



# Appendix A2: Transmitter Output Power

## 1 Result Table

### 1.1 Channel Power, Total

NOTE 1: If applicable, the EIRP [W] =  $10^{((\text{Channel Power [dBm]} + \text{Antenna Gain [dBi]} / 10 - 3)}$ , and the ERP [W] = EIRP [W] / 1.64.

NOTE 2: When the EUT is put into service, the practical maximum antenna gain may exceed the value as described below, and if exceed, the combination of the practical output power and the practical antenna gain should NOT exceed the required ERP/EIRP limit.

| EUT Conf. | Channel Power [dBm]         | Total Channel Power [W] | Antenna Gain [dBi] | EIRP [W] | ERP [W] | Verdict |
|-----------|-----------------------------|-------------------------|--------------------|----------|---------|---------|
| 5M_B      | 19.66@Ant3,4                | 0.185                   | 3                  | ---      | ---     | Pass    |
| 5M_M      | 20.25@Ant3,4                | 0.212                   | 3                  | ---      | ---     | Pass    |
| 5M_T      | 19.56@Ant3,4                | 0.181                   | 3                  | ---      | ---     | Pass    |
| 10M_B     | 19.75@Ant3,4                | 0.189                   | 3                  | ---      | ---     | Pass    |
| 10M_M     | 20.21@Ant3,4                | 0.210                   | 3                  | ---      | ---     | Pass    |
| 10M_T     | 19.47@Ant3,4                | 0.177                   | 3                  | ---      | ---     | Pass    |
| 15M_B     | 19.92@Ant3,4                | 0.196                   | 3                  | ---      | ---     | Pass    |
| 15M_M     | 20.33@Ant3,4                | 0.216                   | 3                  | ---      | ---     | Pass    |
| 15M_T     | 19.59@Ant3,4                | 0.182                   | 3                  | ---      | ---     | Pass    |
| 20M_B     | 19.72@Ant3,4                | 0.188                   | 3                  | ---      | ---     | Pass    |
| 20M_M     | 20.08@Ant3,4                | 0.204                   | 3                  | ---      | ---     | Pass    |
| 20M_T     | 19.4@Ant3,4                 | 0.174                   | 3                  | ---      | ---     | Pass    |
| 1U_B      | 20.05@Ant3                  | 0.101                   | 3                  | ---      | ---     | Pass    |
| 1U_M      | 20.01@Ant3                  | 0.100                   | 3                  | ---      | ---     | Pass    |
| 1U_T      | 20.12@Ant3                  | 0.103                   | 3                  | ---      | ---     | Pass    |
| 1U1L5M_B  | 16.51@Ant3,<br>16.53@Ant3,4 | 0.135                   | 3                  | ---      | ---     | Pass    |
| 1U1L5M_M  | 16.54@Ant3,<br>16.44@Ant3,4 | 0.133                   | 3                  | ---      | ---     | Pass    |
| 1U1L5M_T  | 16.50@Ant3,<br>16.64@Ant3,4 | 0.137                   | 3                  | ---      | ---     | Pass    |
| 1U1L10M_B | 16.54@Ant3,<br>16.57@Ant3,4 | 0.136                   | 3                  | ---      | ---     | Pass    |
| 1U1L10M_M | 16.48@Ant3,<br>16.61@Ant3,4 | 0.136                   | 3                  | ---      | ---     | Pass    |
| 1U1L10M_T | 16.46@Ant3,<br>16.53@Ant3,4 | 0.134                   | 3                  | ---      | ---     | Pass    |
| 1U1L15M_B | 16.57@Ant3,<br>16.51@Ant3,4 | 0.135                   | 3                  | ---      | ---     | Pass    |
| 1U1L15M_M | 16.45@Ant3,                 | 0.135                   | 3                  | ---      | ---     | Pass    |

| EUT Conf. | Channel Power [dBm]         | Total Channel Power [W] | Antenna Gain [dBi] | EIRP [W] | ERP [W] | Verdict |
|-----------|-----------------------------|-------------------------|--------------------|----------|---------|---------|
|           | 16.57@Ant3,4                |                         |                    |          |         |         |
| 1U1L15M_T | 16.44@Ant3,<br>16.50@Ant3,4 | 0.133                   | 3                  | ---      | ---     | Pass    |

## 1.2 Power Spectral Density

NOTE 1: If applicable, the EIRP [W/MHz] =  $10^{((\text{Power Spectral Density [dBm/MHz]} + \text{Antenna Gain [dBi]}) / 10 - 3)}$ , and the ERP [W/MHz] = EIRP [W/MHz] / 1.64.

NOTE 2: When the EUT is put into service, the practical maximum antenna gain may exceed the value as described below, and if exceed, the combination of the practical output power and the practical antenna gain should NOT exceed the required EIRP limit.

| EUT Conf. | Channel Power Spectral Density [dBm/MHz] | Total Channel PSD [dBm/MHz] | Antenna Gain [dBi] | EIRP [W/MHz] | Verdict |
|-----------|------------------------------------------|-----------------------------|--------------------|--------------|---------|
| 5M_B      | 13.65                                    | 16.65                       | 3                  | 0.092        | Pass    |
| 5M_M      | 14.15                                    | 17.15                       | 3                  | 0.104        | Pass    |
| 5M_T      | 13.5                                     | 16.5                        | 3                  | 0.089        | Pass    |
| 20M_B     | 7.61                                     | 10.61                       | 3                  | 0.023        | Pass    |
| 20M_M     | 7.99                                     | 10.99                       | 3                  | 0.025        | Pass    |
| 20M_T     | 7.79                                     | 10.79                       | 3                  | 0.024        | Pass    |
| 1U_B      | 15.00                                    | 15.00                       | 3                  | 0.063        | Pass    |
| 1U_M      | 14.95                                    | 14.95                       | 3                  | 0.062        | Pass    |
| 1U_T      | 15.12                                    | 15.12                       | 3                  | 0.065        | Pass    |

## 1.3 Peak-to-Average Ratio

| EUT Conf. | Peak-to-Average Ratio [dB] | Verdict |
|-----------|----------------------------|---------|
| 5M_B      | 7.36                       | Pass    |
| 5M_M      | 7.36                       | Pass    |
| 5M_T      | 7.33                       | Pass    |
| 20M_B     | 7.22                       | Pass    |
| 20M_M     | 7.11                       | Pass    |
| 20M_T     | 7.15                       | Pass    |
| 1U_B      | 7.37                       | Pass    |
| 1U_M      | 7.40                       | Pass    |
| 1U_T      | 7.31                       | Pass    |

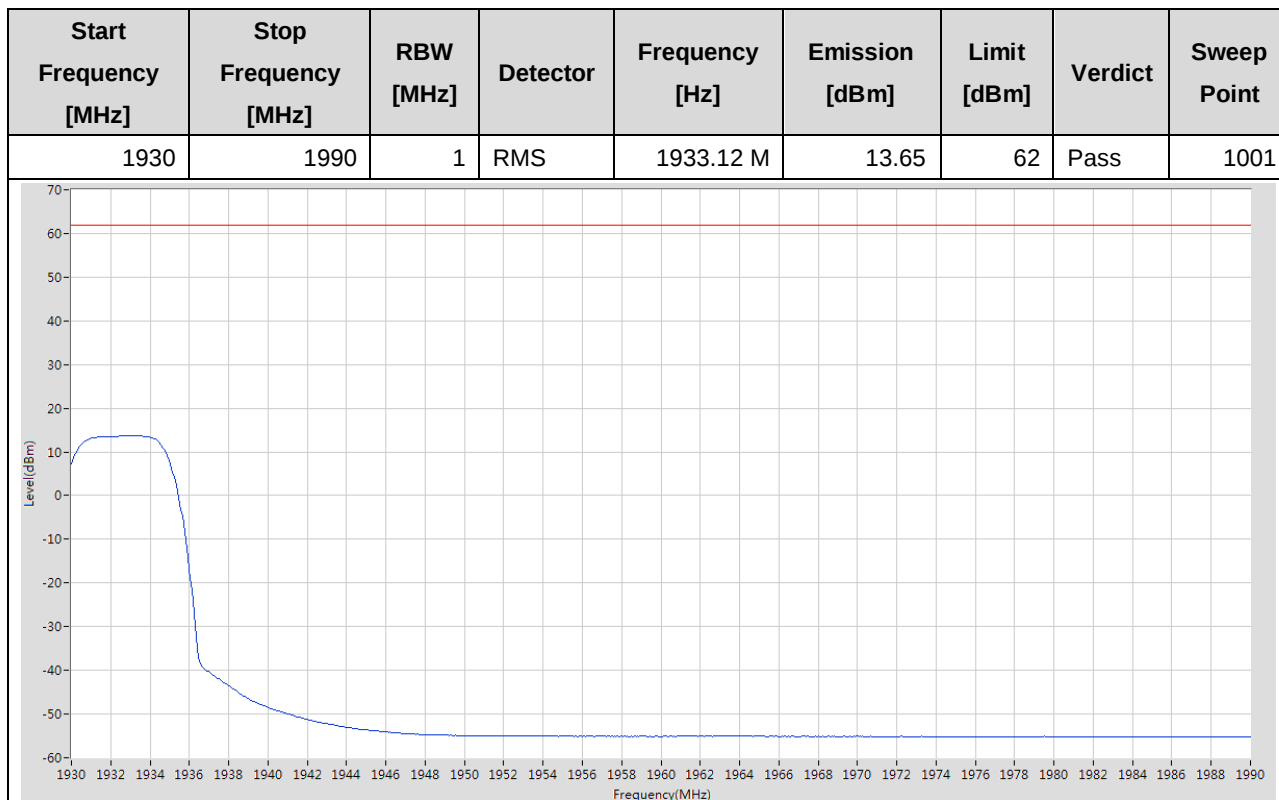


## 2 Test Plot

NOTE: Only the test plots for the measurements of Spectral Density and Peak-to-Average Ratio are supplied.

