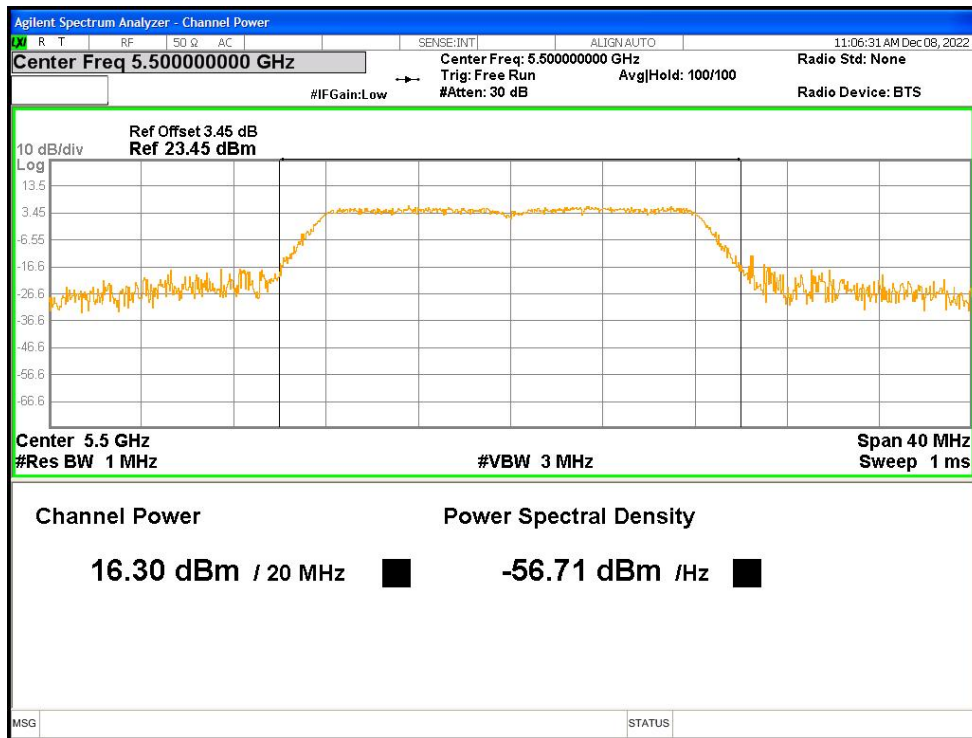
Power NVNT a 5280MHz Ant1



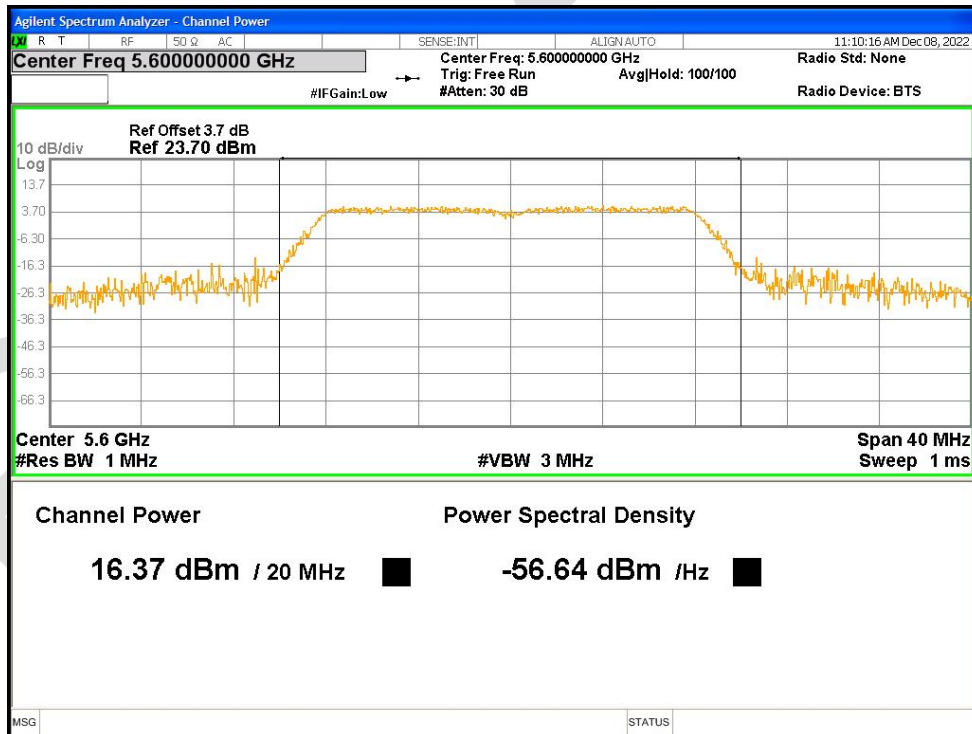
Power NVNT a 5320MHz Ant1



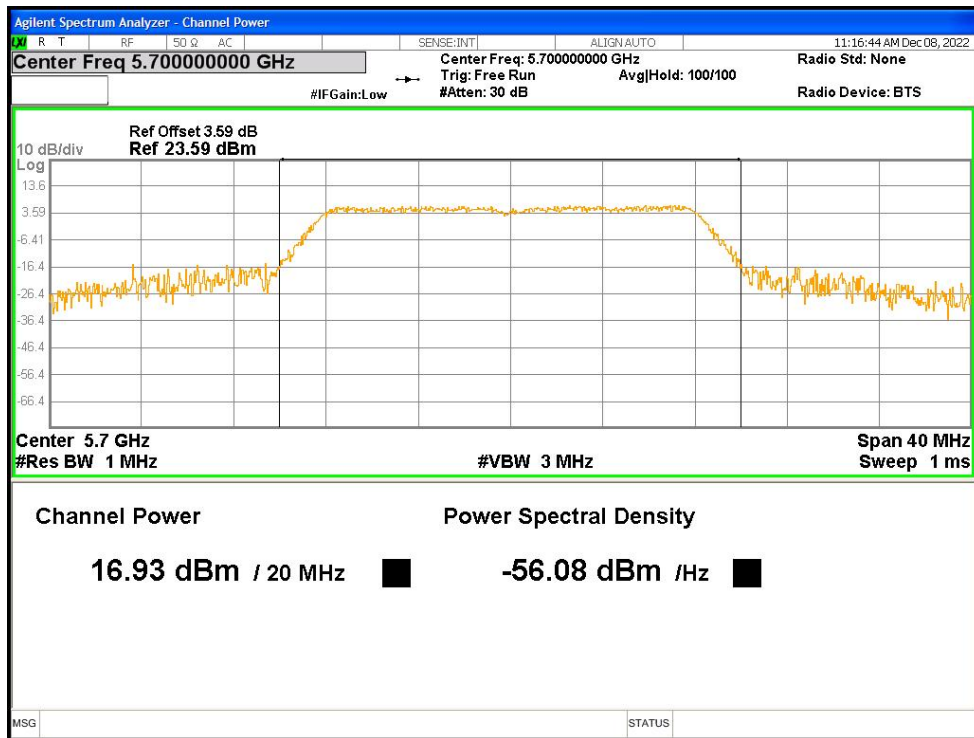
Power NVNT a 5500MHz Ant1



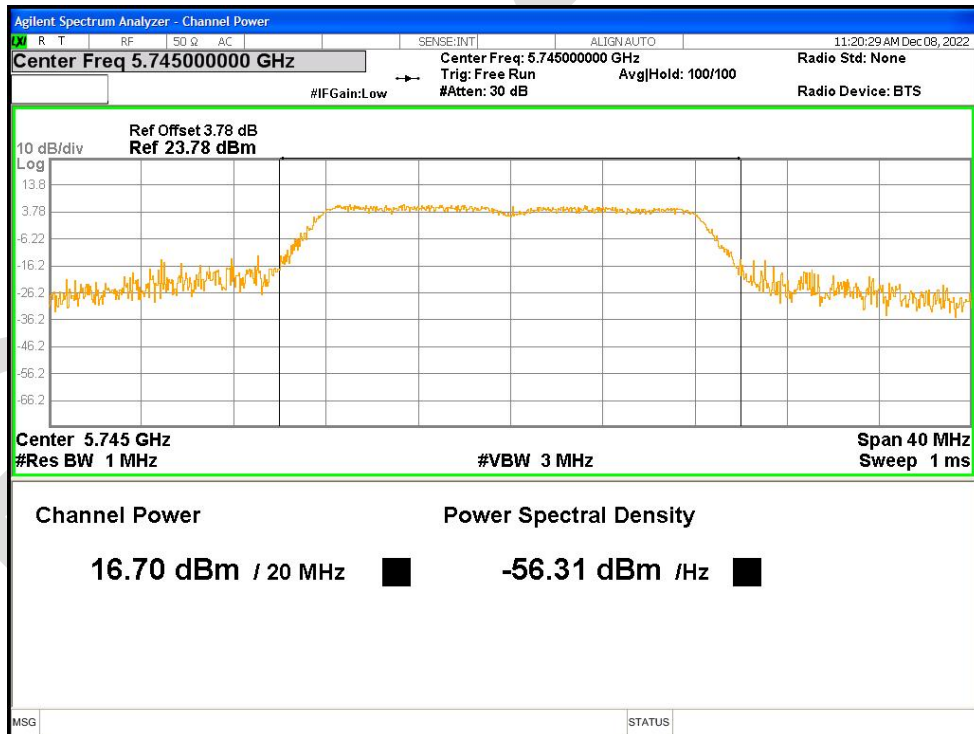
Power NVNT a 5600MHz Ant1



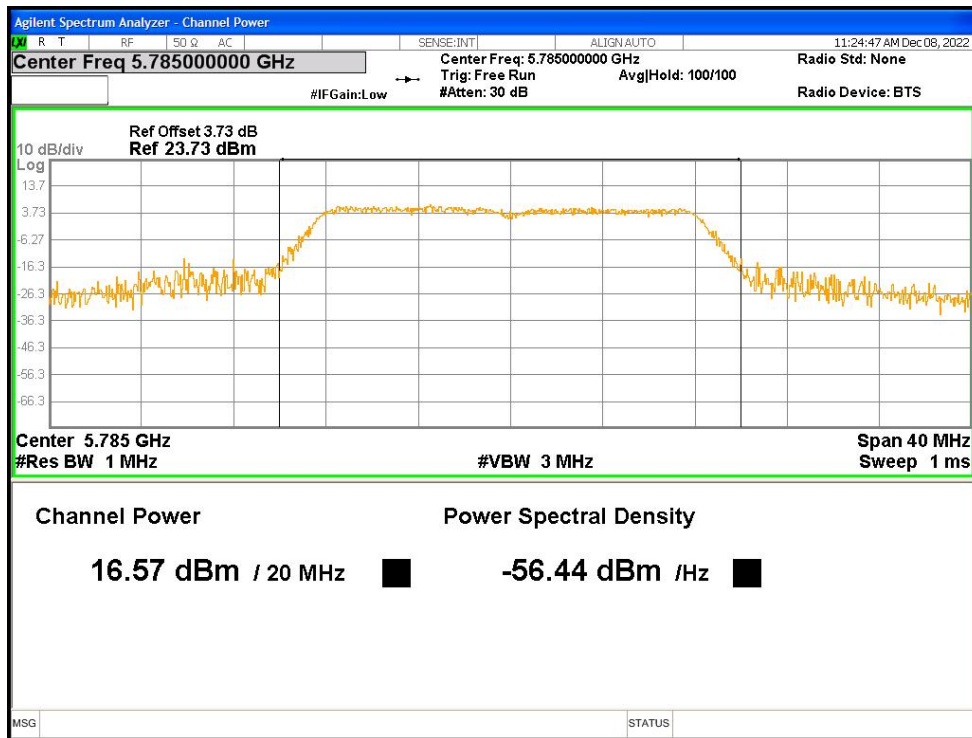
Power NVNT a 5700MHz Ant1



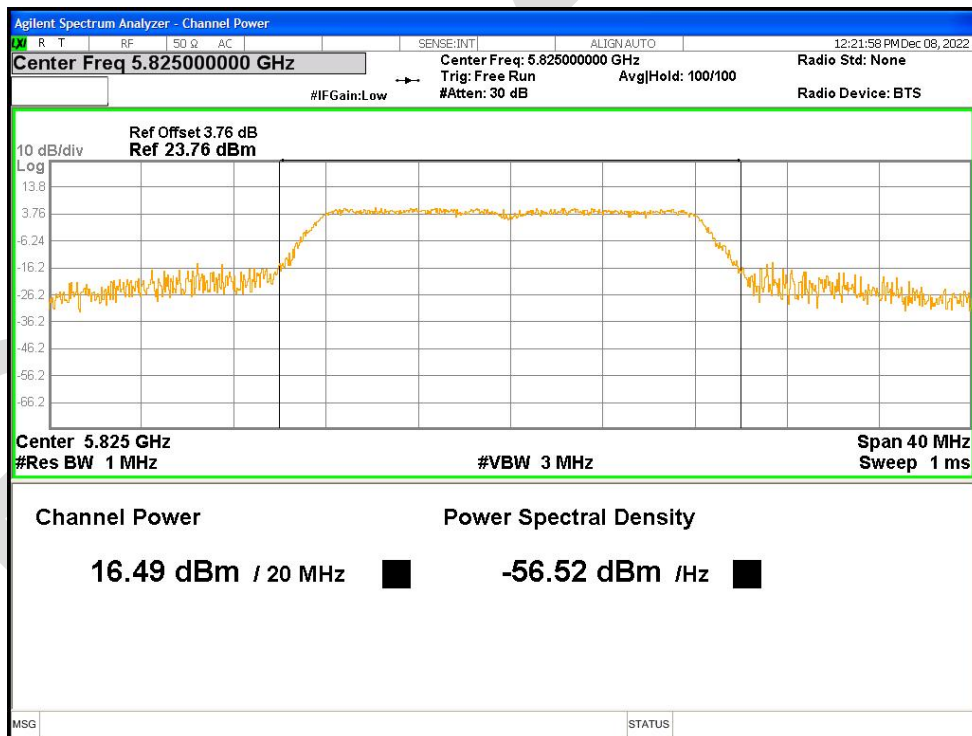
Power NVNT a 5745MHz Ant1



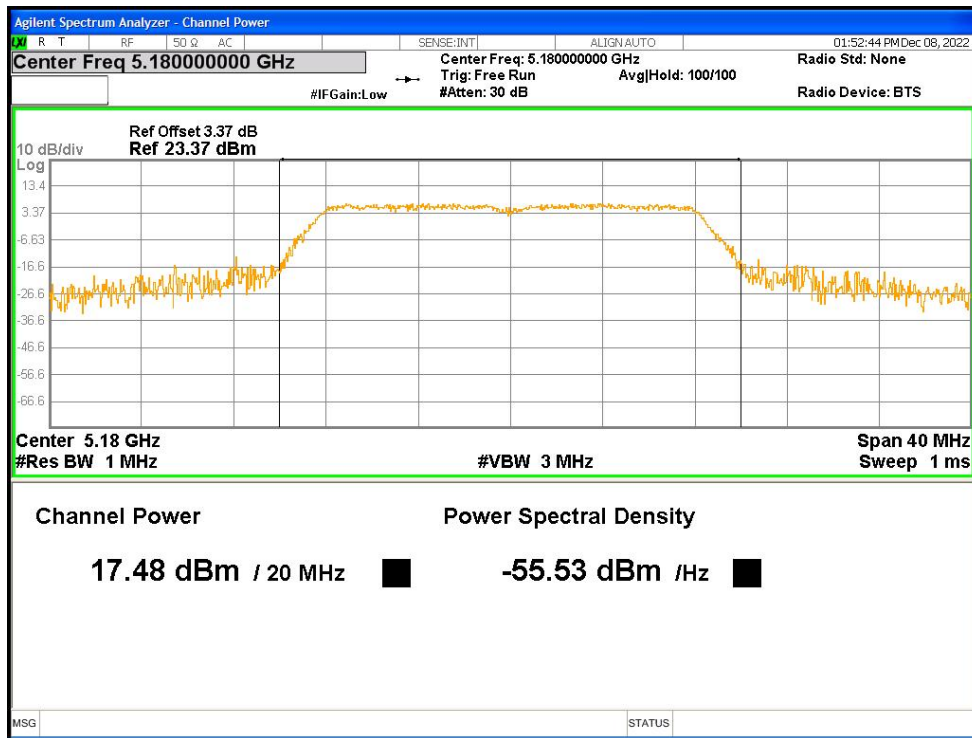