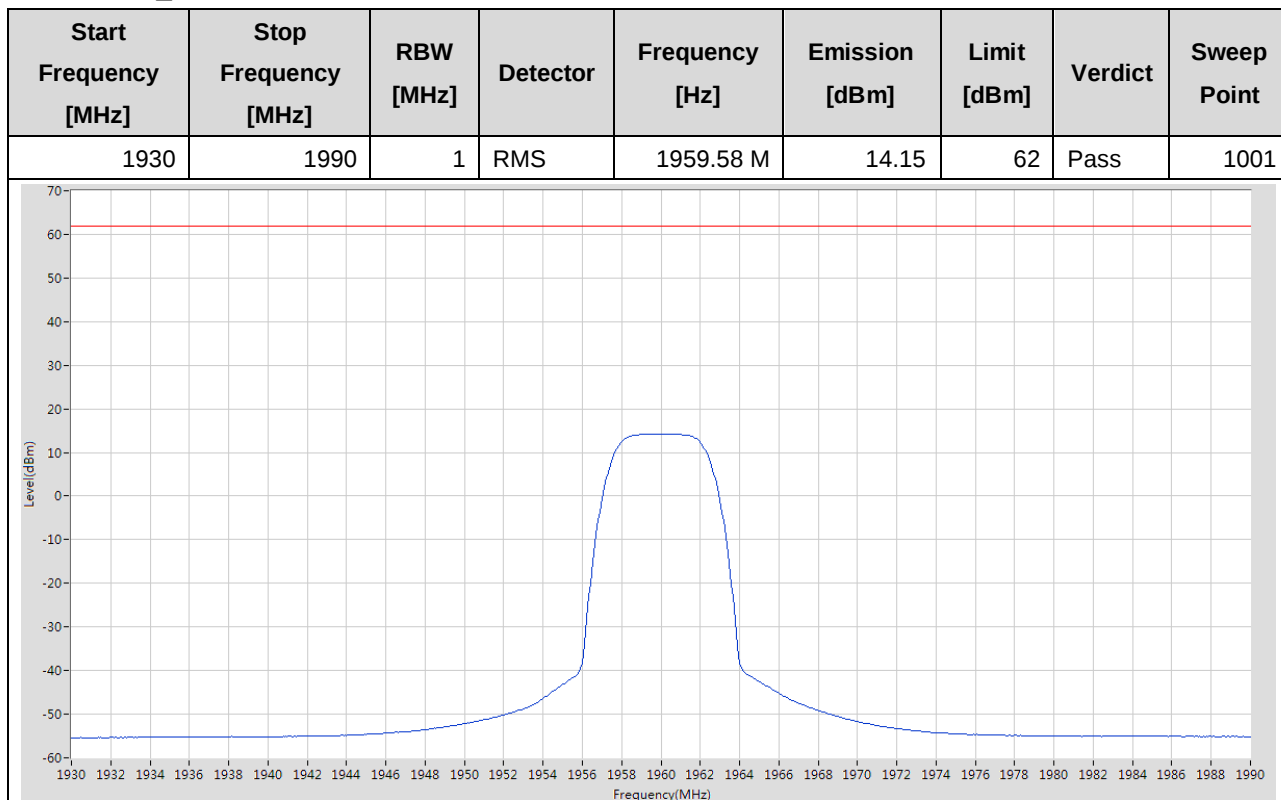
### 2.1 Power Spectral Density

#### 2.1.1 5M\_B



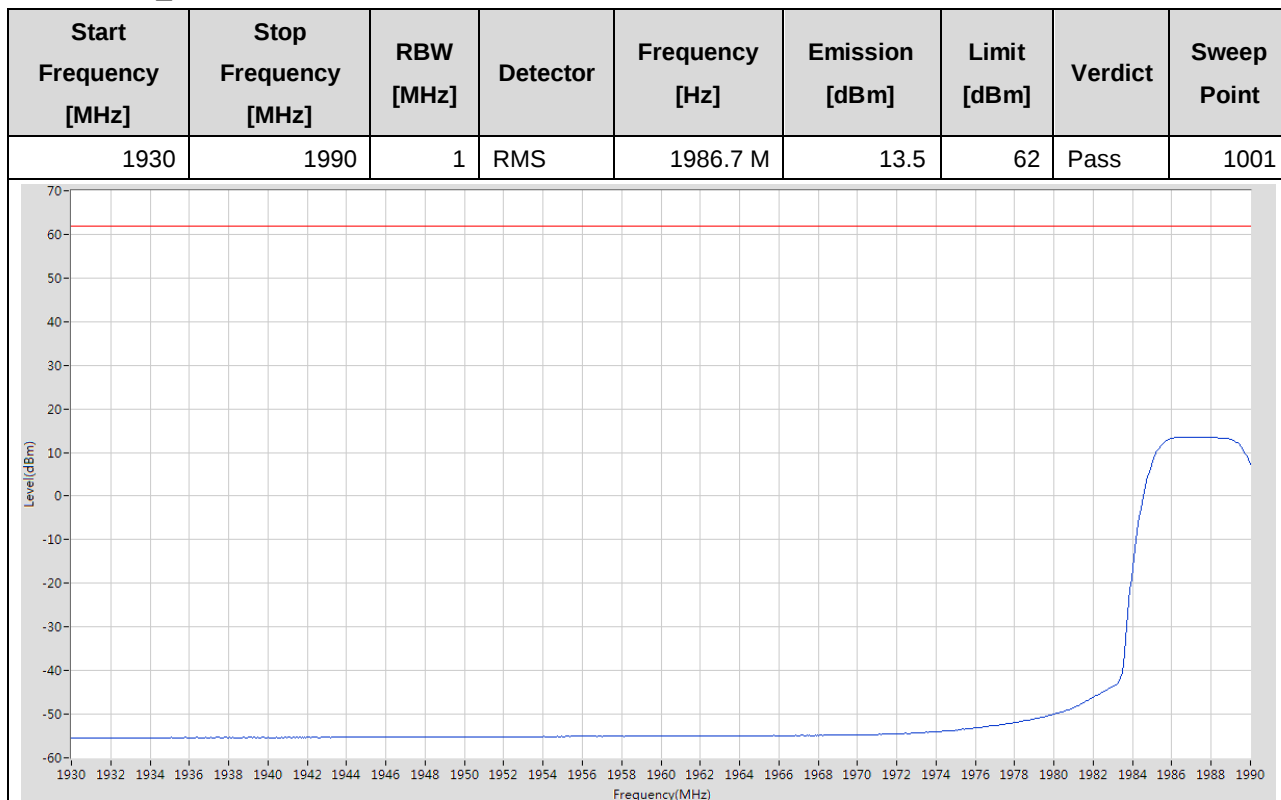


## 2.1.2 5M\_M

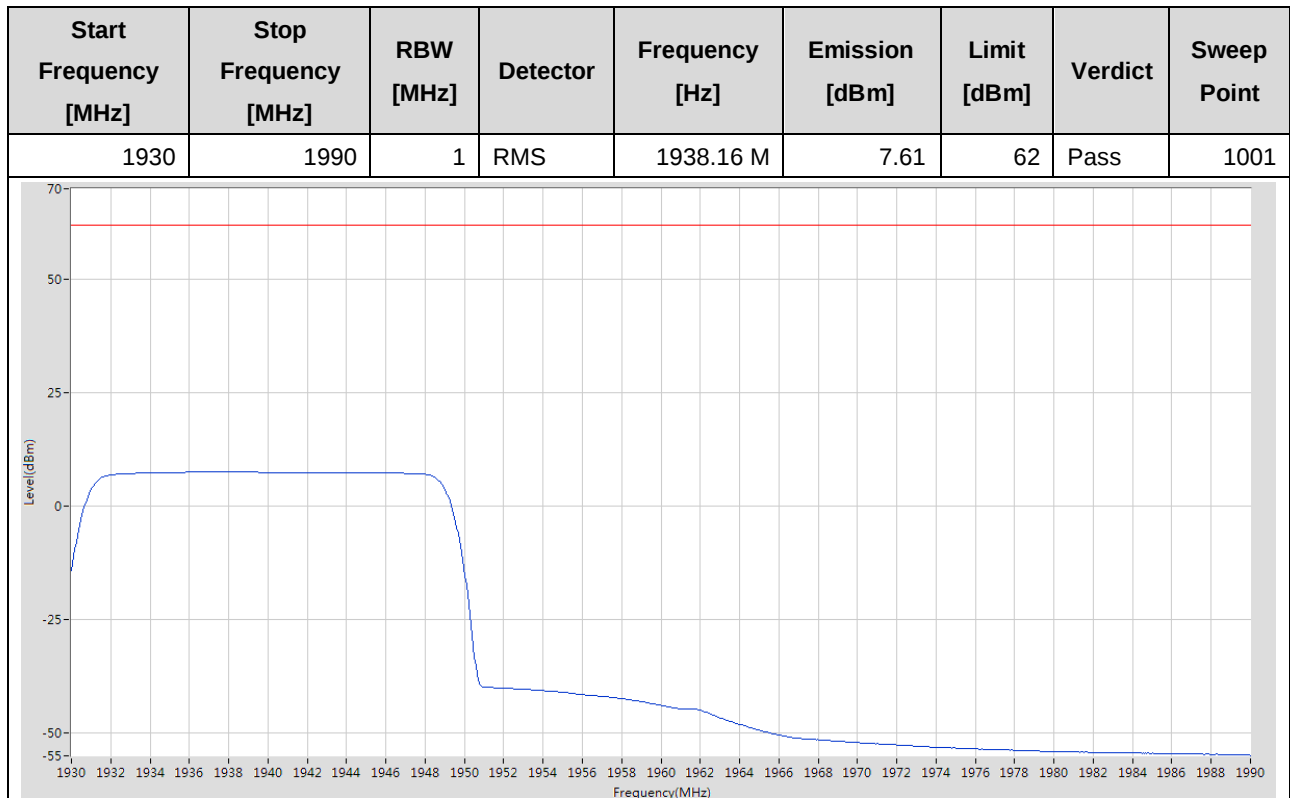




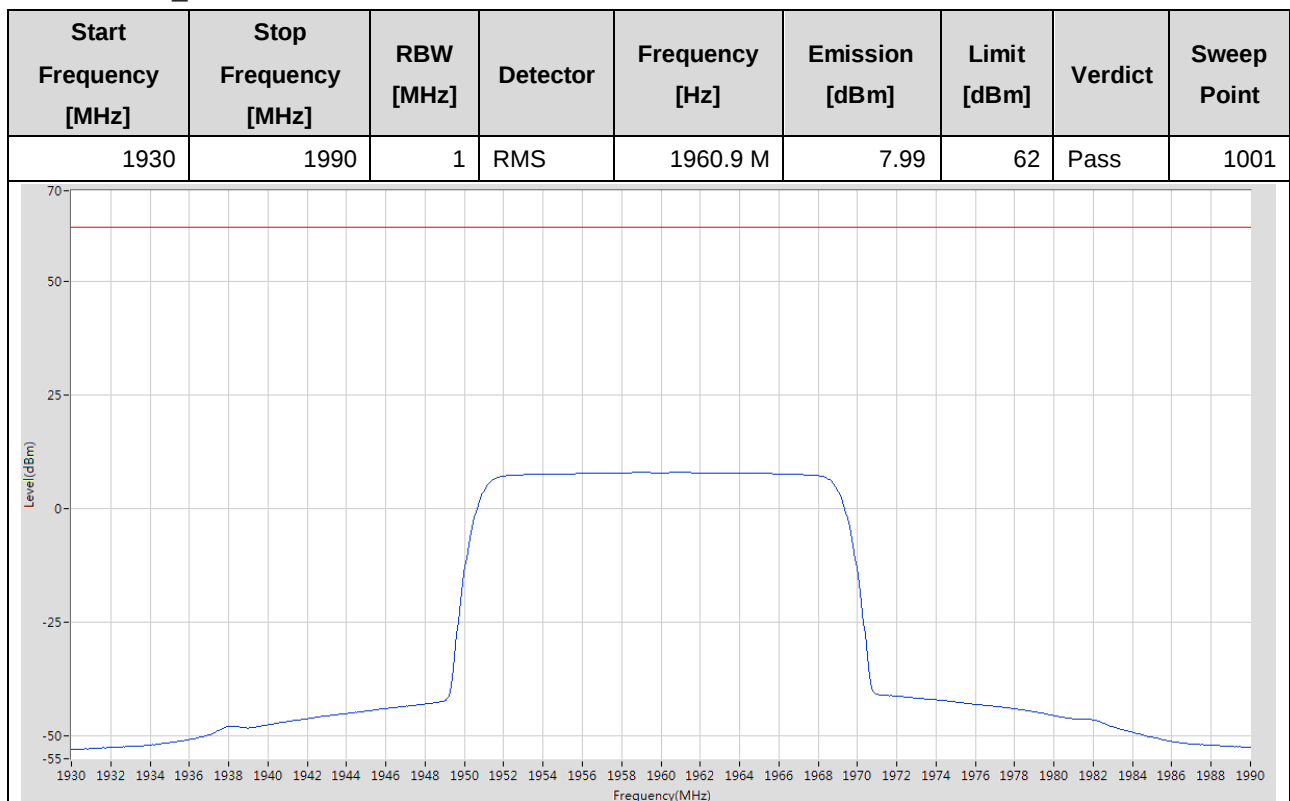
### 2.1.3 5M\_T



#### 2.1.4 20M\_B

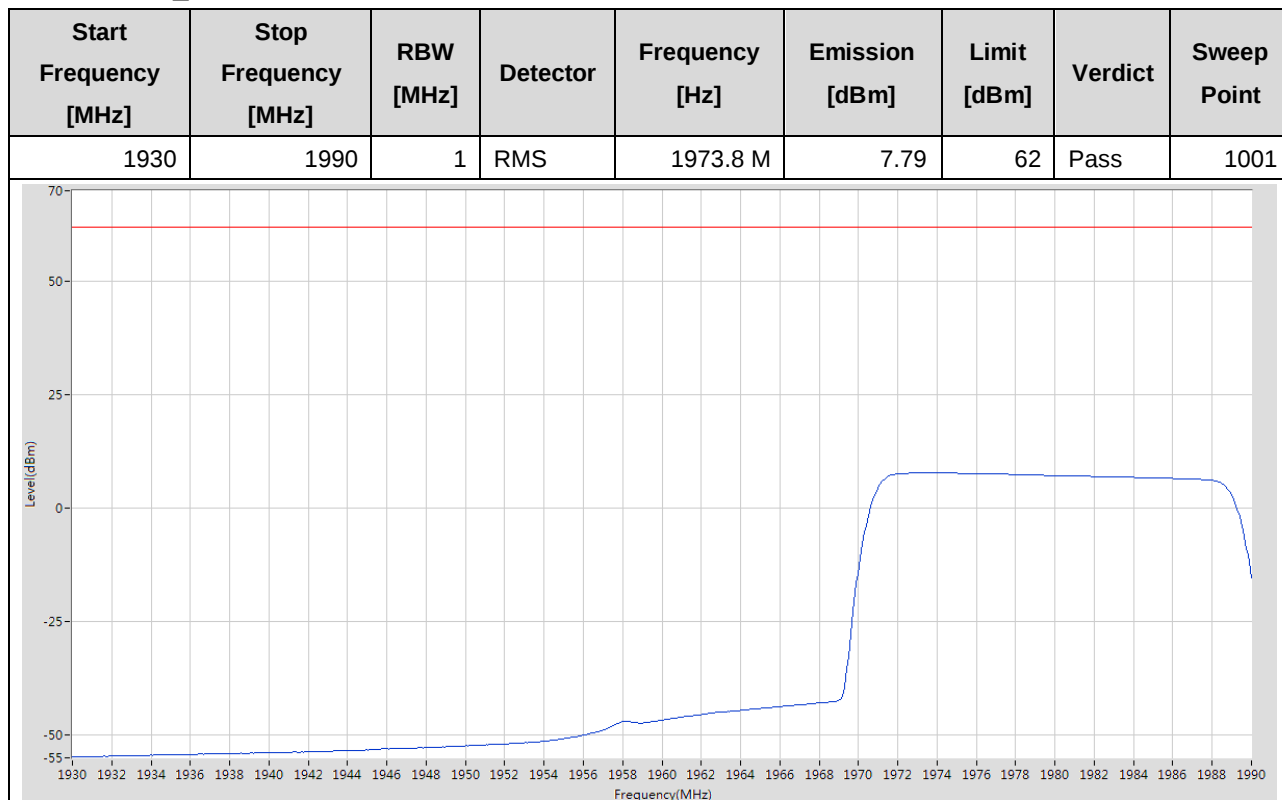


#### 2.1.5 20M\_M



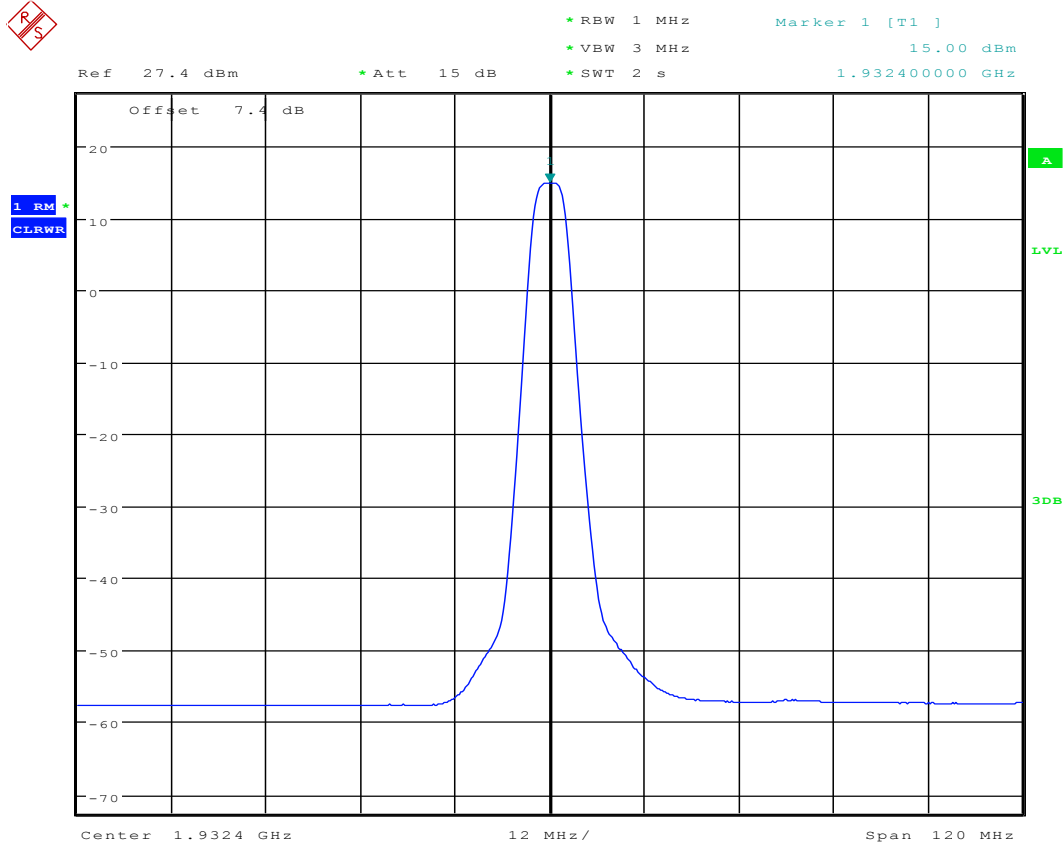


## 2.1.6 20M\_T





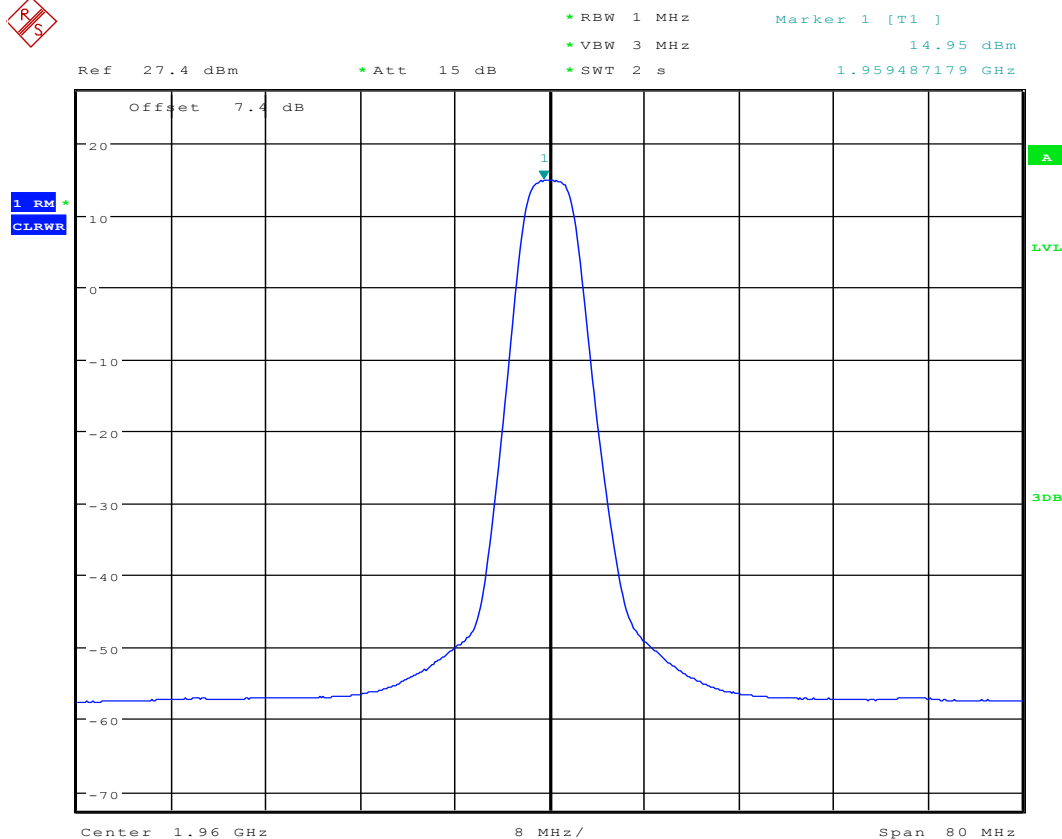
## 2.1.7 1U\_B



Date: 5.NOV.2015 19:16:03



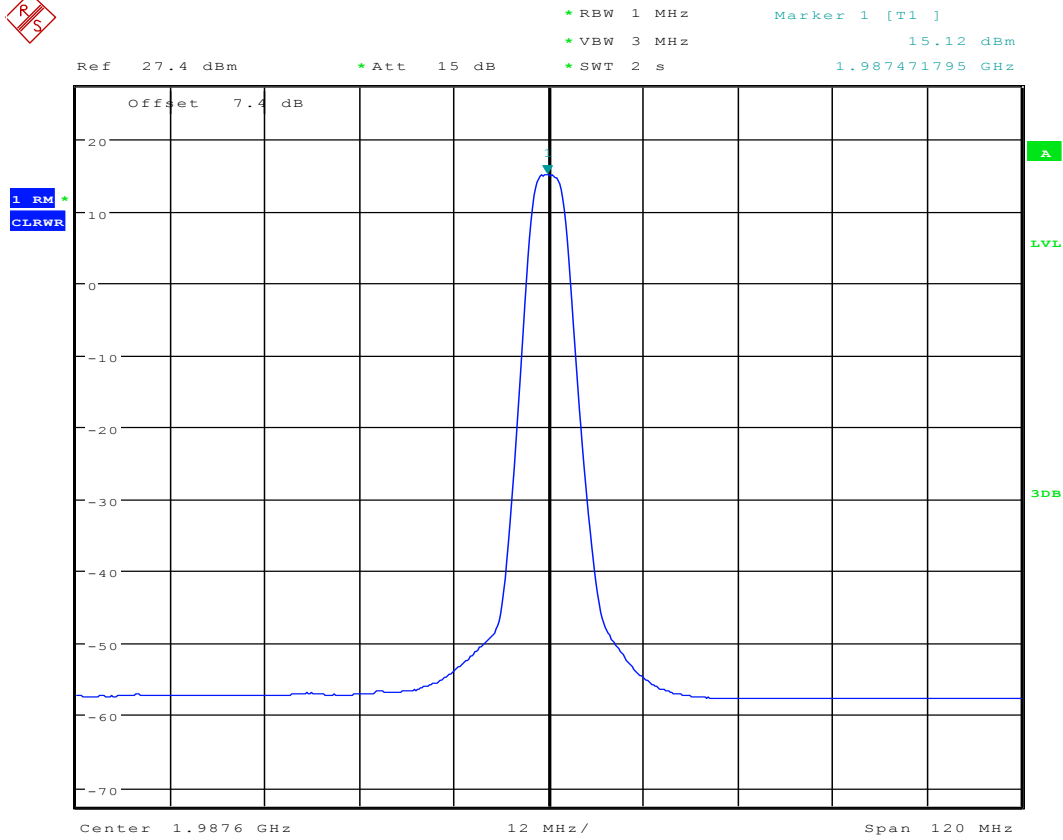
## 2.1.8 1U\_M



Date: 5.NOV.2015 19:21:44



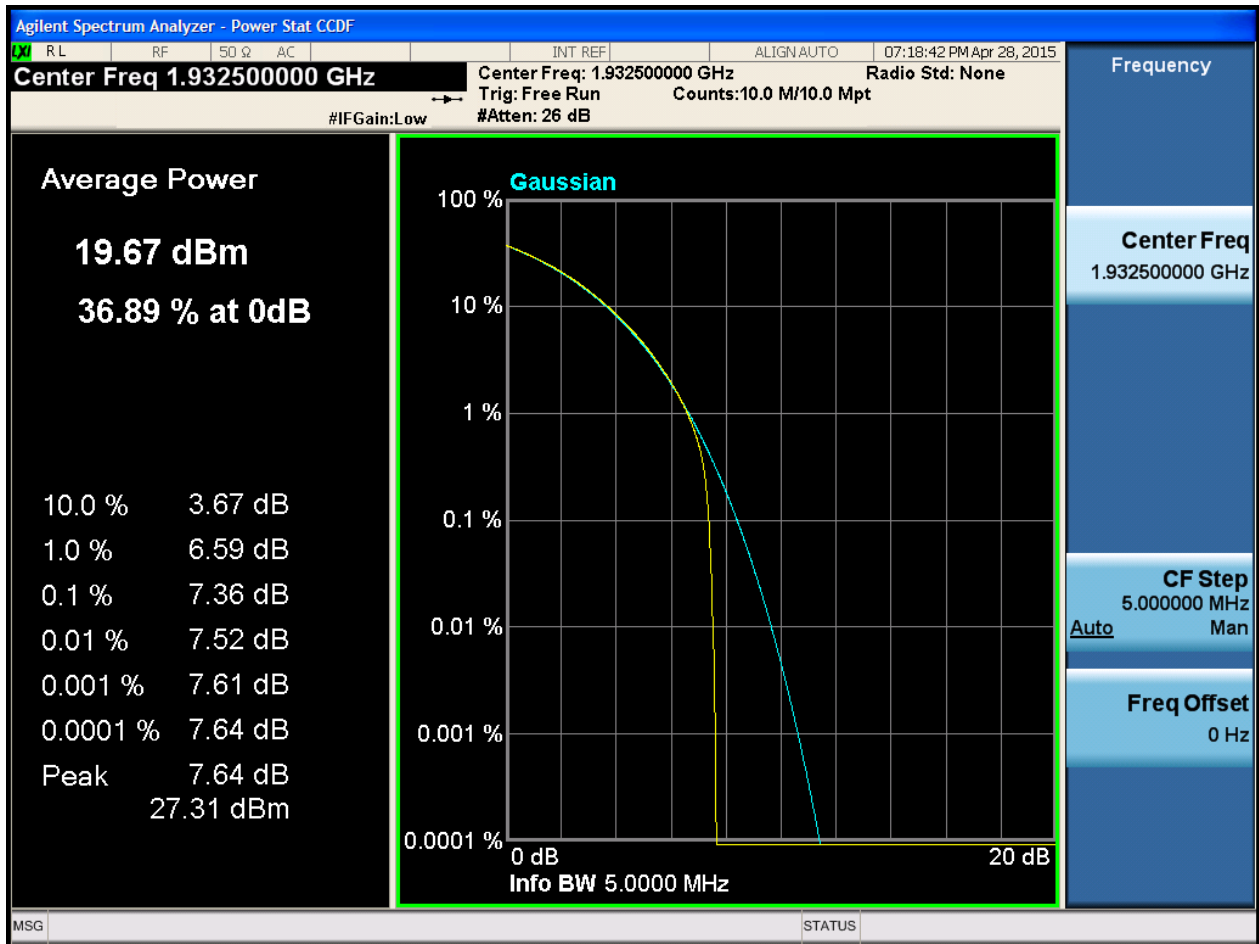
## 2.1.9 1U\_T



Date: 5.NOV.2015 19:23:48

## 2.2 Peak-to-Average Ratio

### 2.2.1 5M\_B



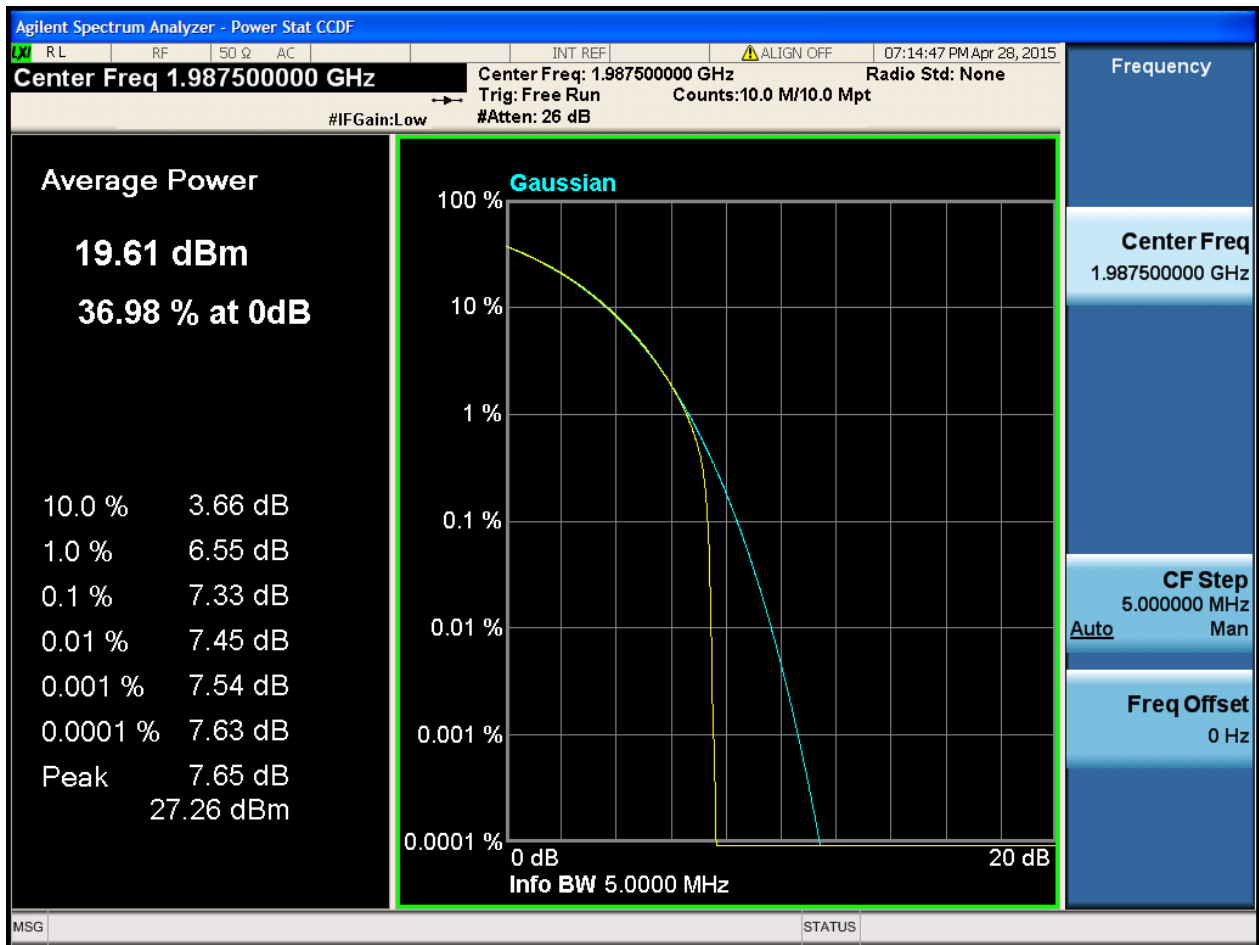


## 2.2.2 5M\_M



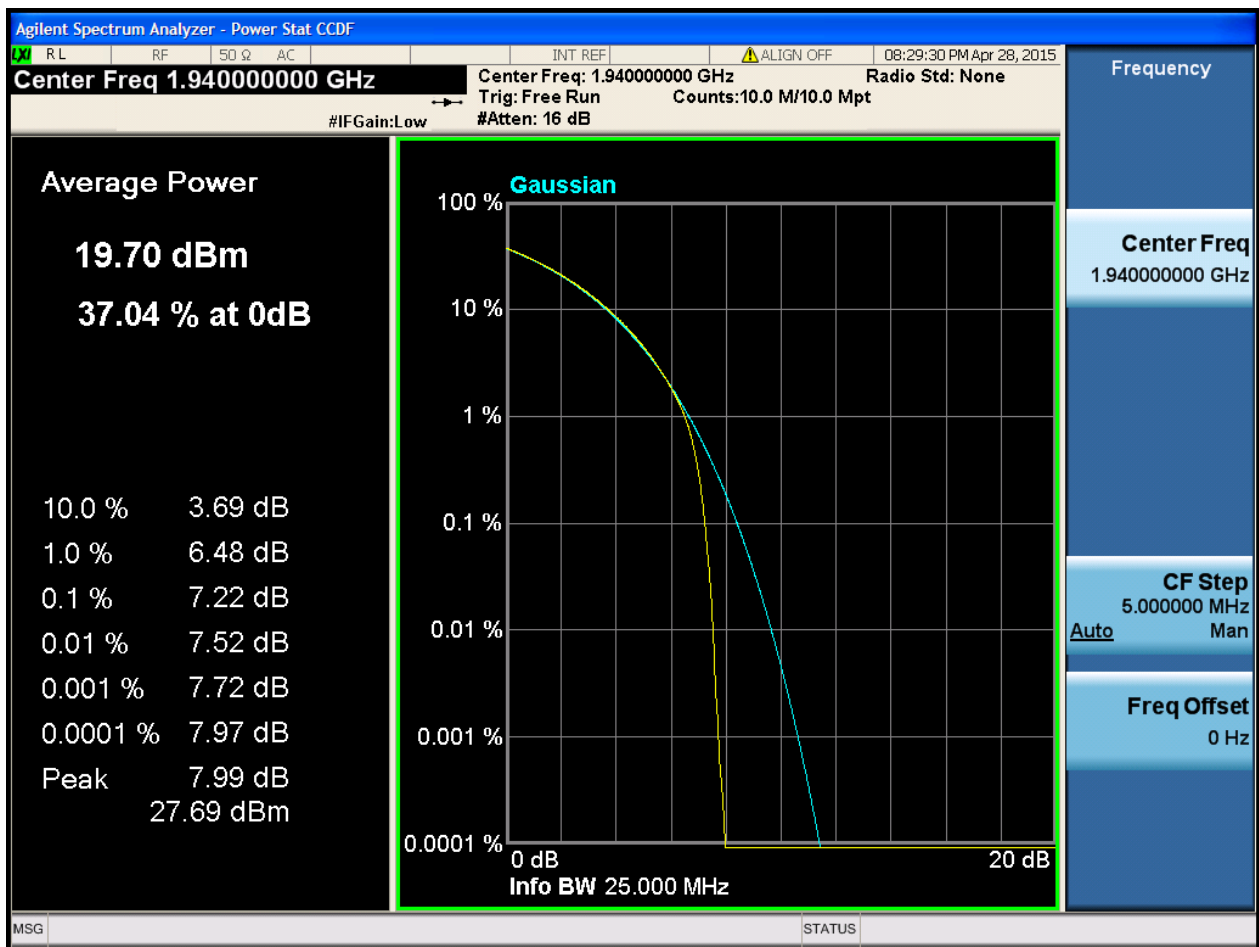


## 2.2.3 5M\_T



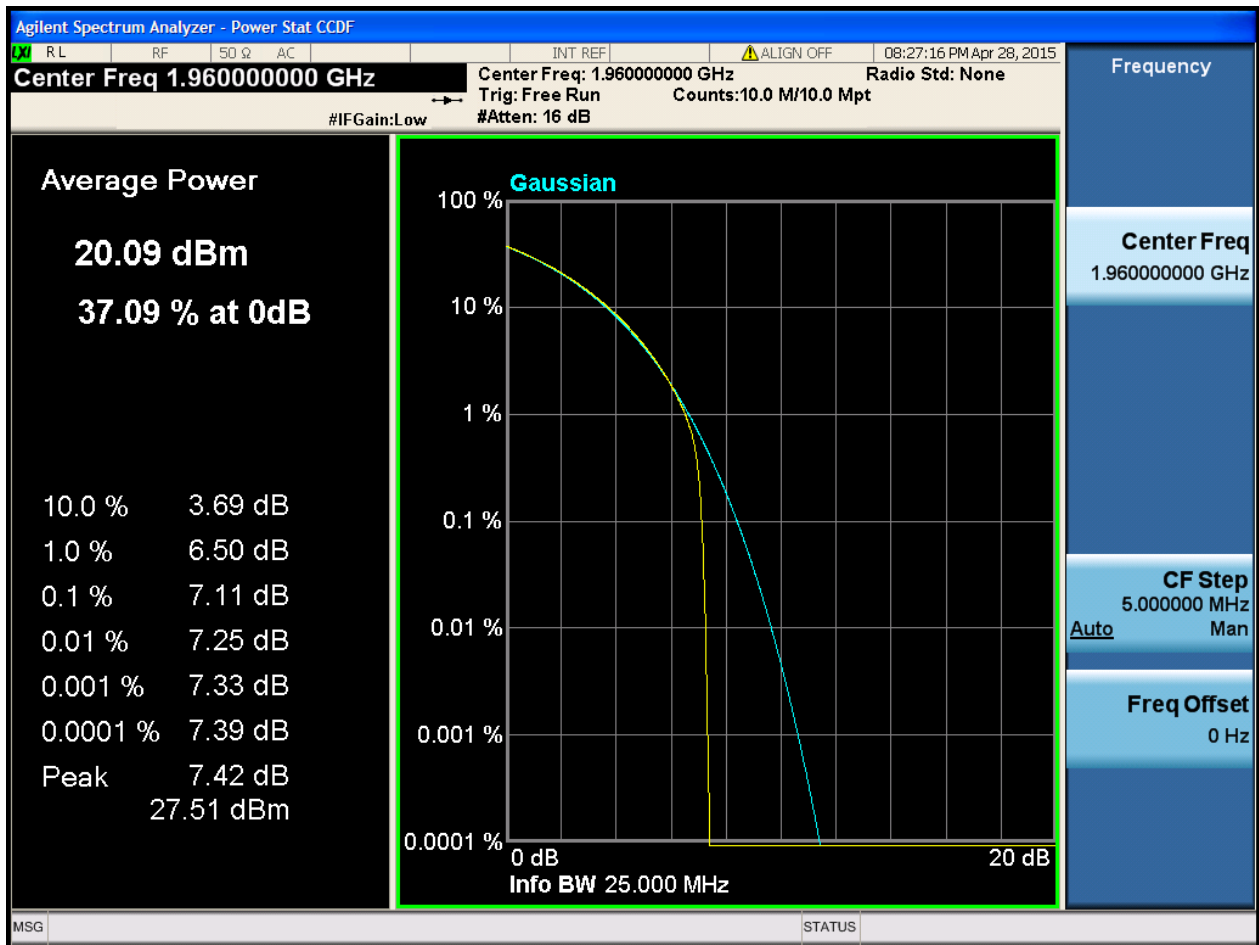


## 2.2.4 20M\_B





## 2.2.5 20M\_M



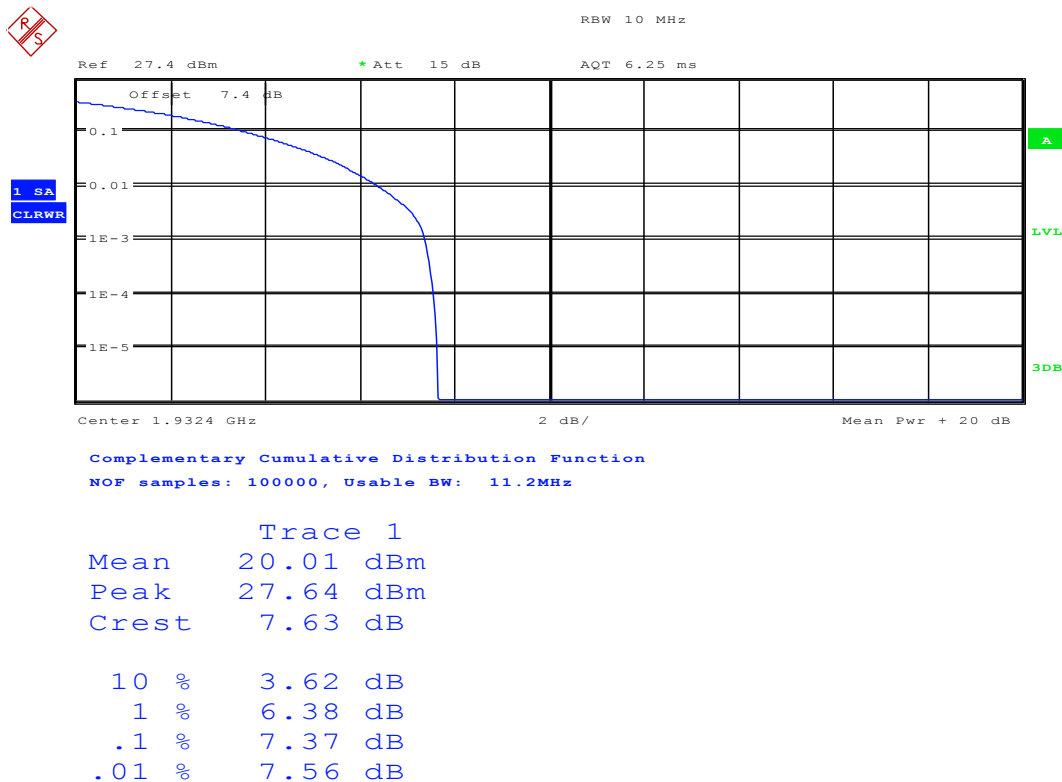


## 2.2.6 20M\_T



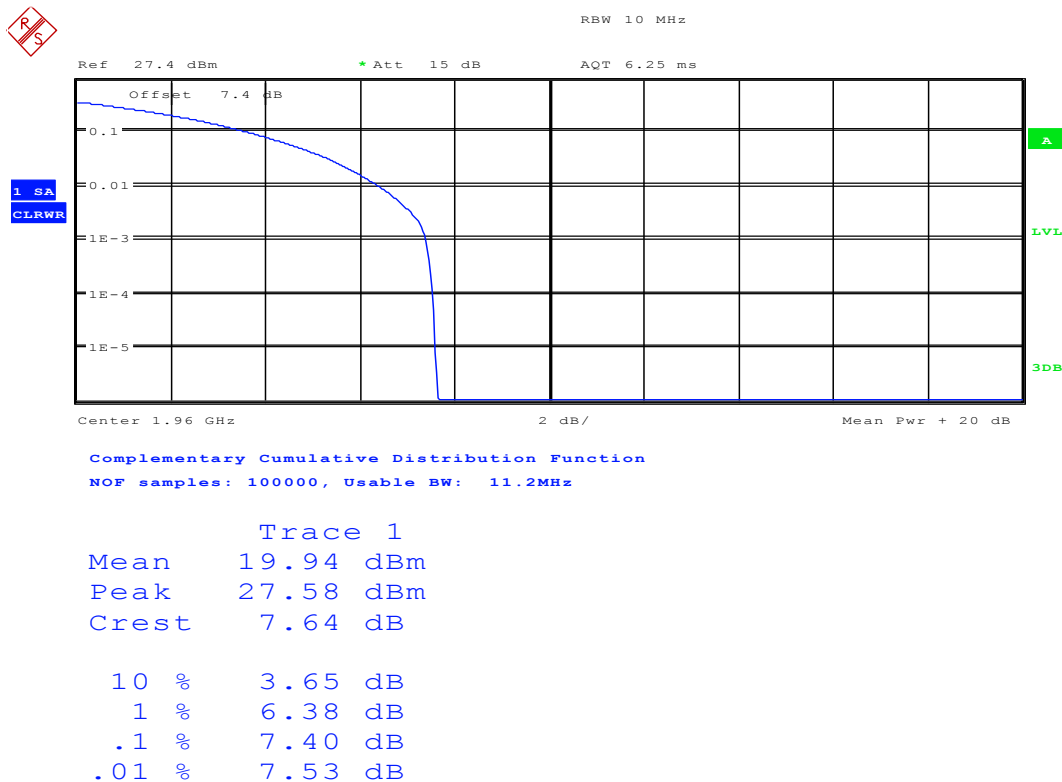


## 2.2.7 1U\_B



Date: 5.NOV.2015 19:13:44