Power NVNT a 5785MHz Ant1



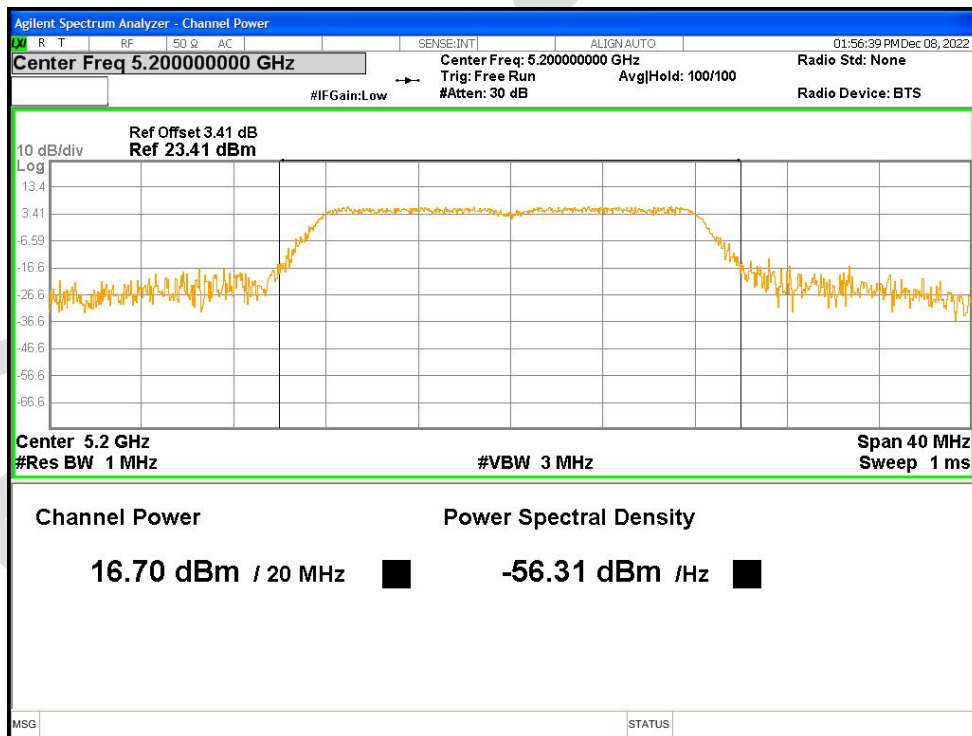
Power NVNT a 5825MHz Ant1



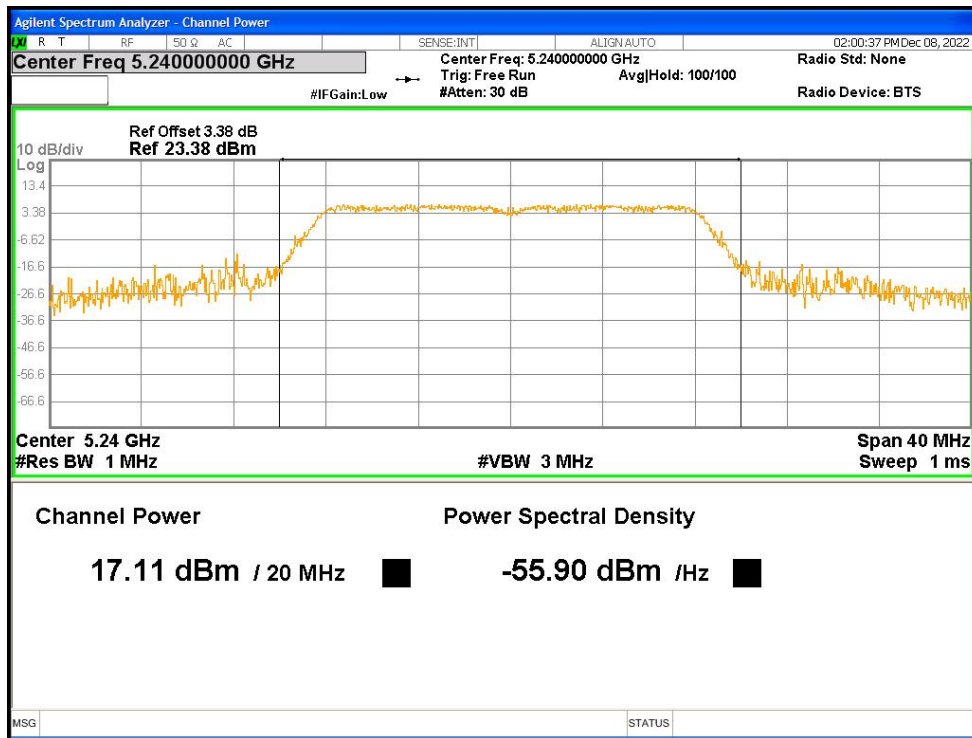
Power NVNT a 5180MHz Ant2



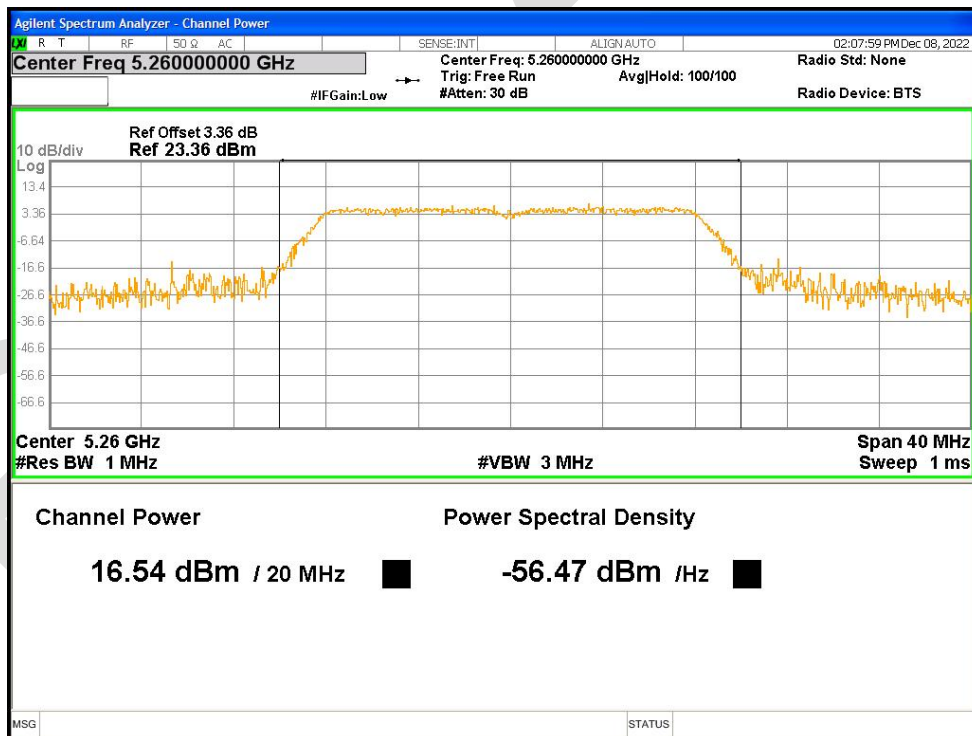