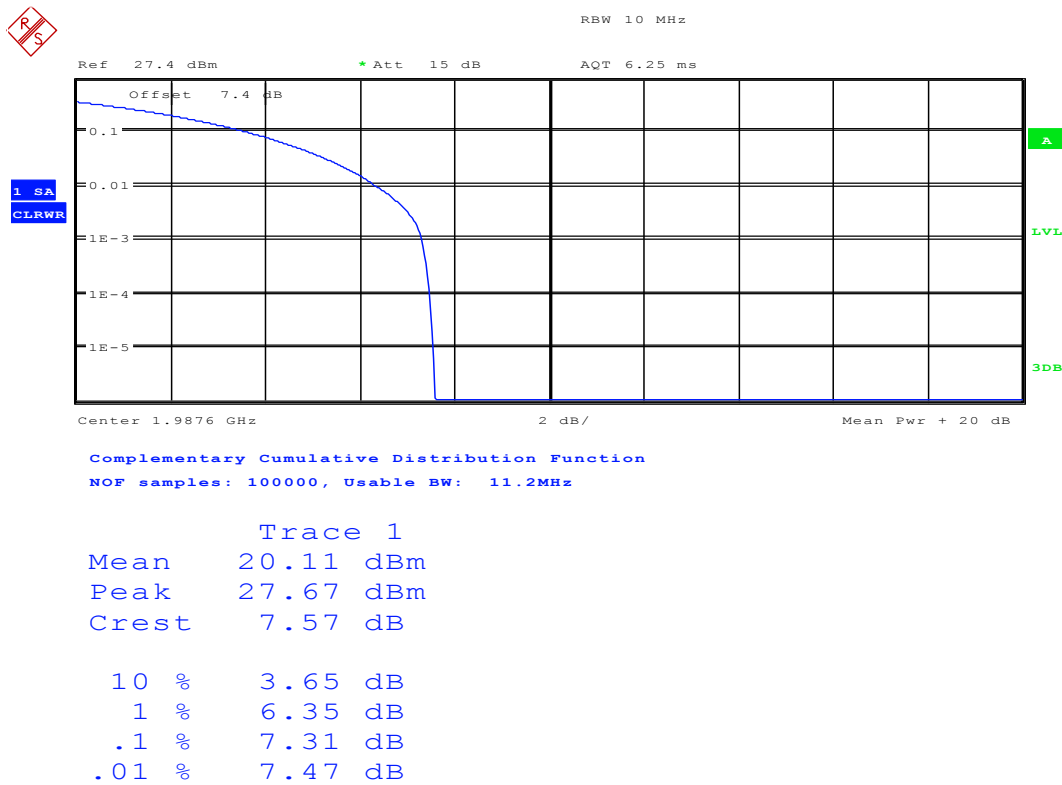
## 2.2.8 1U\_M



Date: 5.NOV.2015 19:20:55



## 2.2.9 1U\_T



Date: 5.NOV.2015 19:24:03



## Appendix B2: Bandwidth



## 1 Result Table

### 1.1 Occupied Bandwidth

| EUT Conf. | Occupied Bandwidth [MHz] | Verdict |
|-----------|--------------------------|---------|
| 5M_B      | 4.49351                  | ---     |
| 5M_M      | 4.494276                 | ---     |
| 5M_T      | 4.494164                 | ---     |
| 10M_B     | 8.965866                 | ---     |
| 10M_M     | 8.970047                 | ---     |
| 10M_T     | 8.971851                 | ---     |
| 15M_B     | 13.454836                | ---     |
| 15M_M     | 13.458541                | ---     |
| 15M_T     | 13.468678                | ---     |
| 20M_B     | 17.915639                | ---     |
| 20M_M     | 17.911744                | ---     |
| 20M_T     | 17.922258                | ---     |
| 1U_B      | 4.146635                 | ---     |
| 1U_M      | 4.146635                 | ---     |
| 1U_T      | 4.166667                 | ---     |