Power NVNT a 5200MHz Ant2



Power NVNT a 5240MHz Ant2



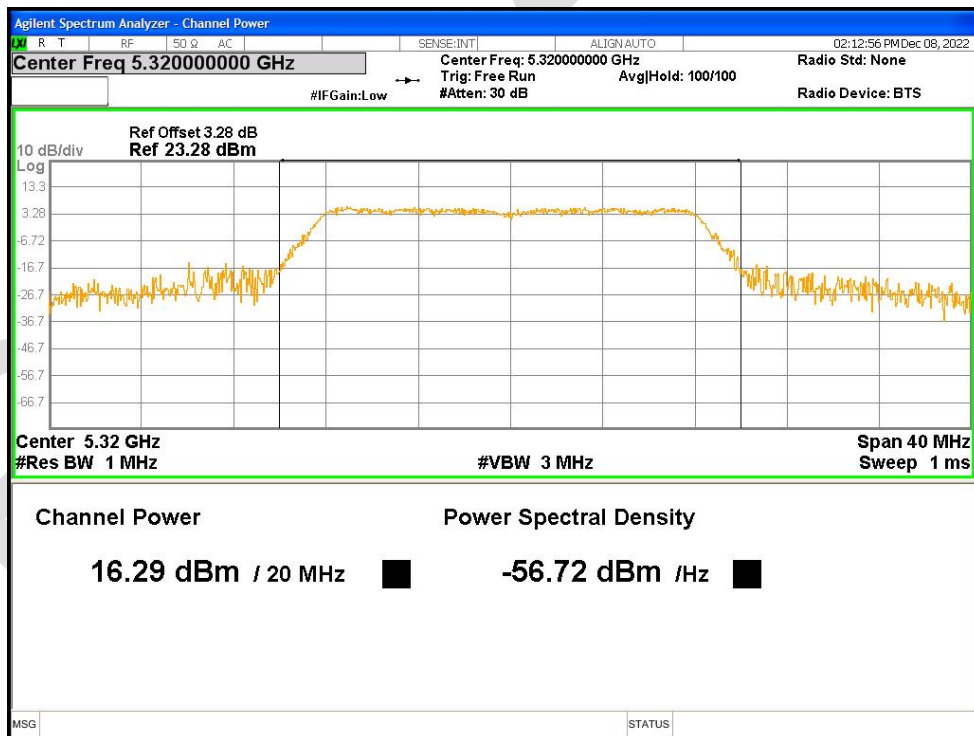
Power NVNT a 5260MHz Ant2



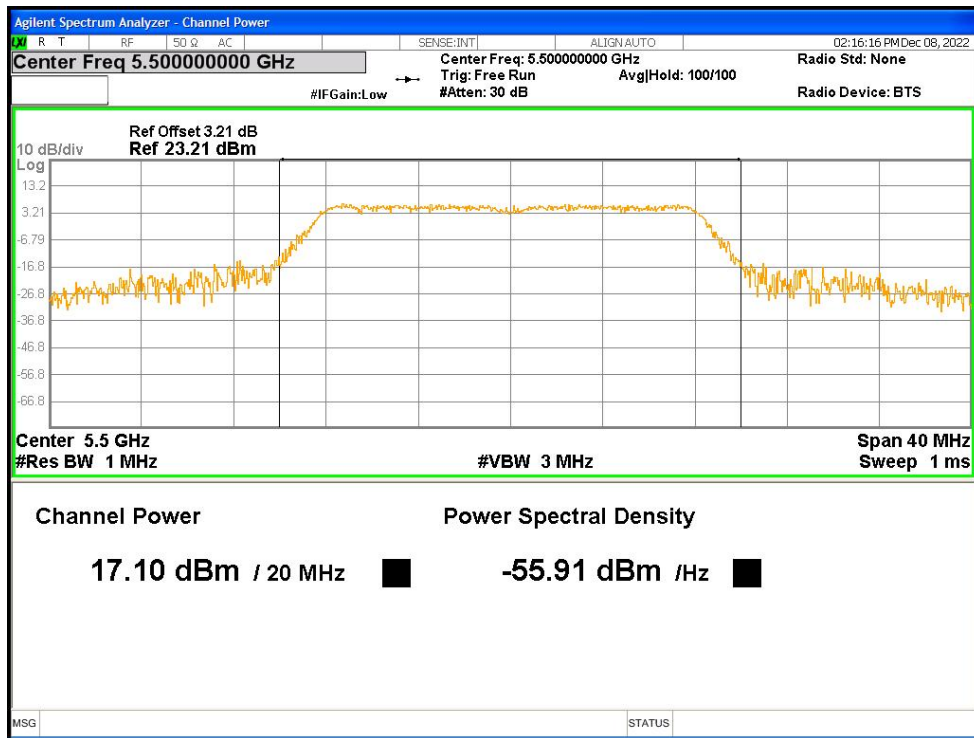
Power NVNT a 5280MHz Ant2



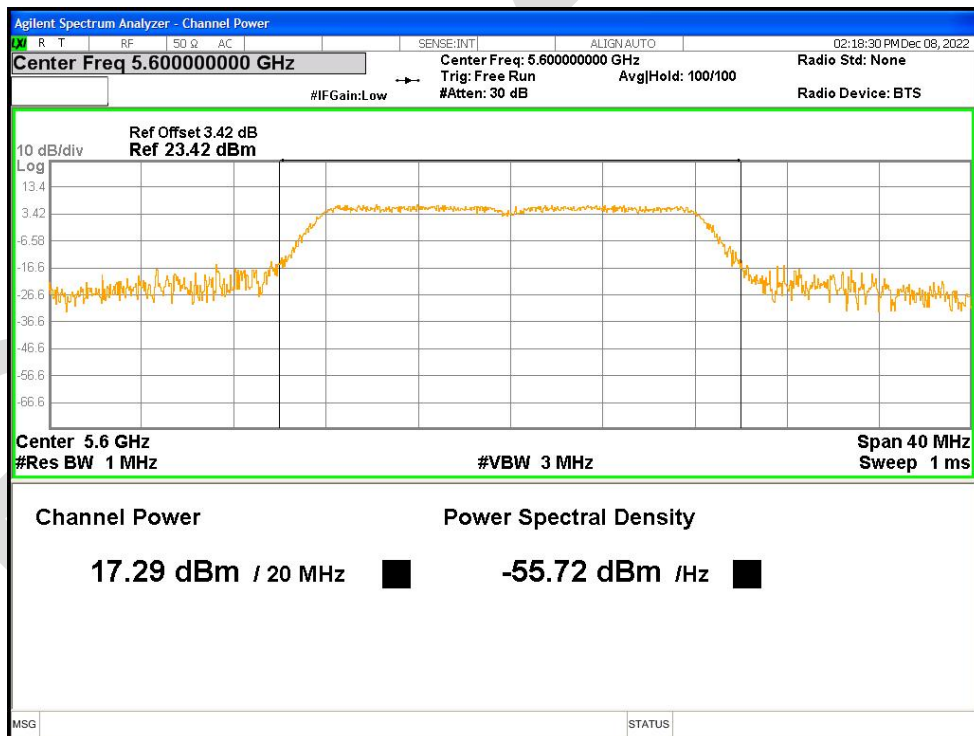
Power NVNT a 5320MHz Ant2



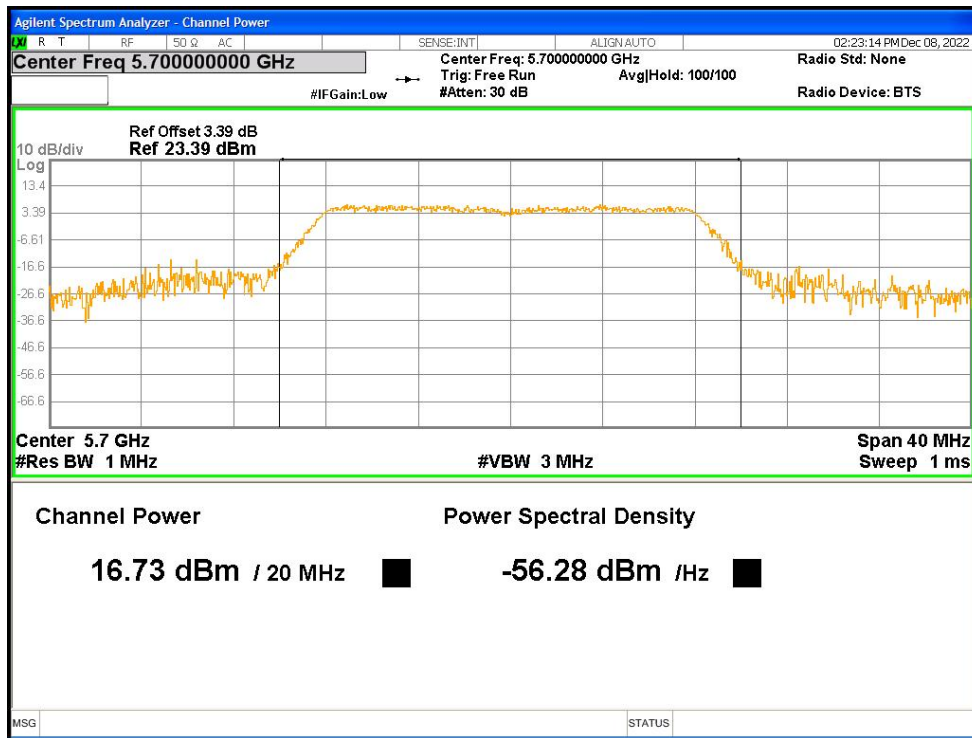
Power NVNT a 5500MHz Ant2



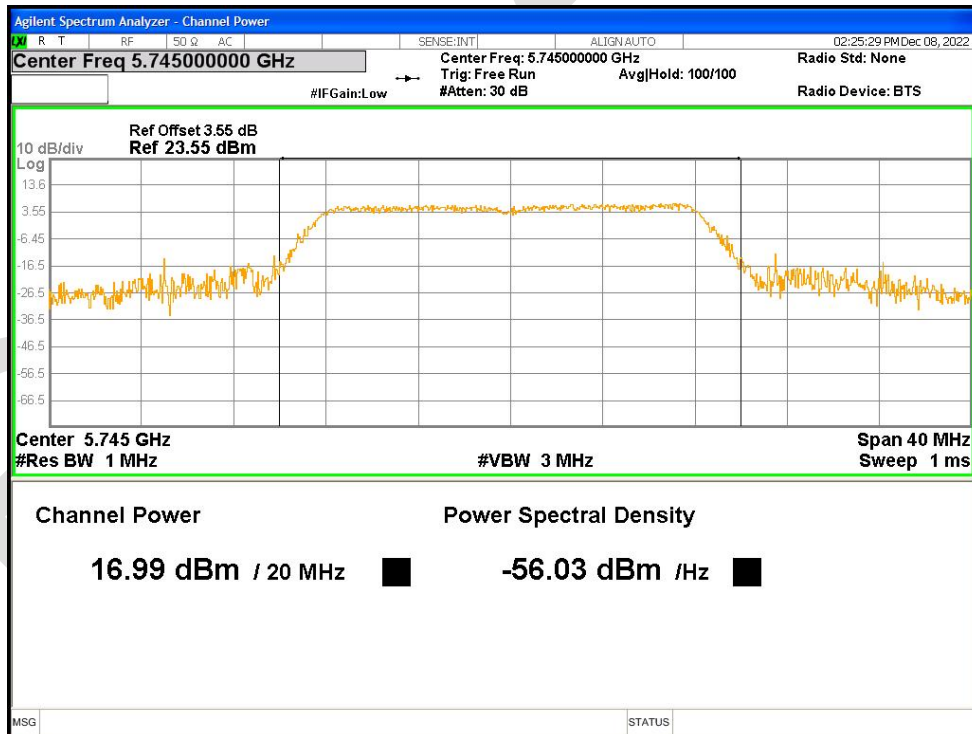
Power NVNT a 5600MHz Ant2



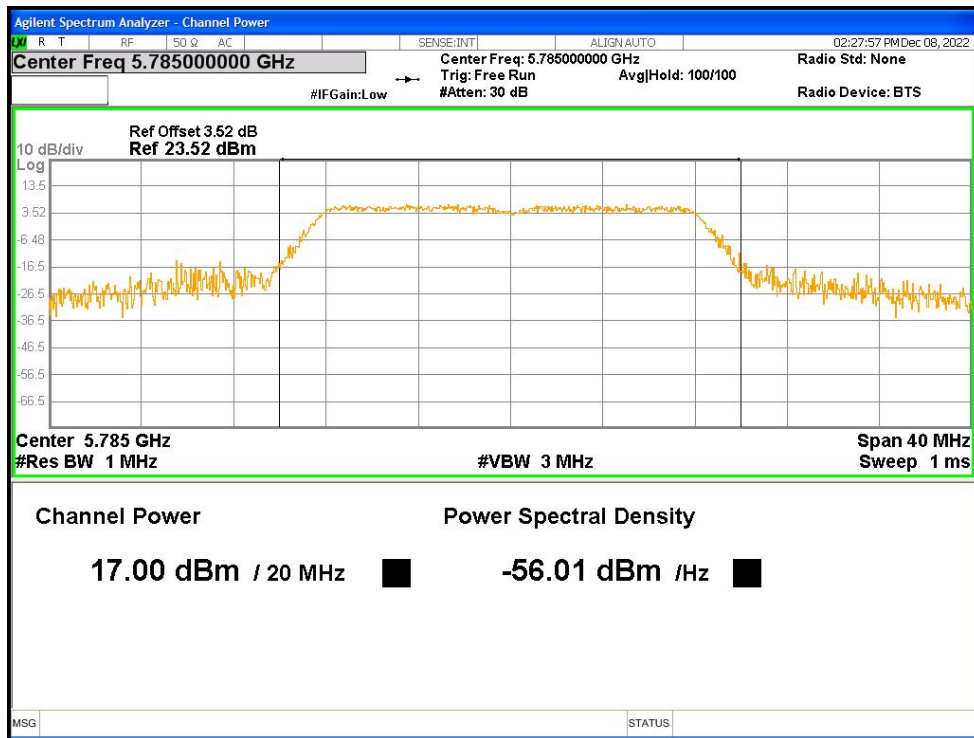