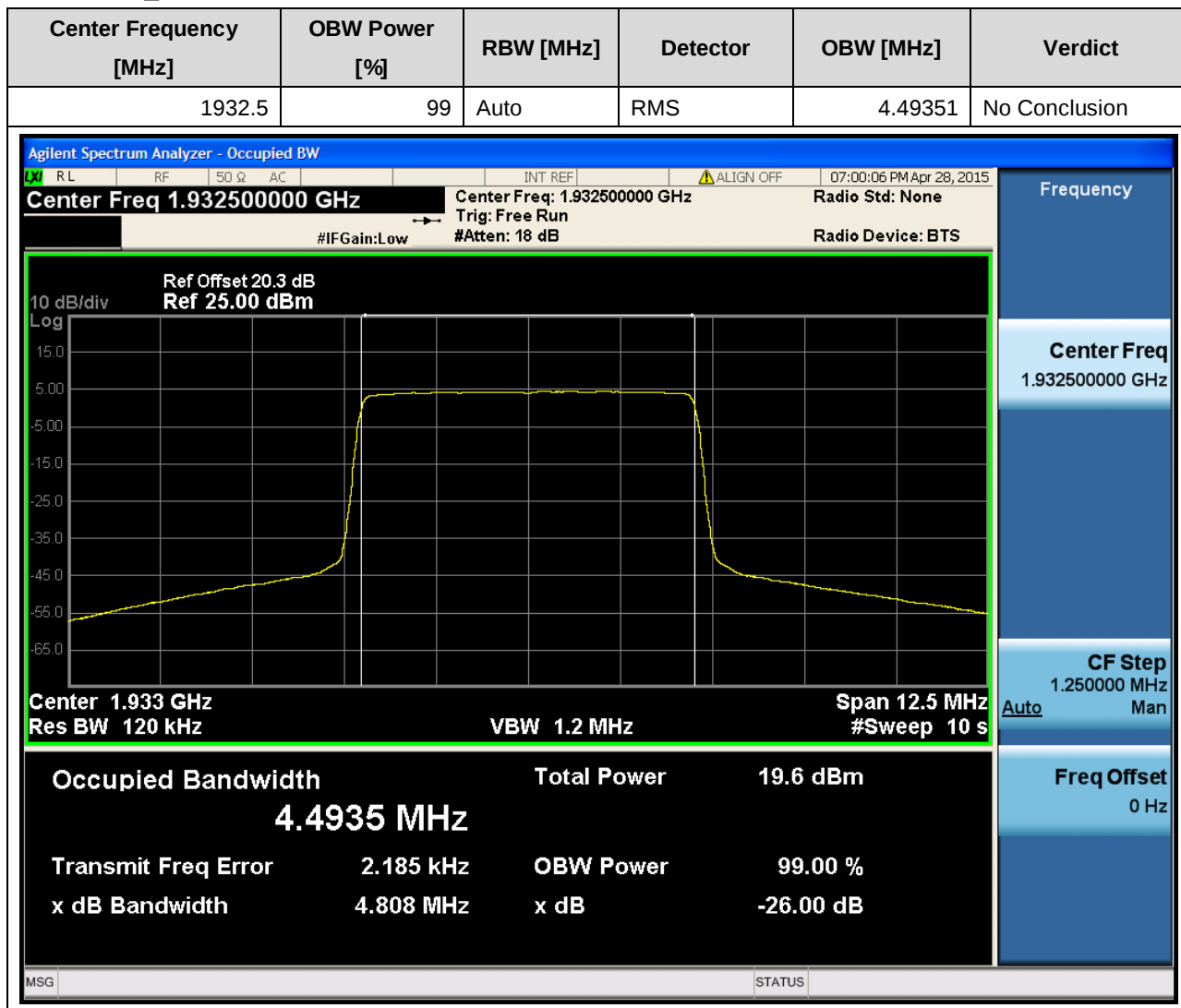
### 1.2 Emission Bandwidth

| EUT Conf. | Emission Bandwidth, -26 dBc [MHz] | Emission Bandwidth, -20 dBc [MHz] | Verdict |
|-----------|-----------------------------------|-----------------------------------|---------|
| 5M_B      | 4.77376                           | 4.723712                          | ---     |
| 5M_M      | 4.793856                          | 4.723712                          | ---     |
| 5M_T      | 4.783744                          | 4.72384                           | ---     |
| 10M_B     | 9.393792                          | 9.233792                          | ---     |
| 10M_M     | 9.383808                          | 9.233664                          | ---     |
| 10M_T     | 9.383808                          | 9.25376                           | ---     |
| 15M_B     | 13.97376                          | 13.733632                         | ---     |
| 15M_M     | 14.003712                         | 13.743616                         | ---     |
| 15M_T     | 13.993728                         | 13.743616                         | ---     |
| 20M_B     | 18.58368                          | 18.303616                         | ---     |
| 20M_M     | 18.593664                         | 18.2336                           | ---     |
| 20M_T     | 18.603648                         | 18.243584                         | ---     |
| 1U_B      | 4.687500                          | 4.567308                          | ---     |
| 1U_M      | 4.687500                          | 4.567308                          | ---     |
| 1U_T      | 4.687500                          | 4.567308                          | ---     |