Power NVNT a 5700MHz Ant2



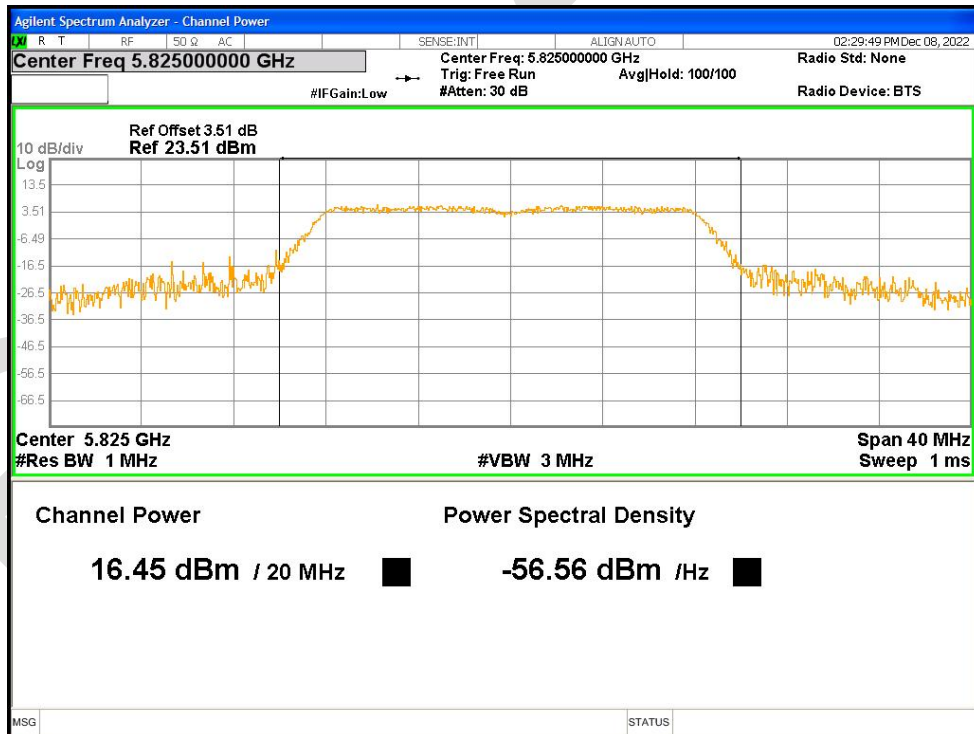
Power NVNT a 5745MHz Ant2



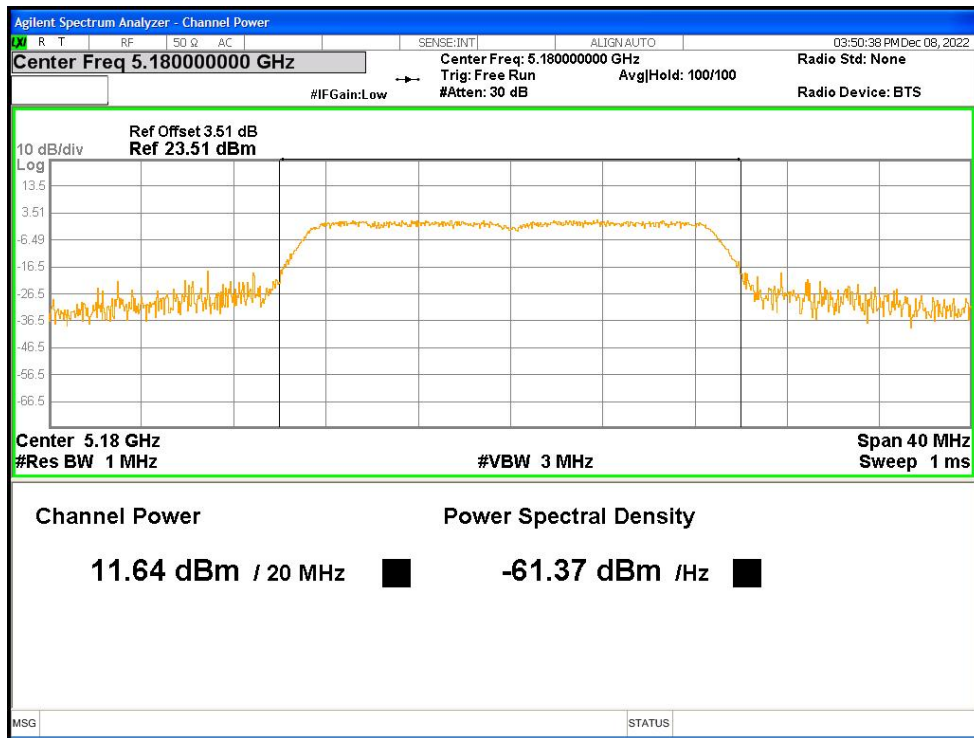
Power NVNT a 5785MHz Ant2



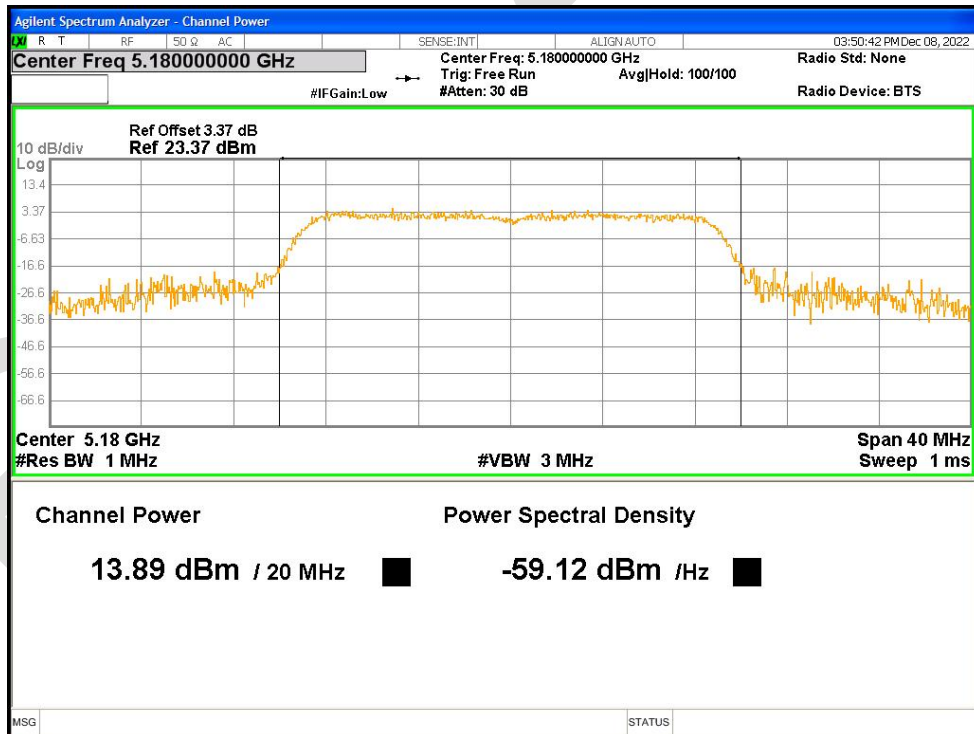