## 2 Test Plot

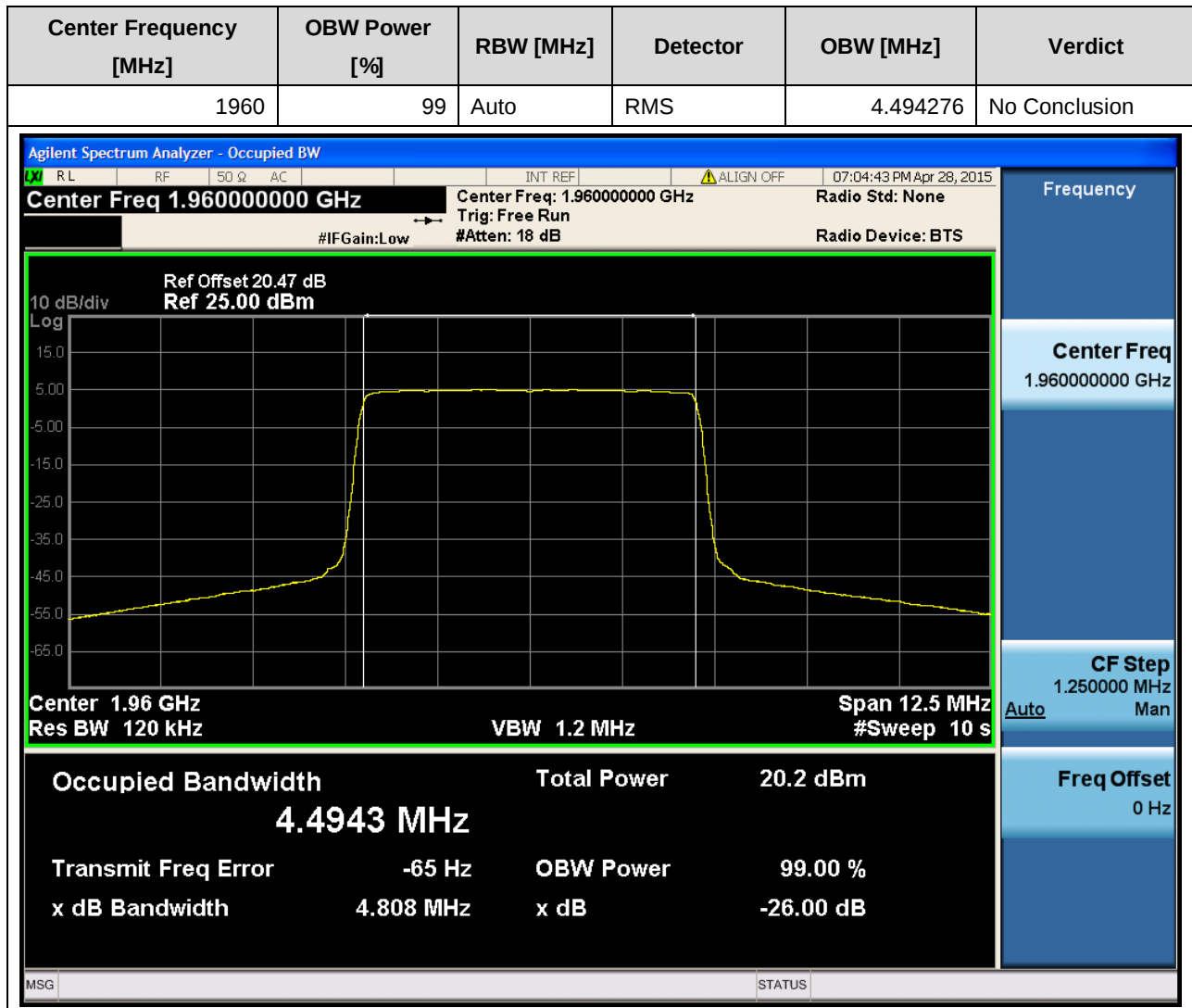
### 2.1 Occupied Bandwidth

#### 2.1.1 5M\_B



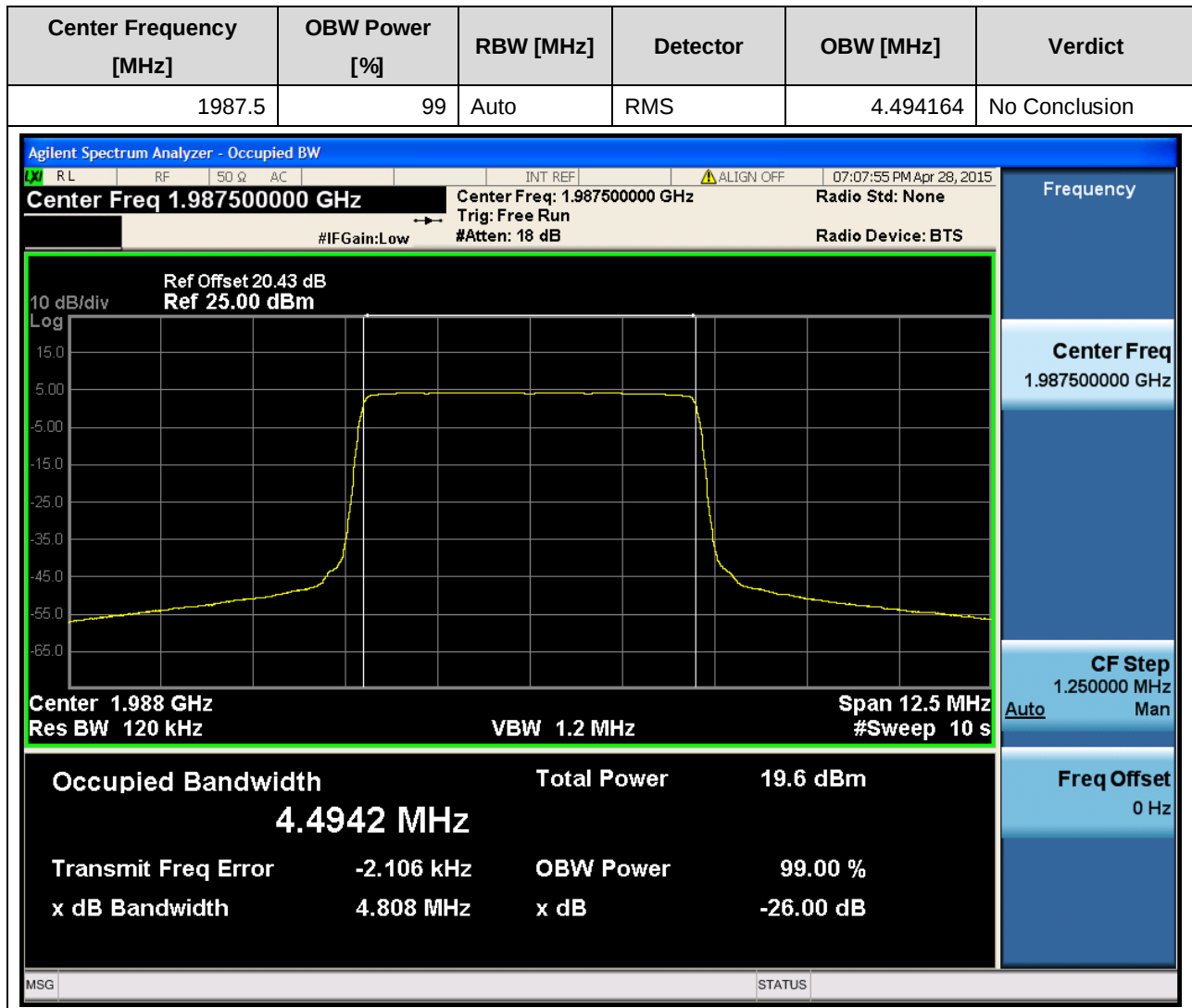


## 2.1.2 5M\_M



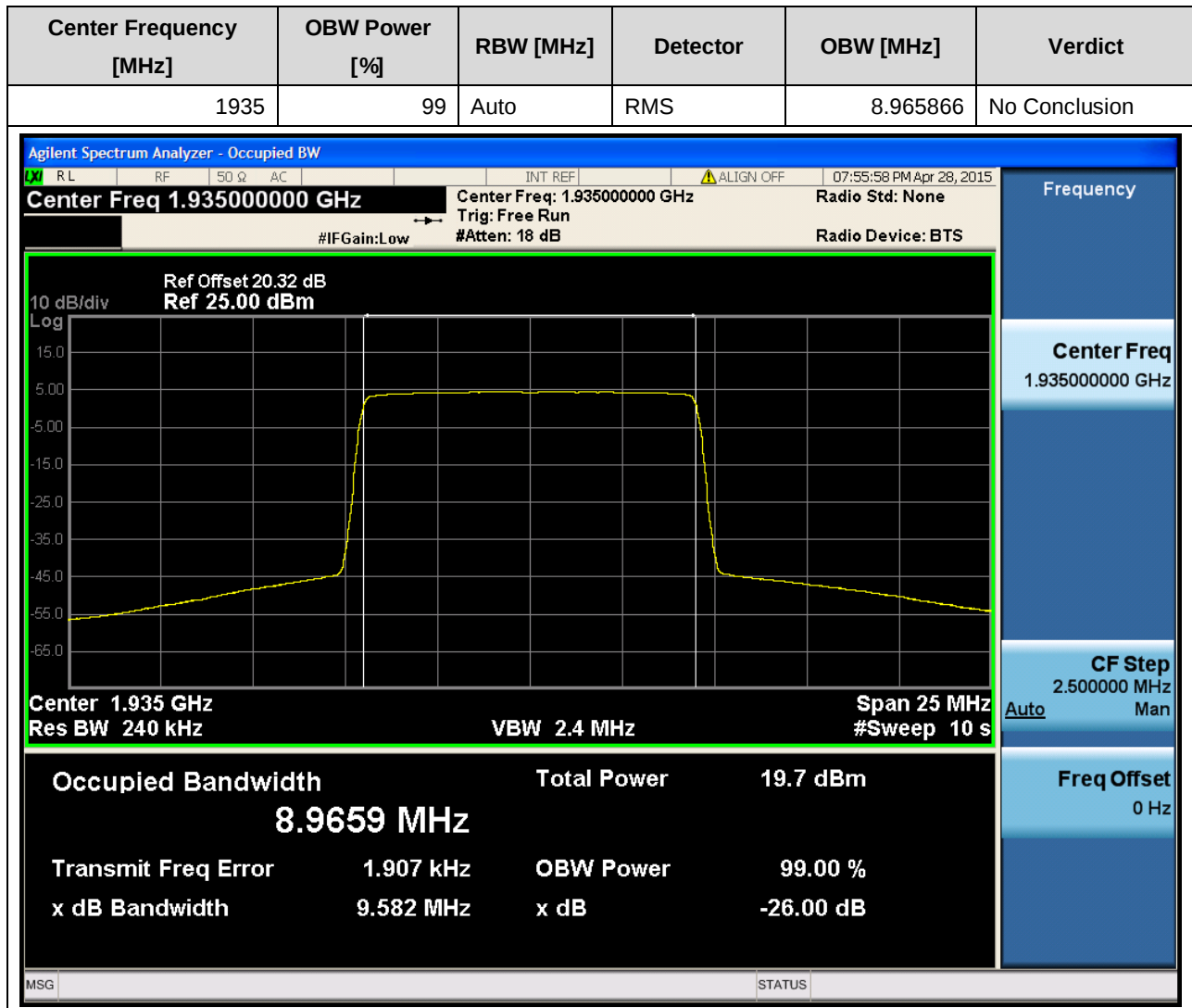


### 2.1.3 5M\_T



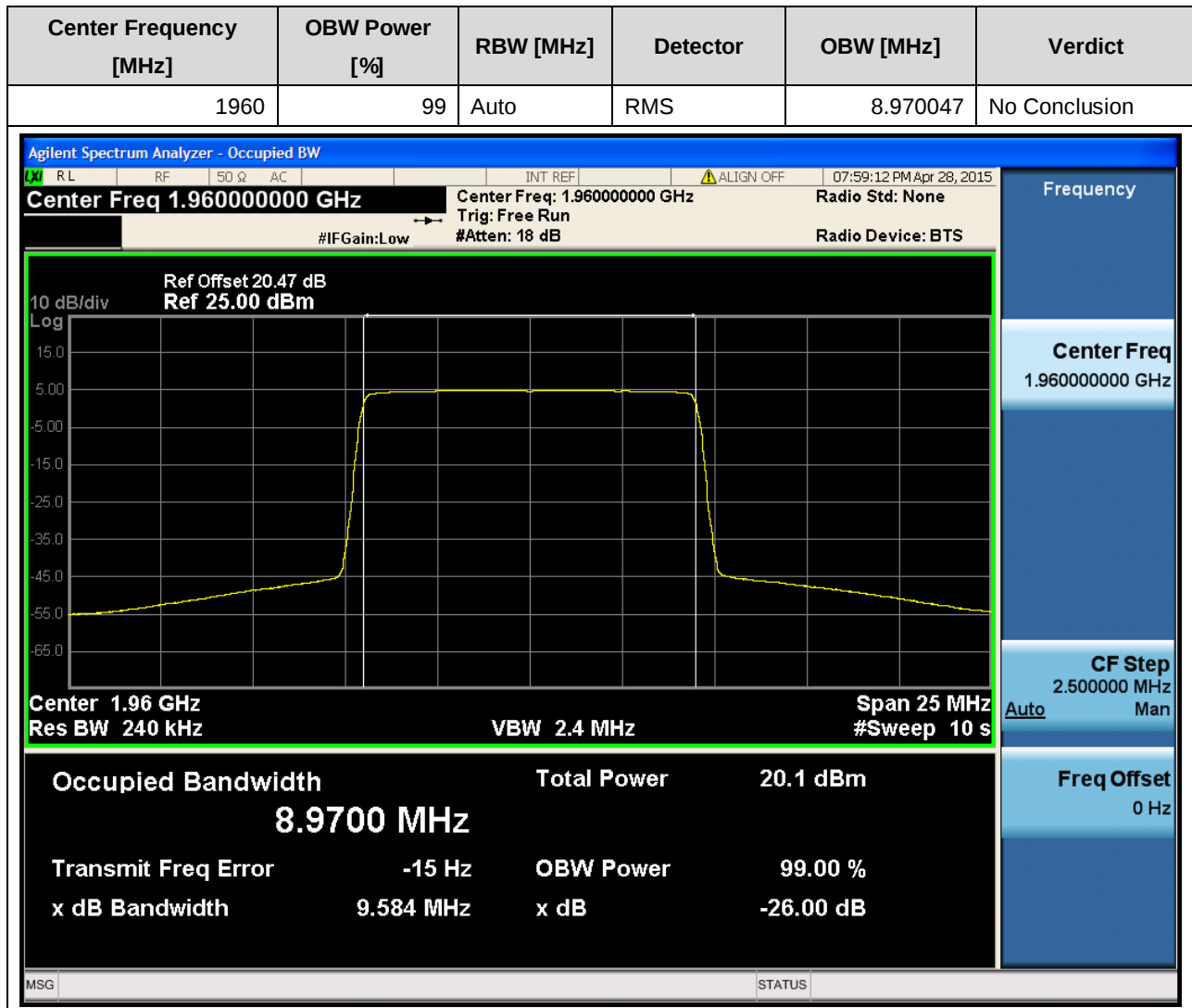


## 2.1.4 10M\_B



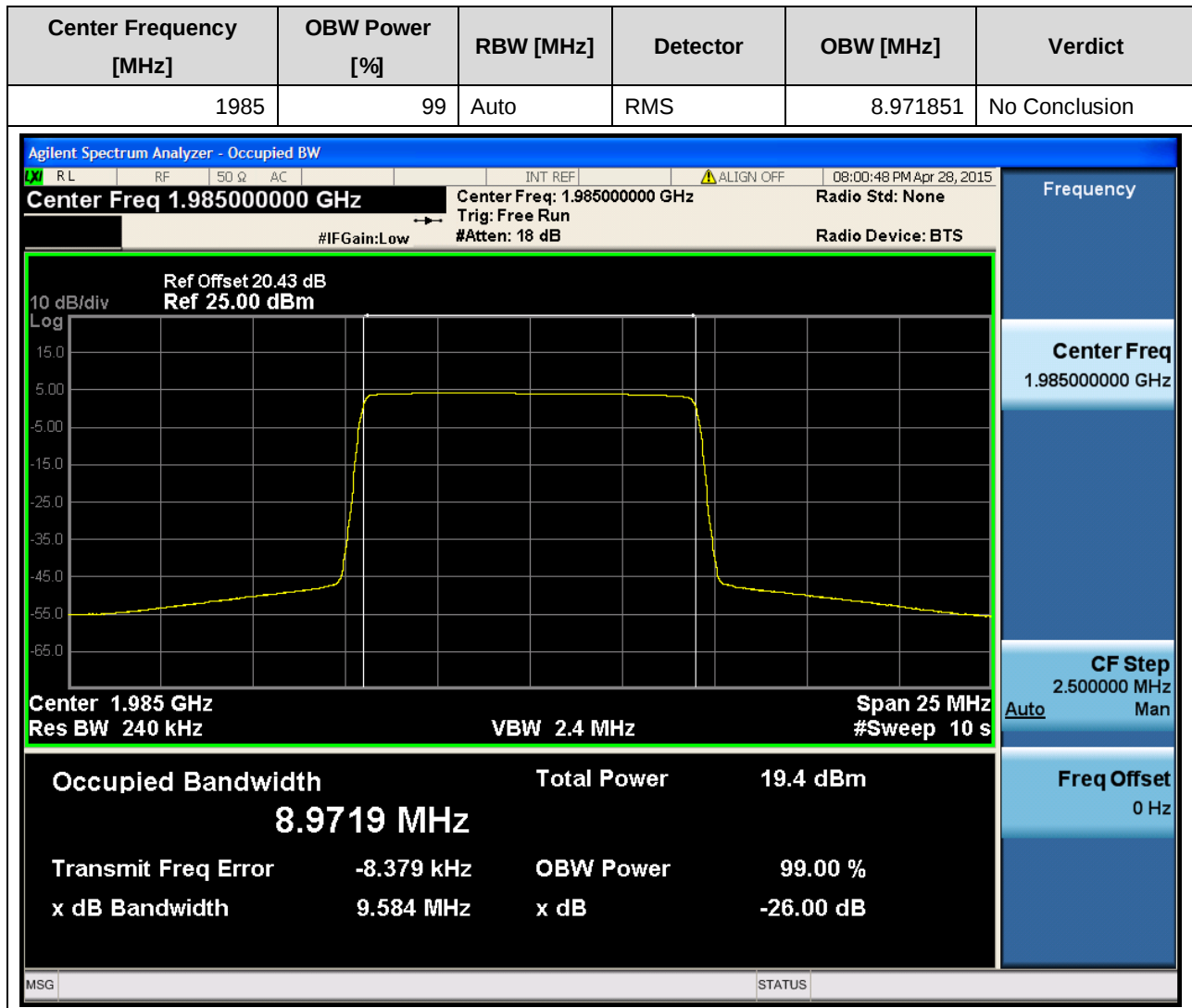


## 2.1.5 10M\_M



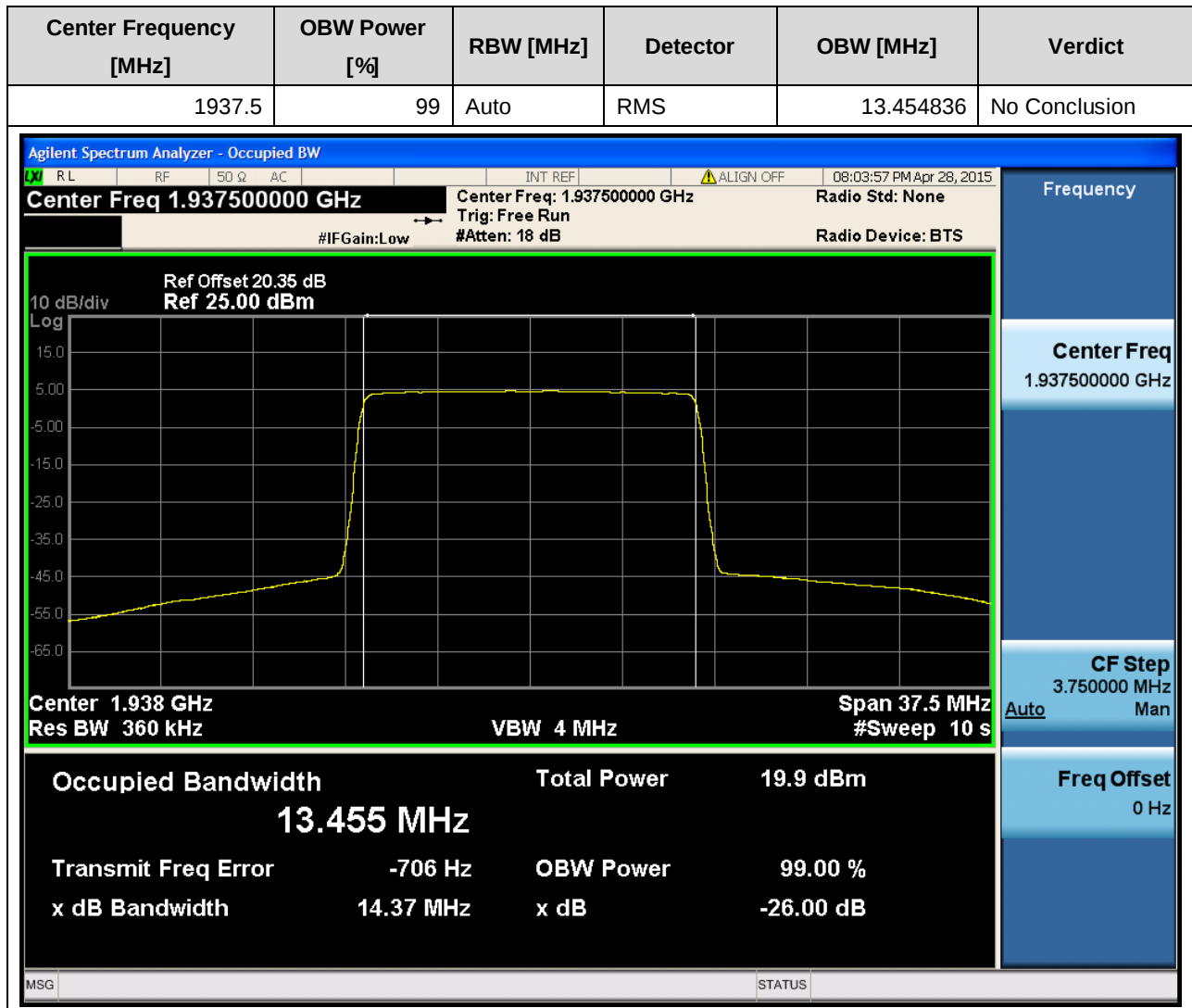


## 2.1.6 10M\_T



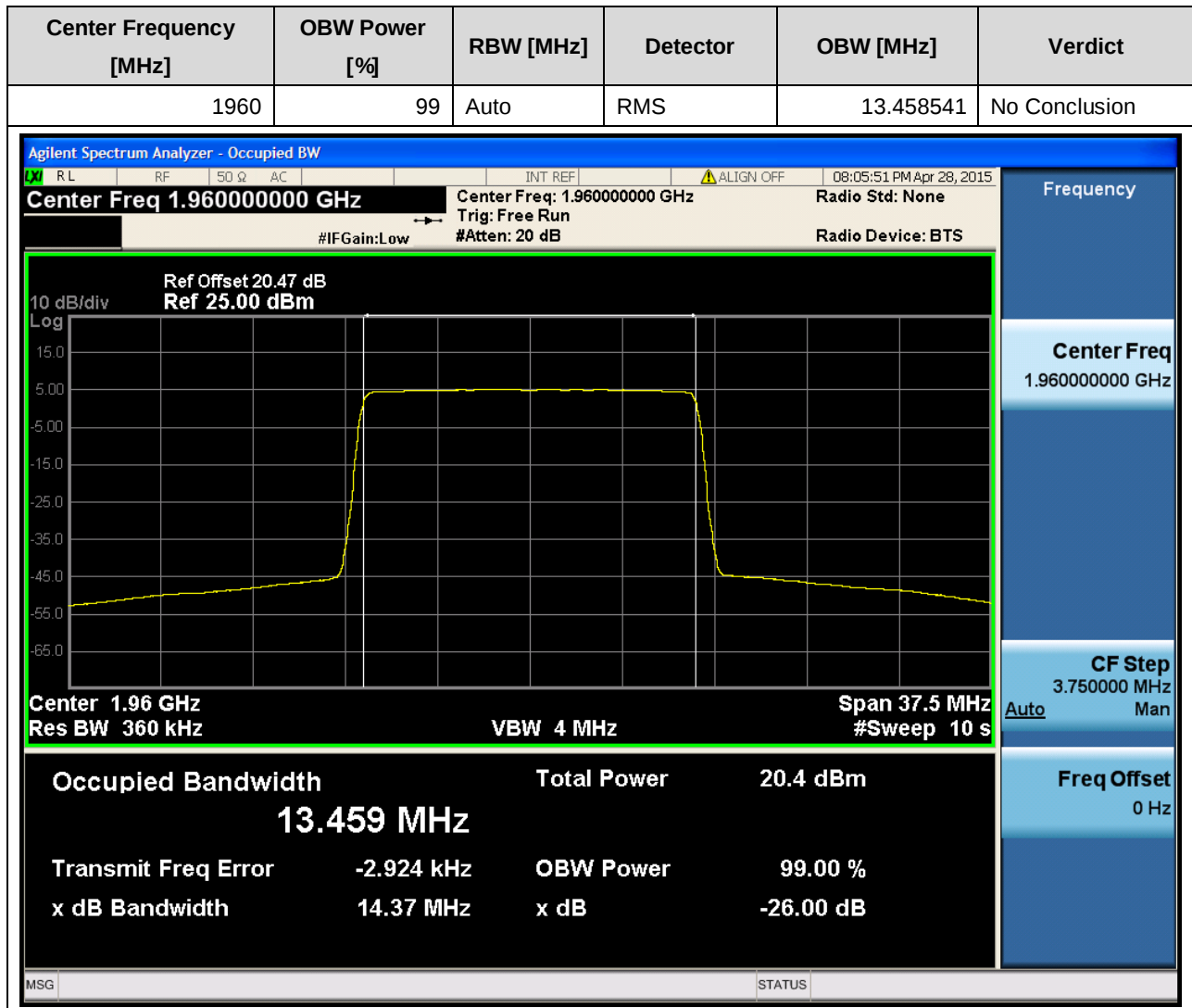


## 2.1.7 15M\_B



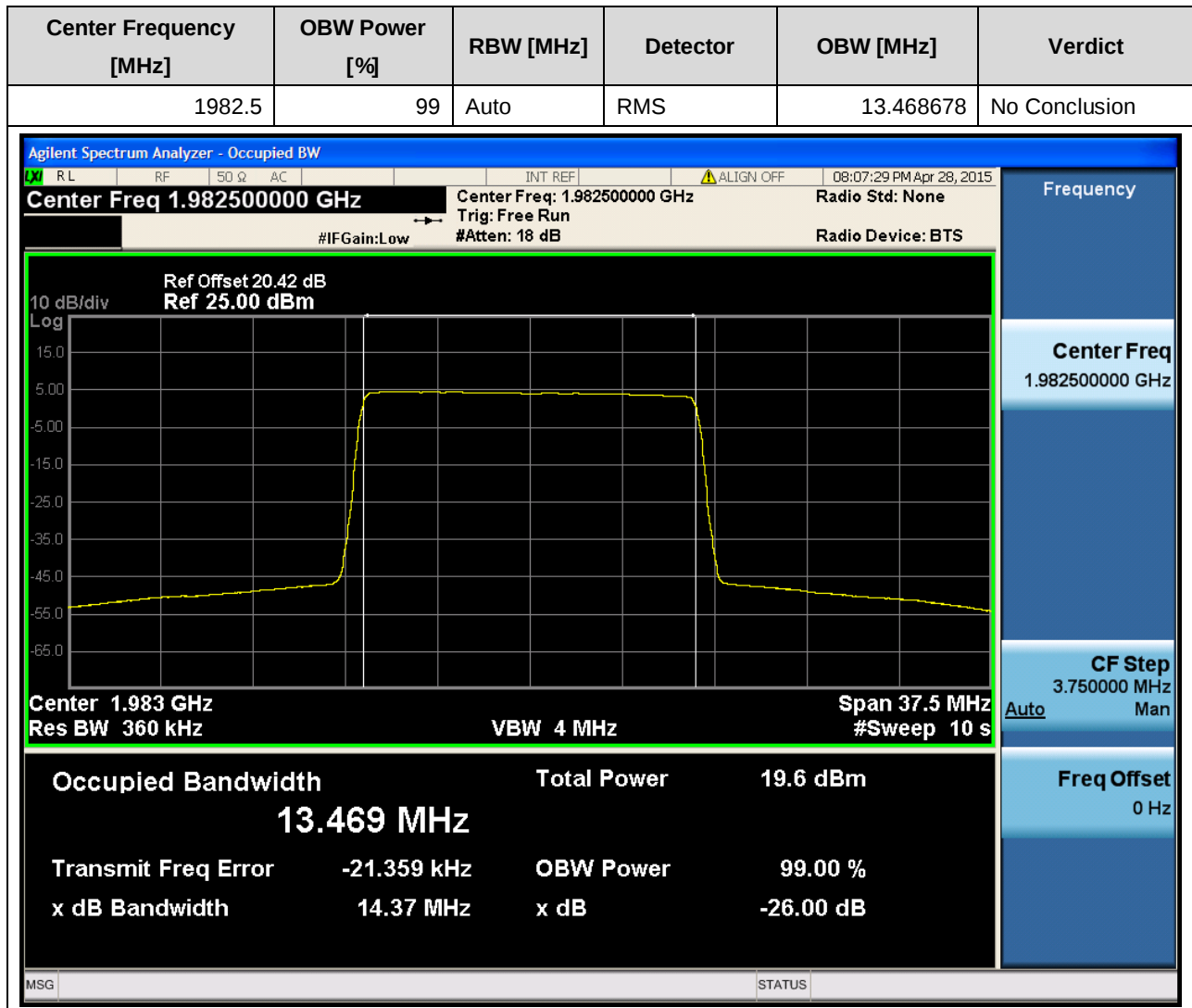


## 2.1.8 15M\_M



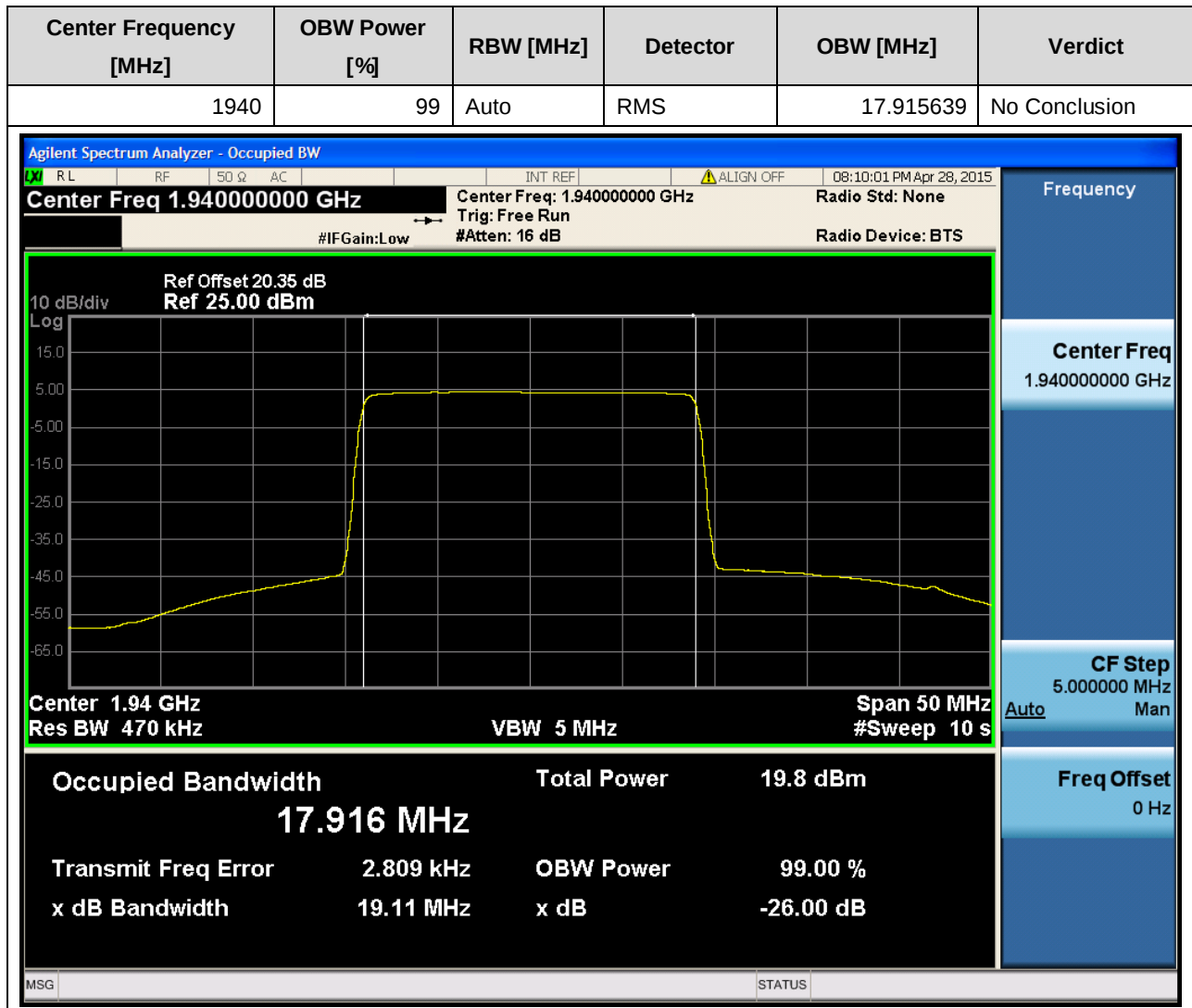


## 2.1.9 15M\_T



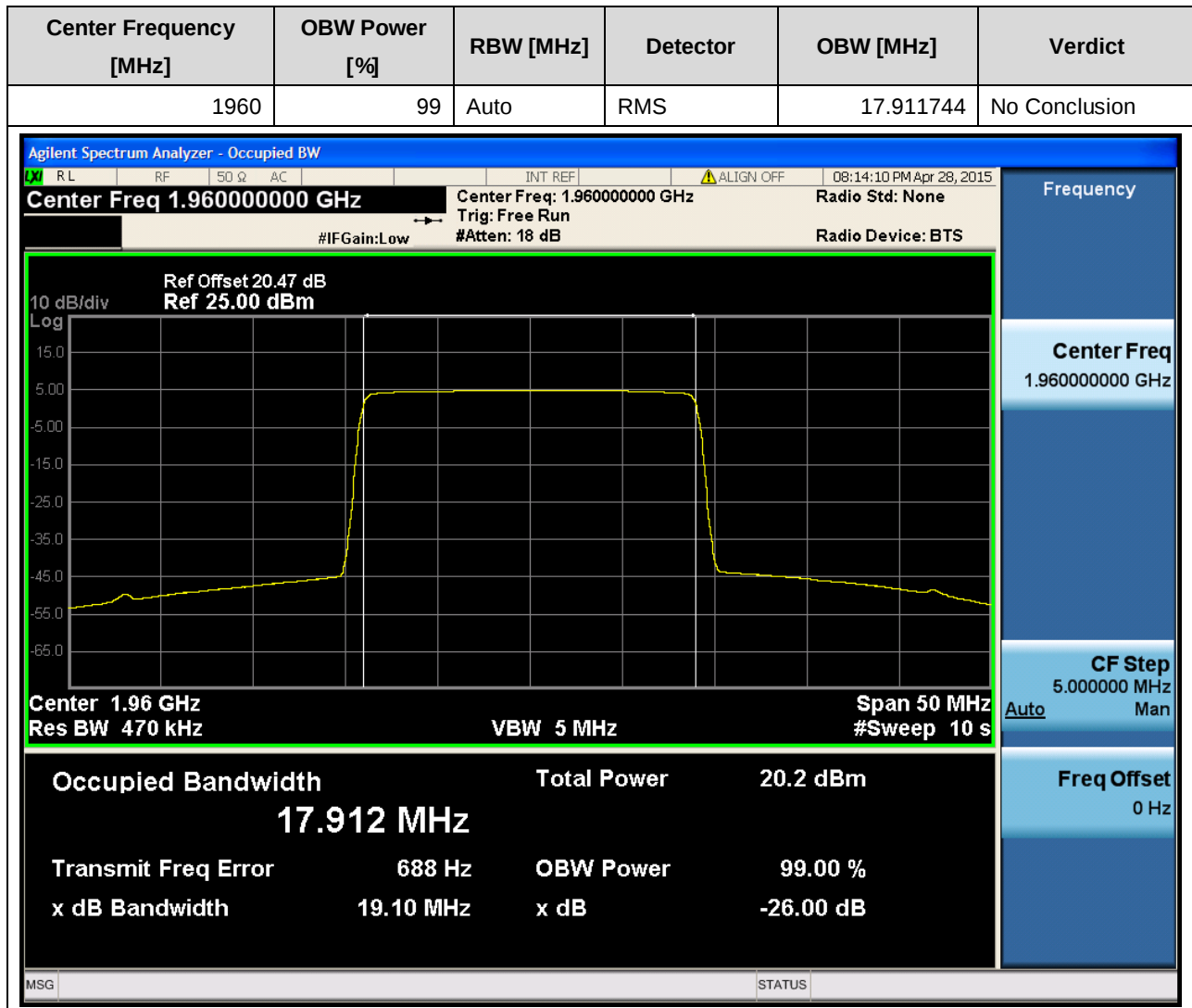


## 2.1.10 20M\_B



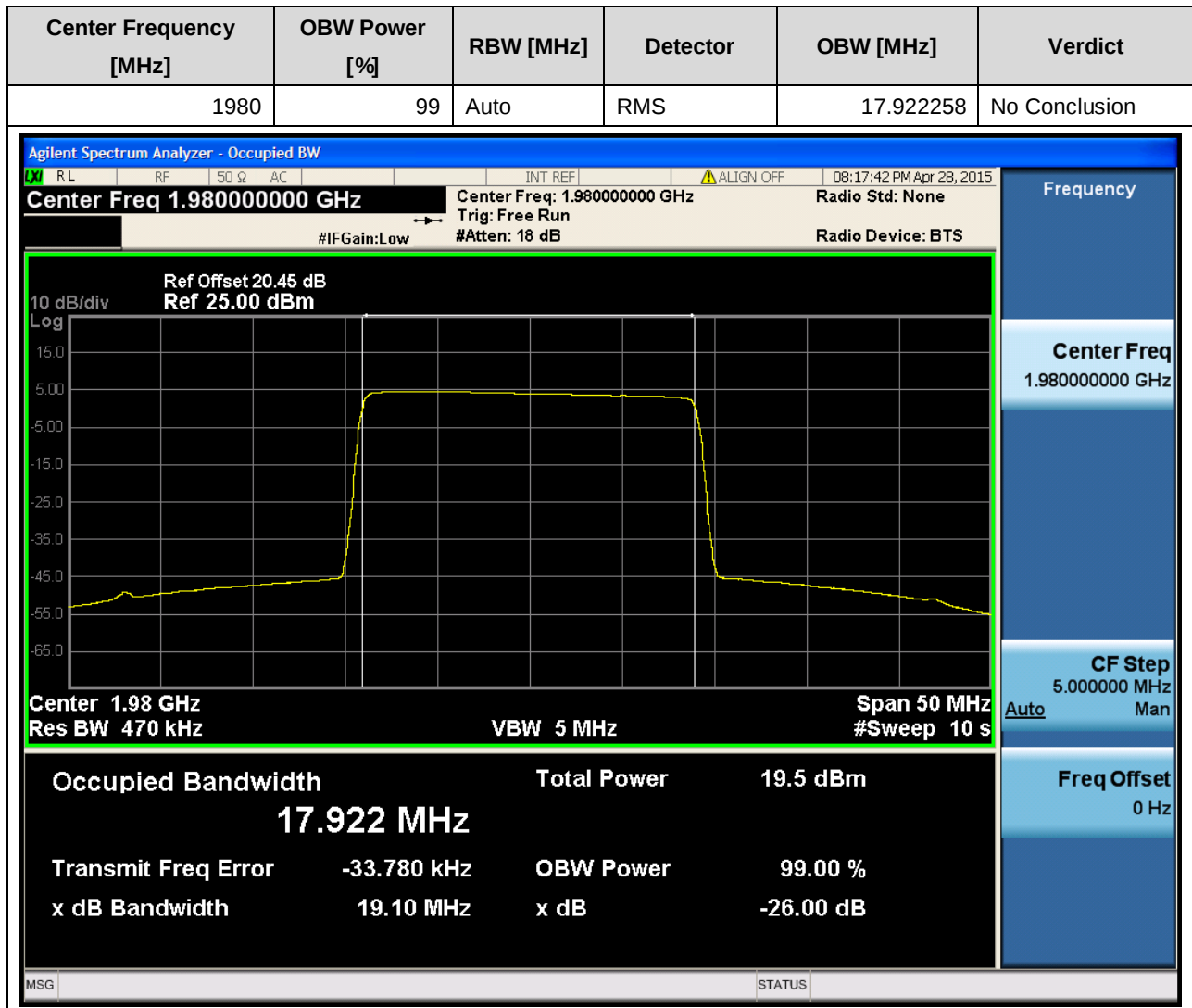


### 2.1.11 20M\_M



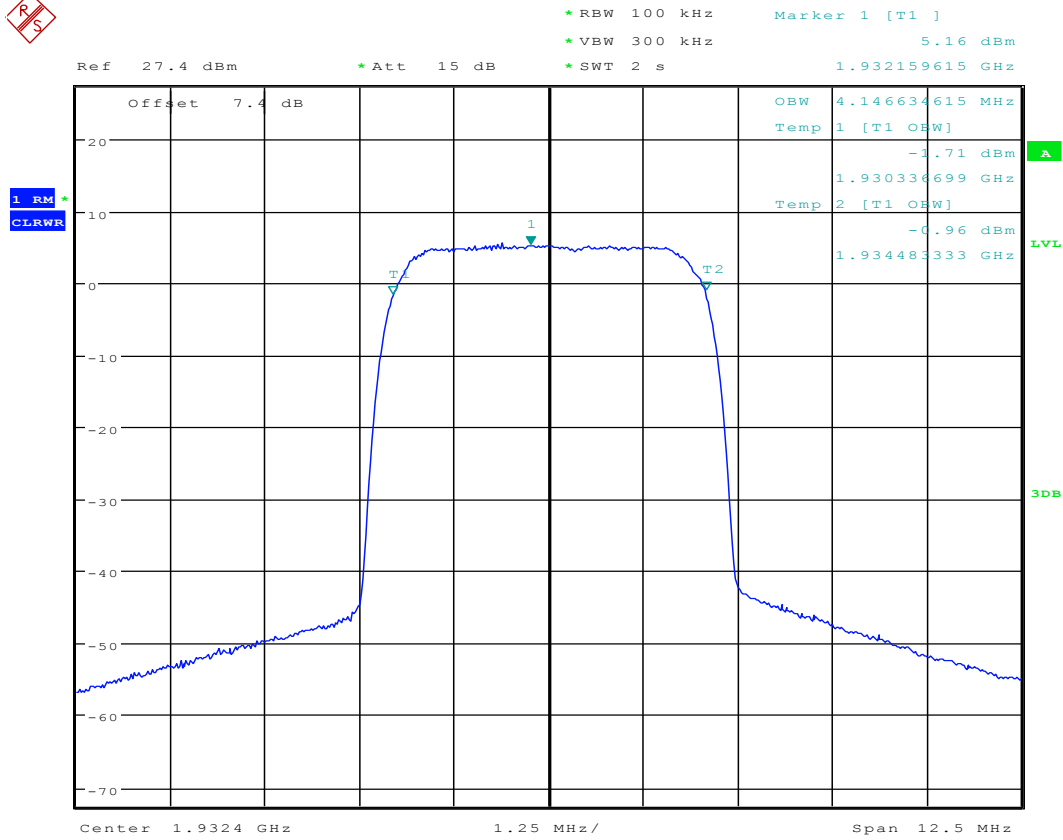