Power NVNT a 5825MHz Ant2



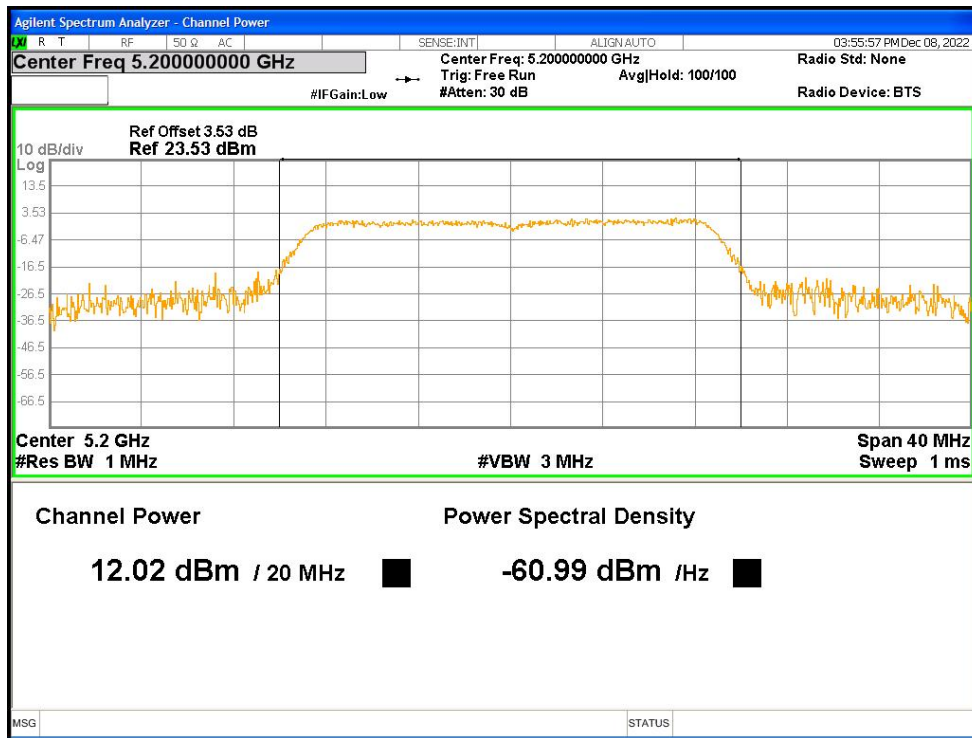
Power NVNT ac20 5180MHz Ant1



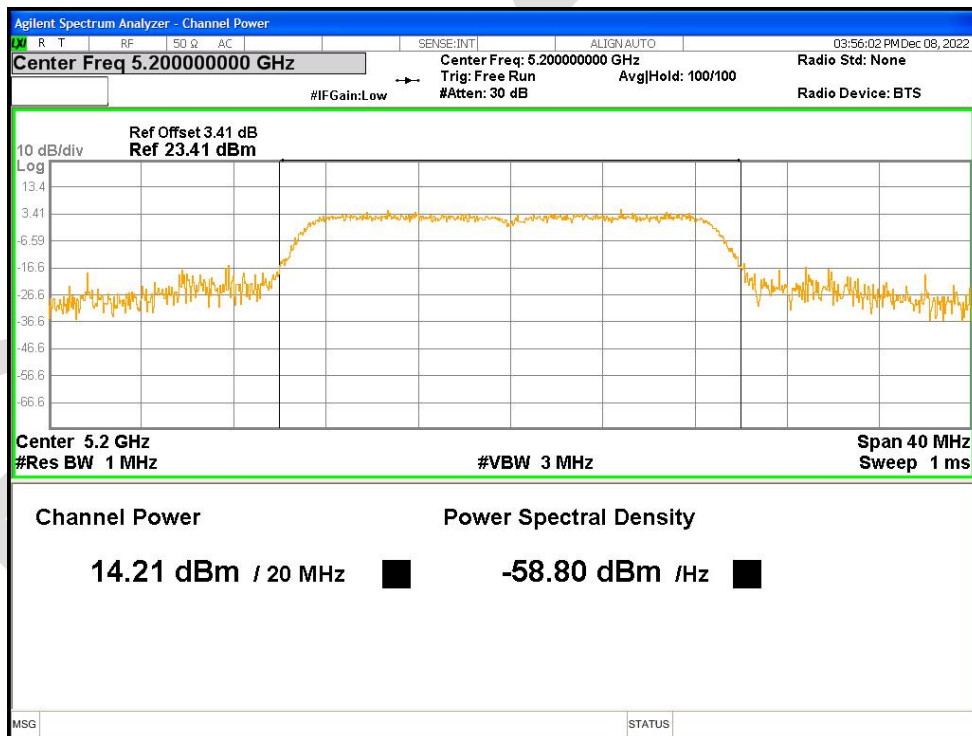
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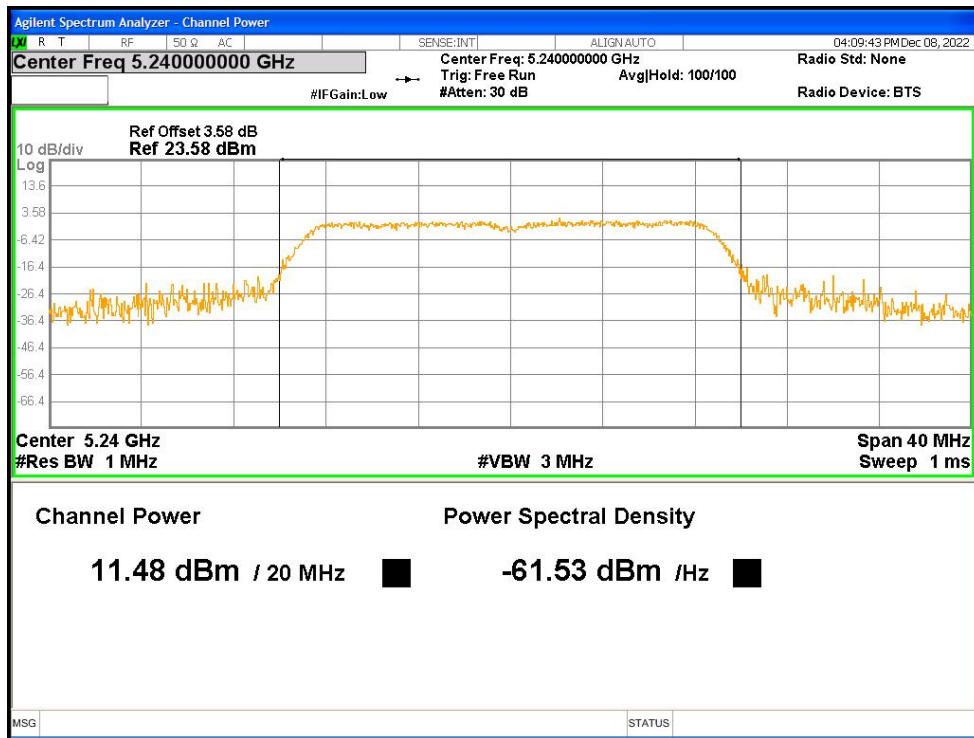