## 2.1.12 20M\_T





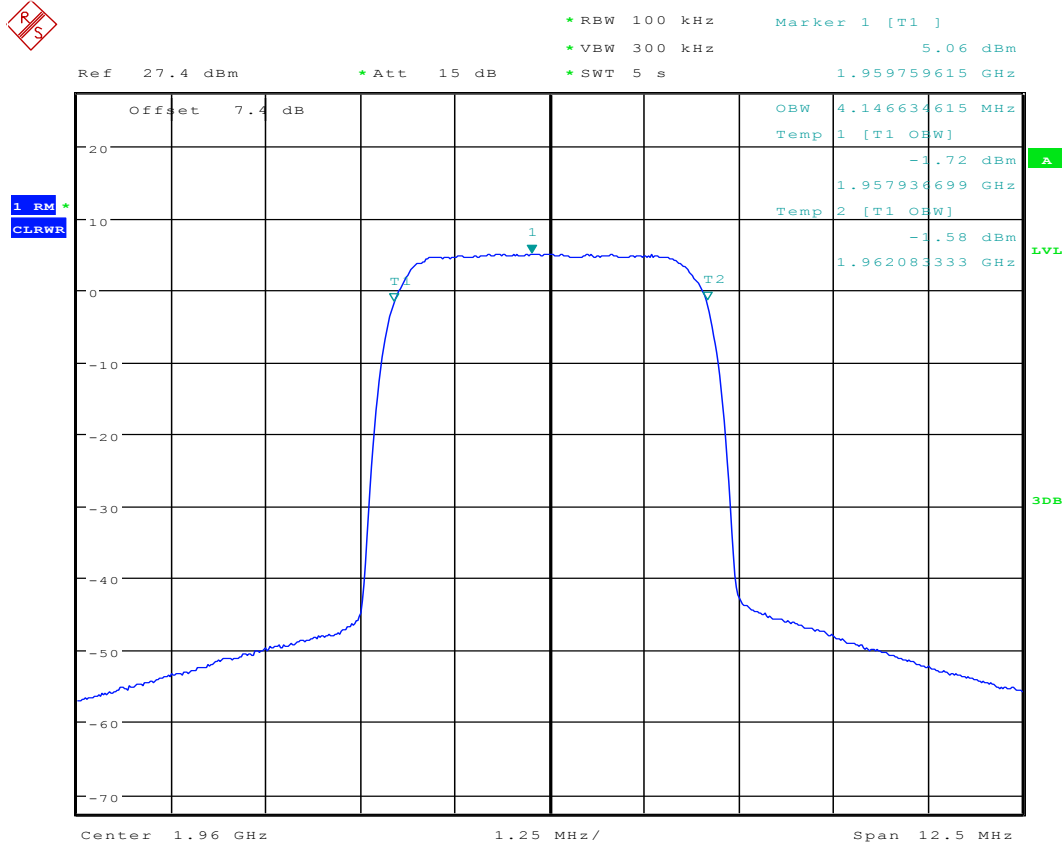
## 2.1.13 1U\_B



Date: 30.OCT.2015 10:25:54



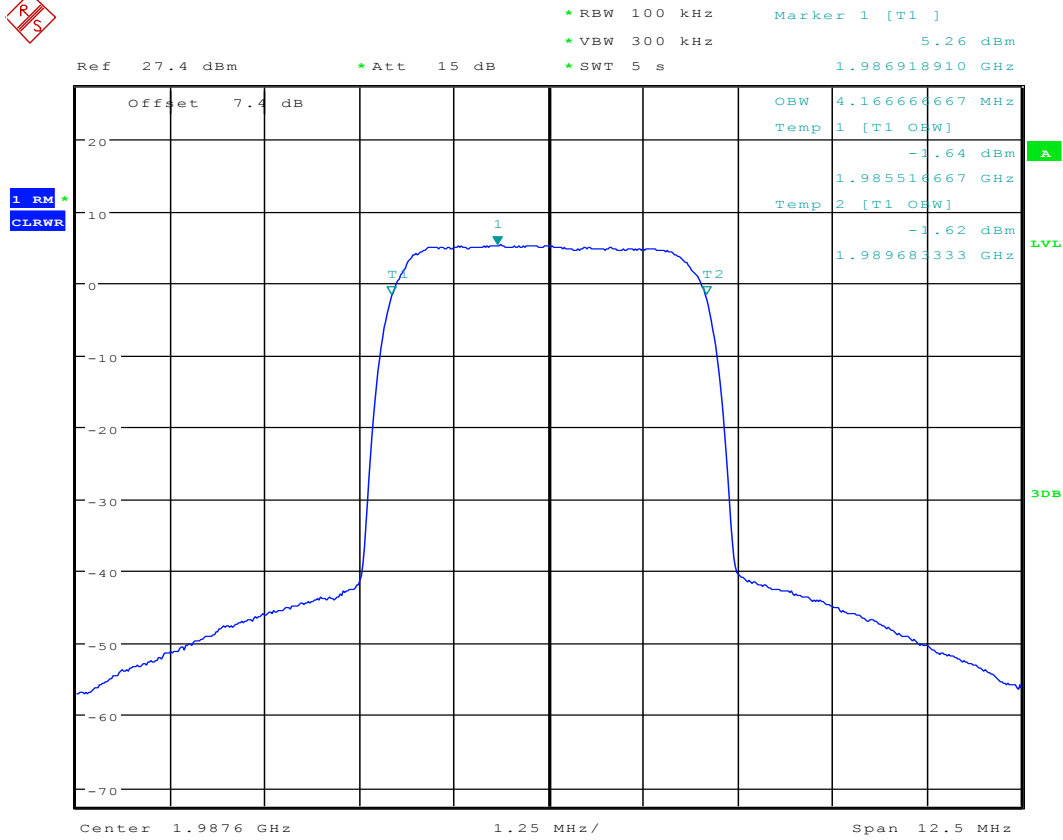
## 2.1.14 1U\_M



Date: 30.OCT.2015 10:48:51



## 2.1.15 1U\_T



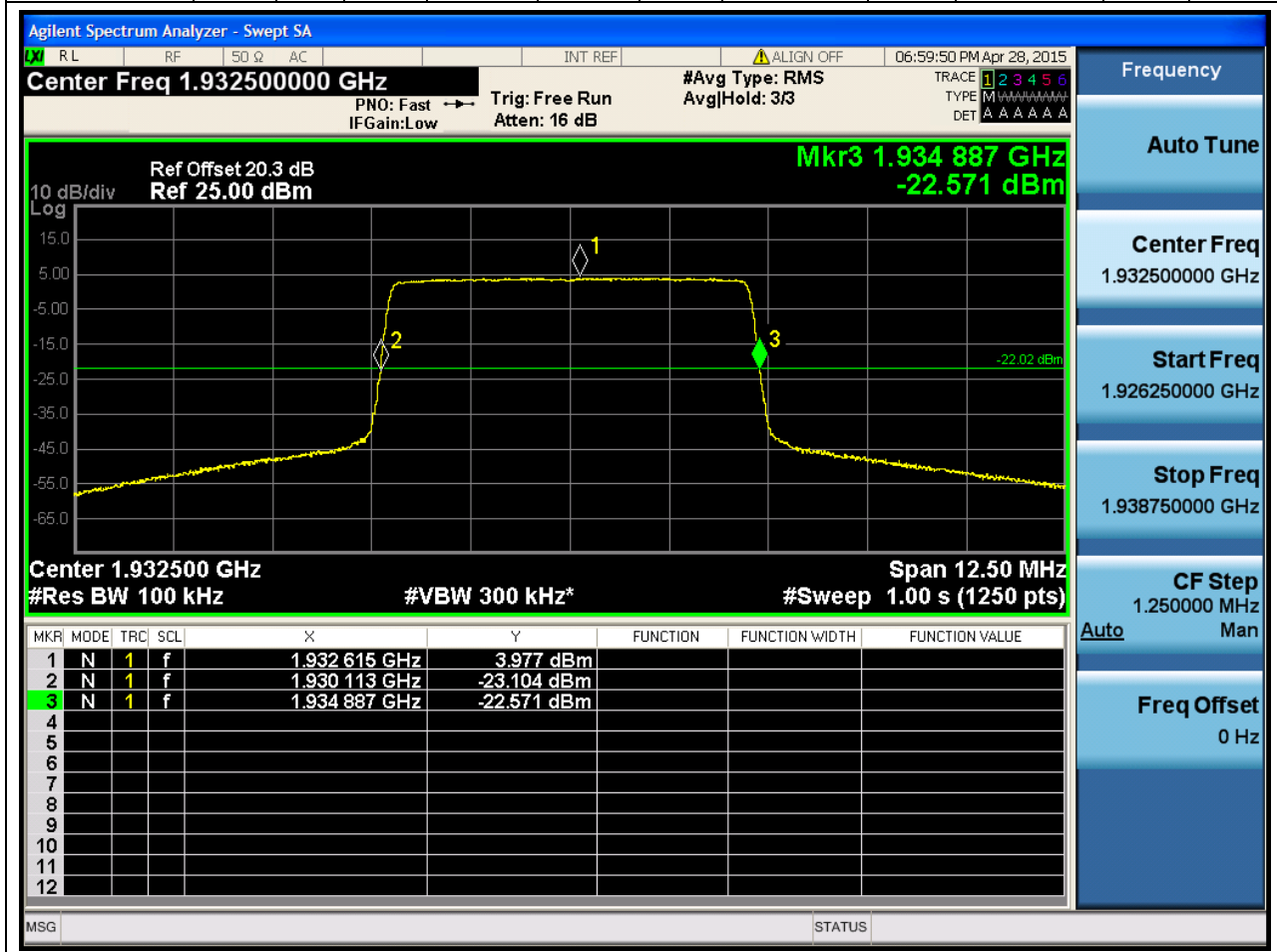
Date: 30.OCT.2015 10:58:40



## 2.2 Emission Bandwidth(-26dBc)

### 2.2.1 5M\_B

| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Low er Limit [MHz] | Upper Freq [MHz] | Upp er Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|--------------------|------------------|--------------------|---------|
| 1932.5                | 12.5       | 26        | 0.1        | RMS       | 4.77376      | 5              | 1930.113152      | 1930               | 1934.886912      | 1990               | Pass    |

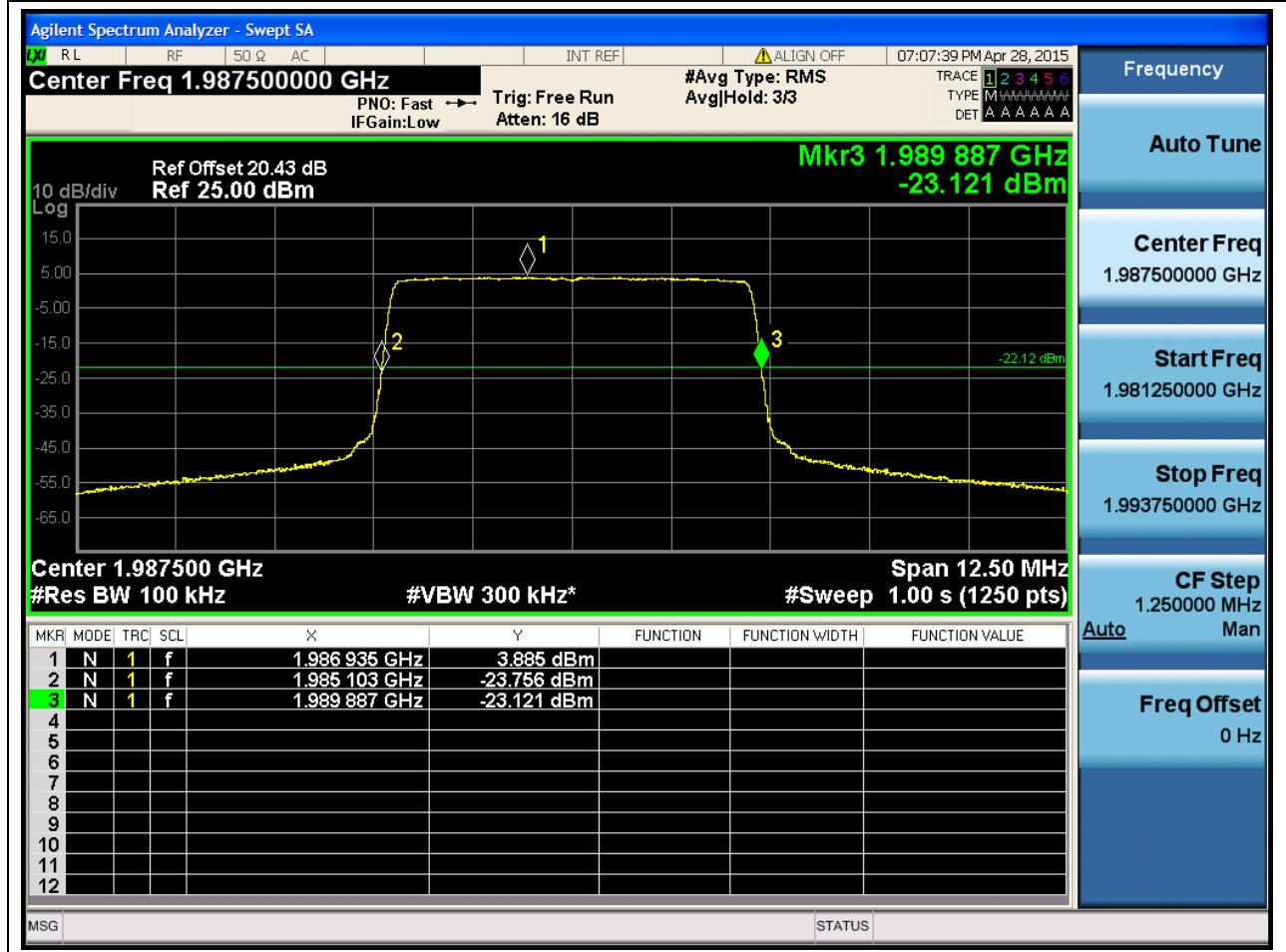






### 2.2.3 5M\_T

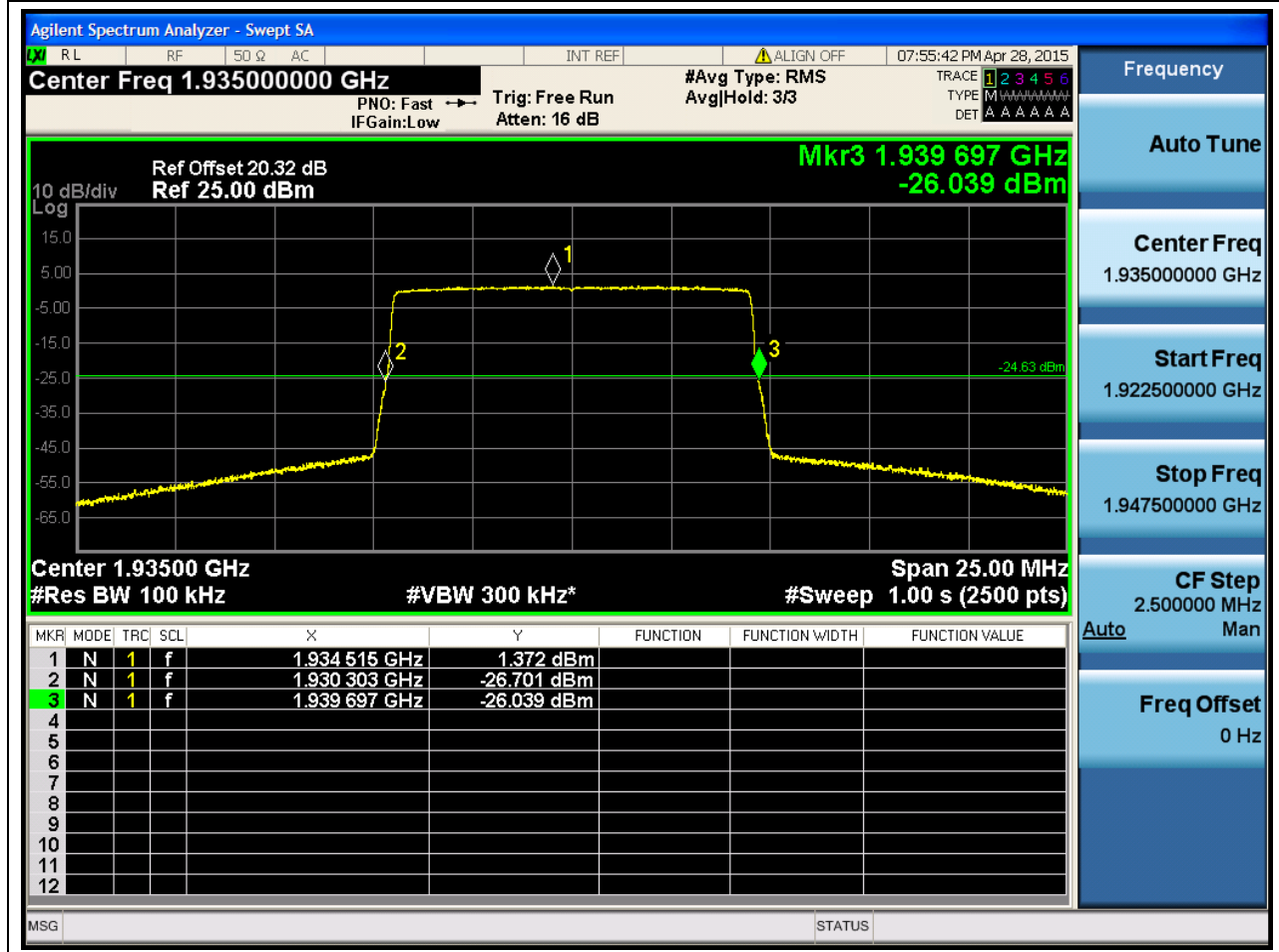
| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1987.5                | 12.5       | 26        | 0.1        | RMS       | 4.783744     | 5              | 1985.103104      | 1930              | 1989.886848      | 1990              | Pass    |





## 2.2.4 10M\_B

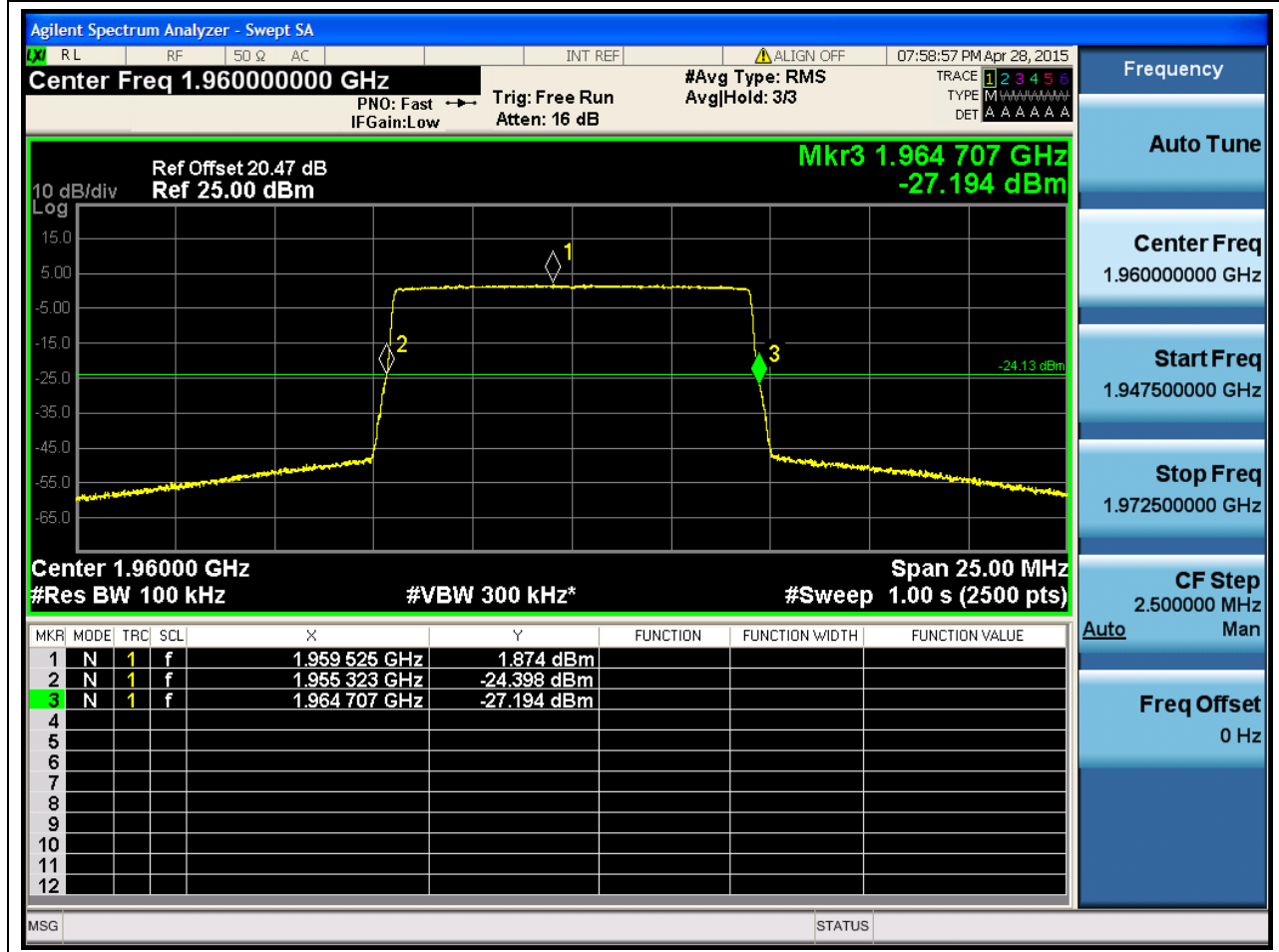
| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1935                  | 25         | 26        | 0.1        | RMS       | 9.393792     | 10             | 1930.303104      | 1930              | 1939.696896      | 1990              | Pass    |





## 2.2.5 10M\_M

| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Low er Limit [MHz] | Upper Freq [MHz] | Upp er Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|--------------------|------------------|--------------------|---------|
| 1960                  | 25         | 26        | 0.1        | RMS       | 9.383808     | 10             | 1955.323136      | 1930               | 1964.706944      | 1990               | Pass    |

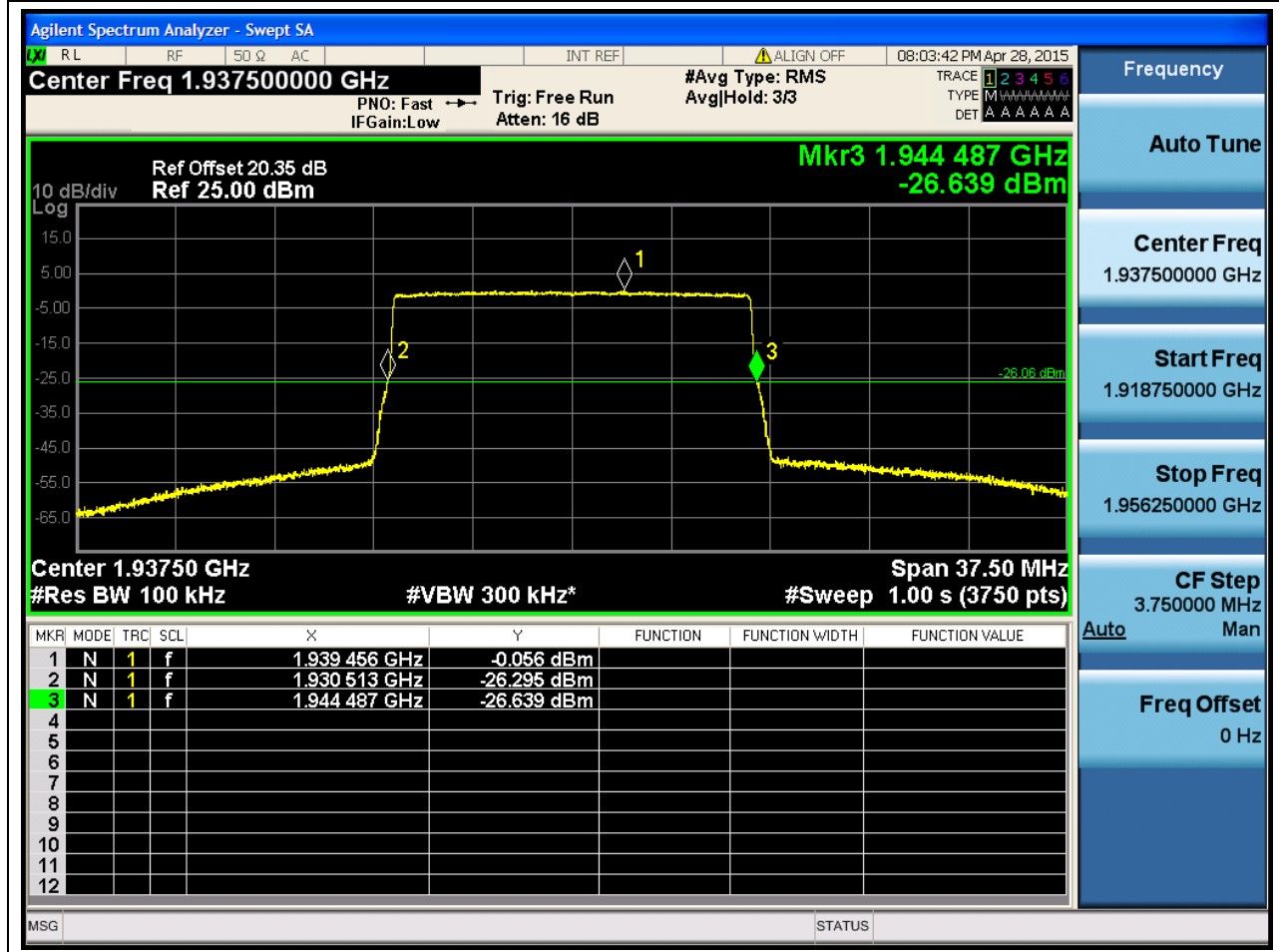






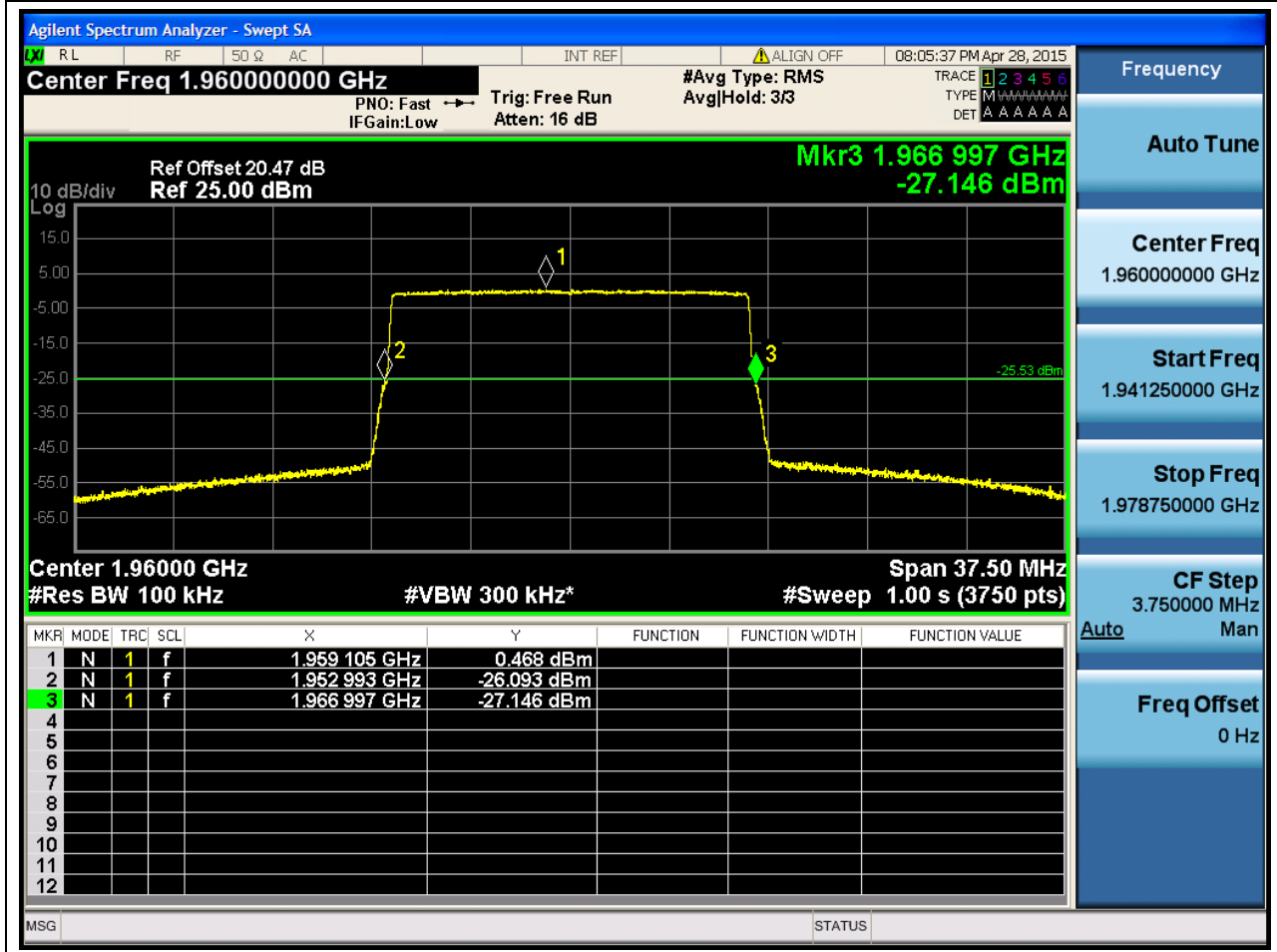
## 2.2.7 15M\_B

| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1937.5                | 37.5       | 26        | 0.1        | RMS       | 13.97376     | 15             | 1930.513152      | 1930              | 1944.486912      | 1990              | Pass    |