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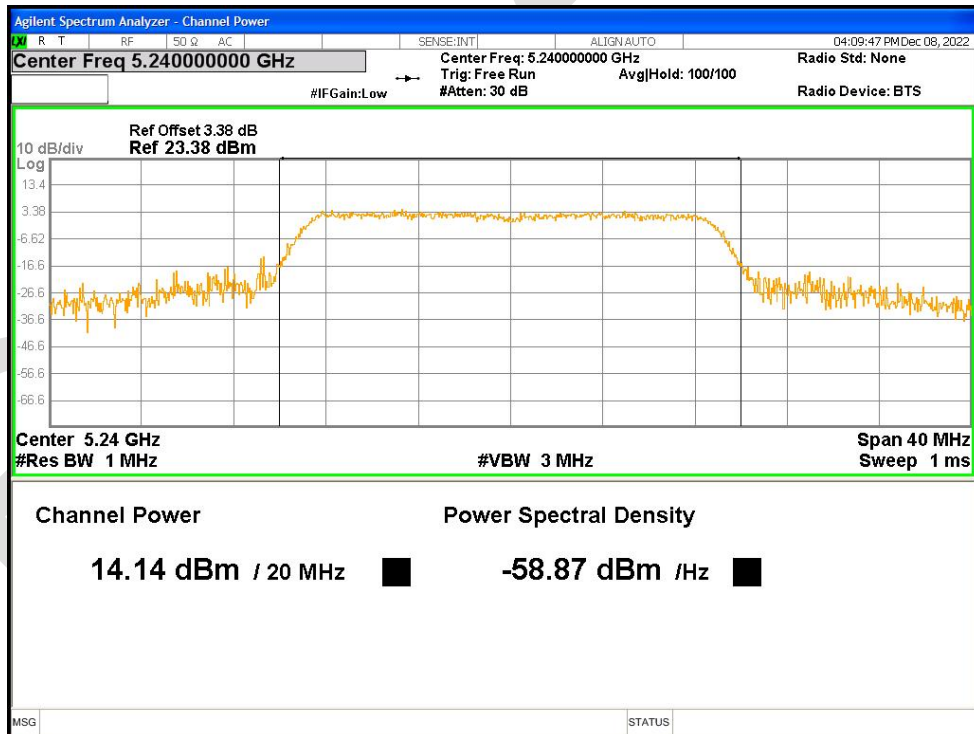
Power NVNT ac20 5200MHz Ant2



Power NVNT ac20 5240MHz Ant1



Power NVNT ac20 5240MHz Ant2



Power NVNT ac20 5260MHz Ant1