### 2.2.8 15M\_M

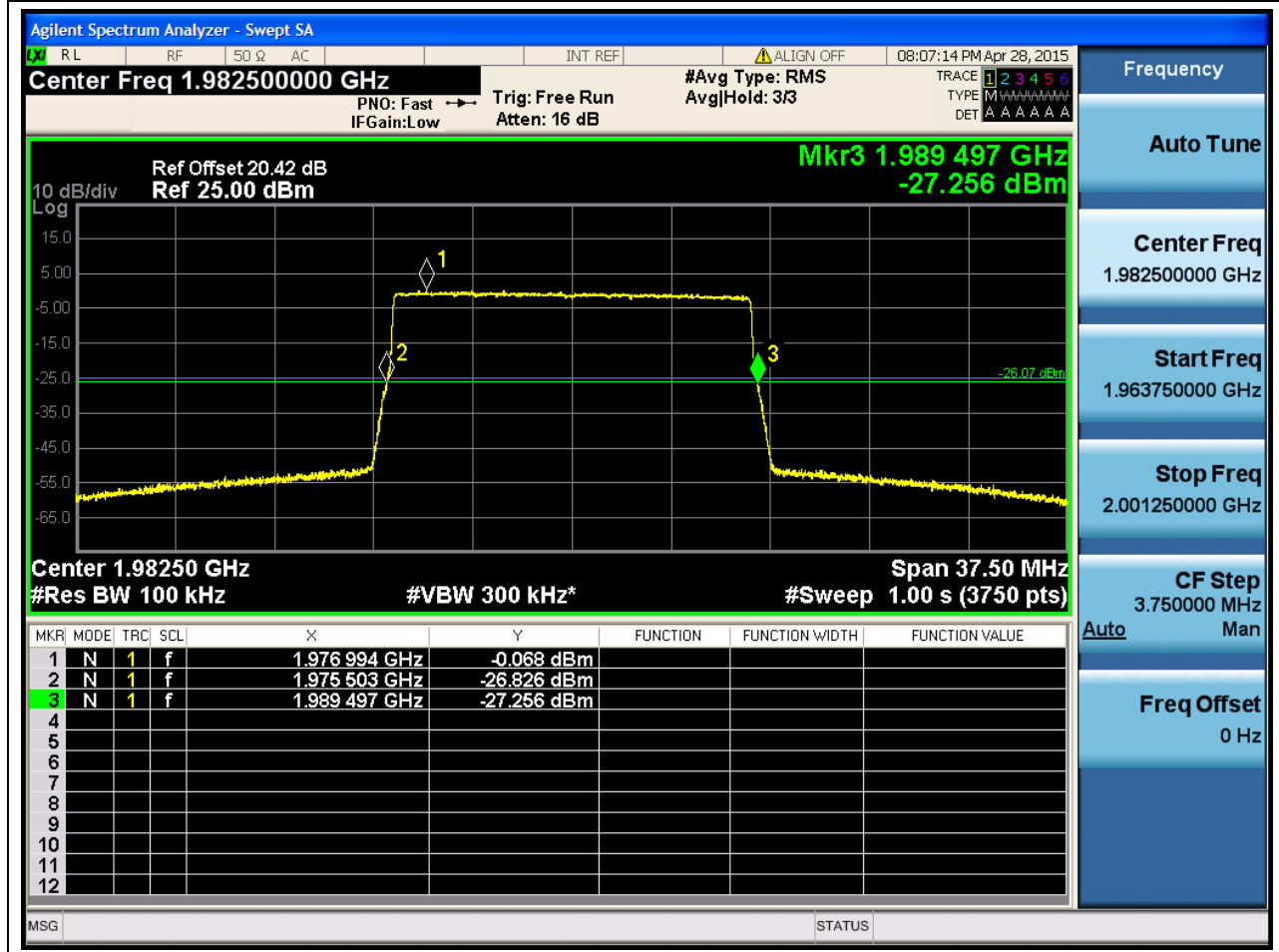
| Center<br>Frequency[M<br>Hz] | Spa<br>n<br>[MH<br>z] | nd<br>B<br>[dB<br>] | RB<br>W<br>[MH<br>z] | Detect<br>or | ndB BW<br>[MHz] | BW<br>Limi<br>t<br>[MH<br>z] | Lower<br>Freq<br>[MHz] | Low<br>er<br>Limit<br>[MHz<br>] | Upper<br>Freq<br>[MHz] | Upp<br>er<br>Limit<br>[MHz<br>] | Verdi<br>ct |
|------------------------------|-----------------------|---------------------|----------------------|--------------|-----------------|------------------------------|------------------------|---------------------------------|------------------------|---------------------------------|-------------|
| 1960                         | 37.5                  | 26                  | 0.1                  | RMS          | 14.0037<br>12   | 15                           | 1952.9931<br>52        | 1930                            | 1966.9968<br>64        | 1990                            | Pass        |





## 2.2.9 15M\_T

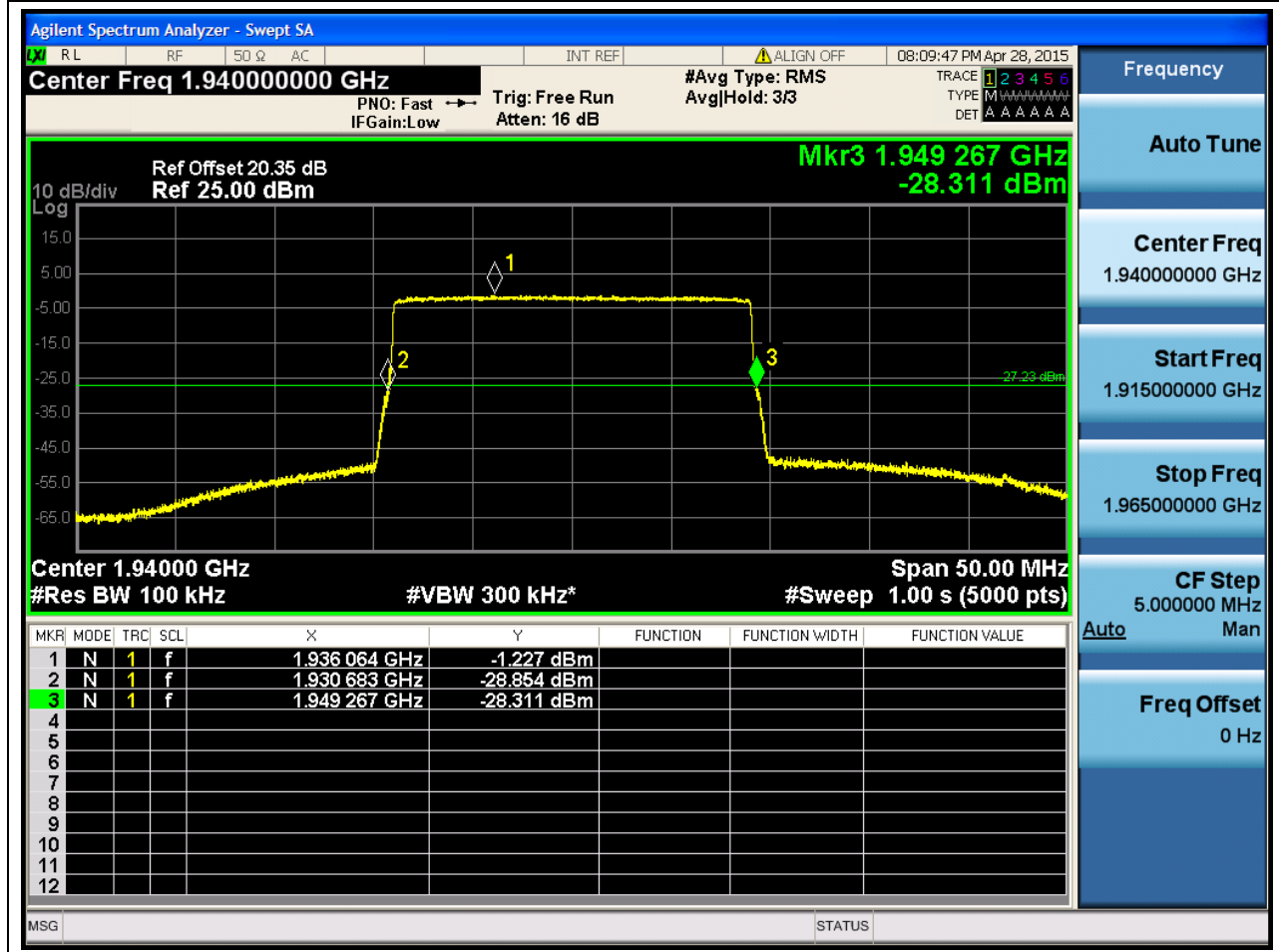
| Center Frequency[MHz] | Span [MHz] | ndB [dB] | RBW [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|----------|-----------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1982.5                | 37.5       | 26       | 0.1       | RMS       | 13.993728    | 15             | 1975.503104      | 1930              | 1989.496832      | 1990              | Pass    |





## 2.2.10 20M\_B

| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1940                  | 50         | 26        | 0.1        | RMS       | 18.58368     | 20             | 1930.683136      | 1930              | 1949.266816      | 1990              | Pass    |

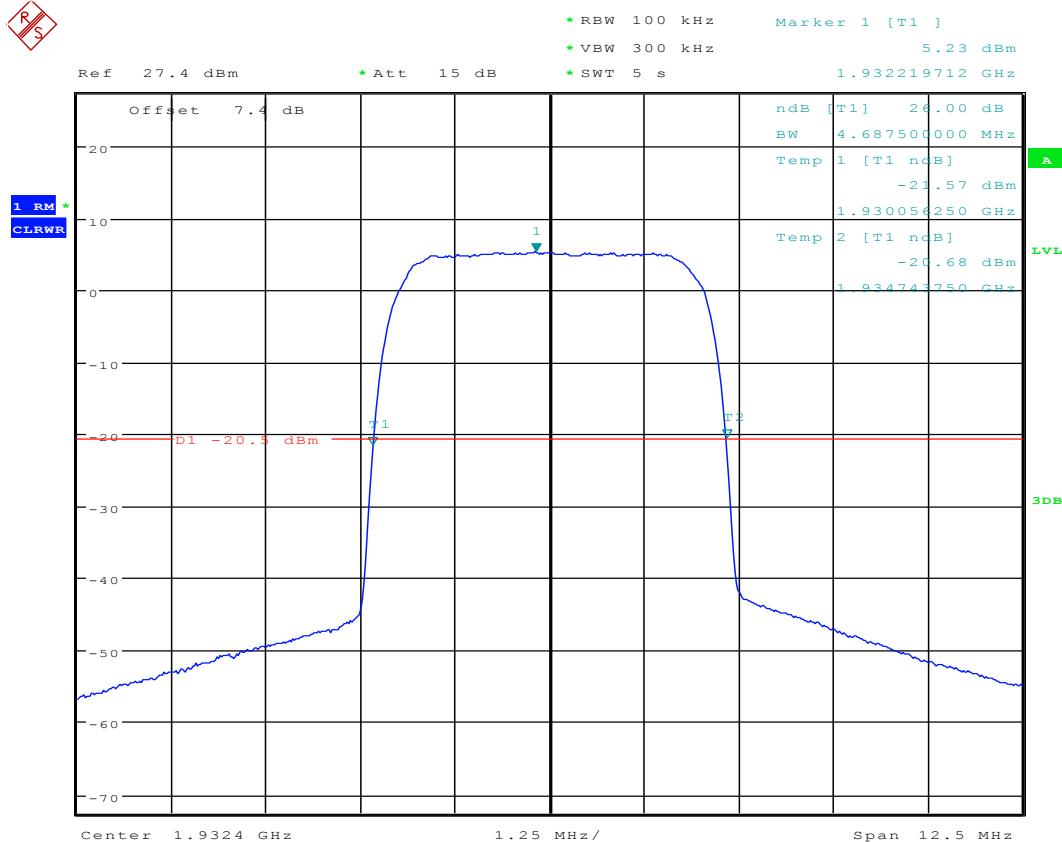








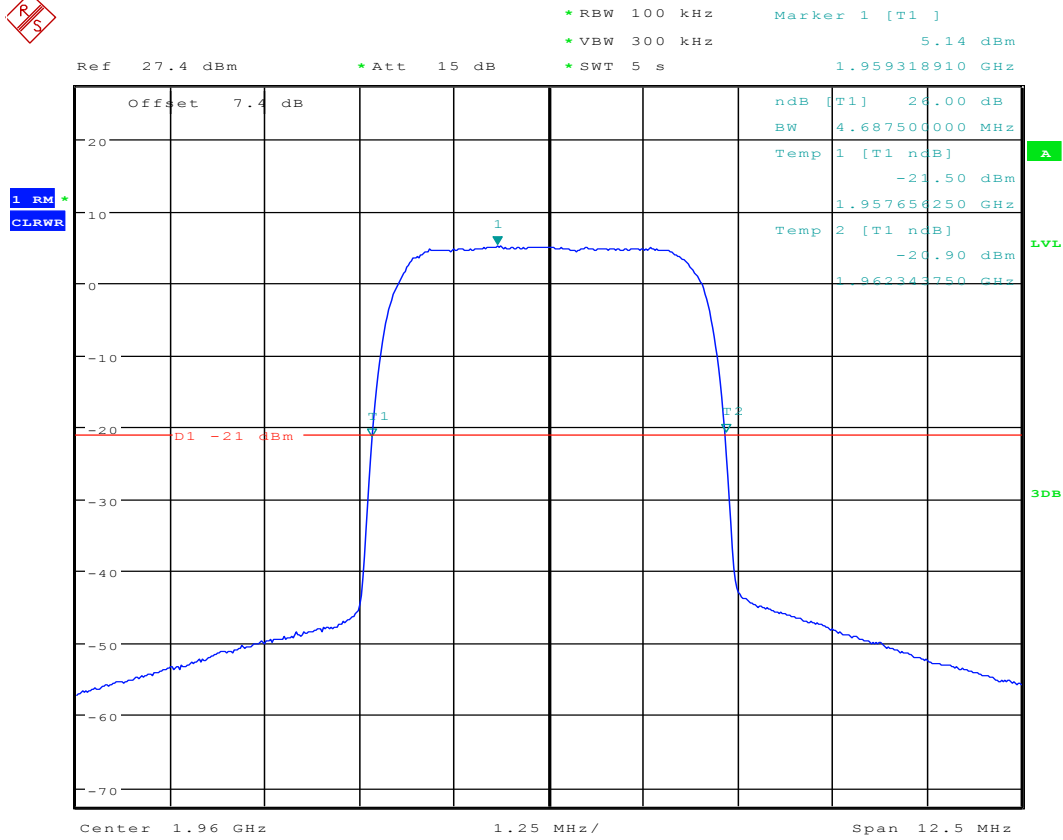
## 2.2.13 1U\_B



Date: 30.OCT.2015 10:33:55



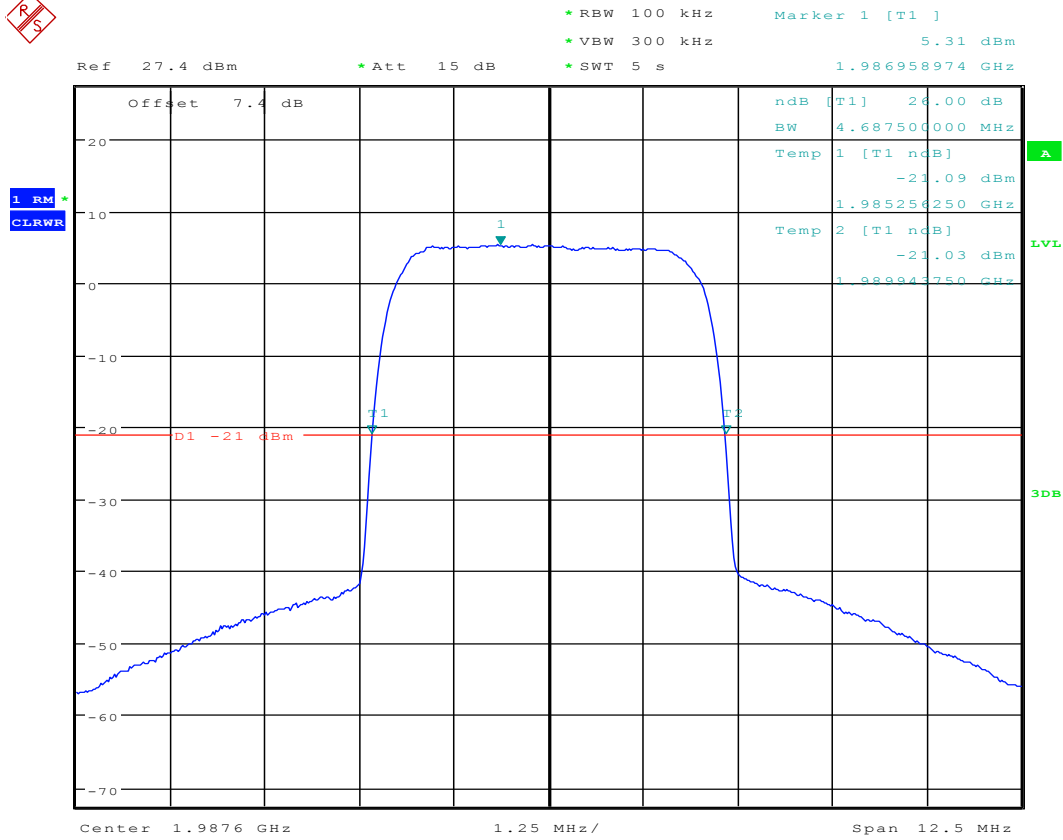
## 2.2.14 1U\_M



Date: 30.OCT.2015 10:40:11



## 2.2.15 1U\_T



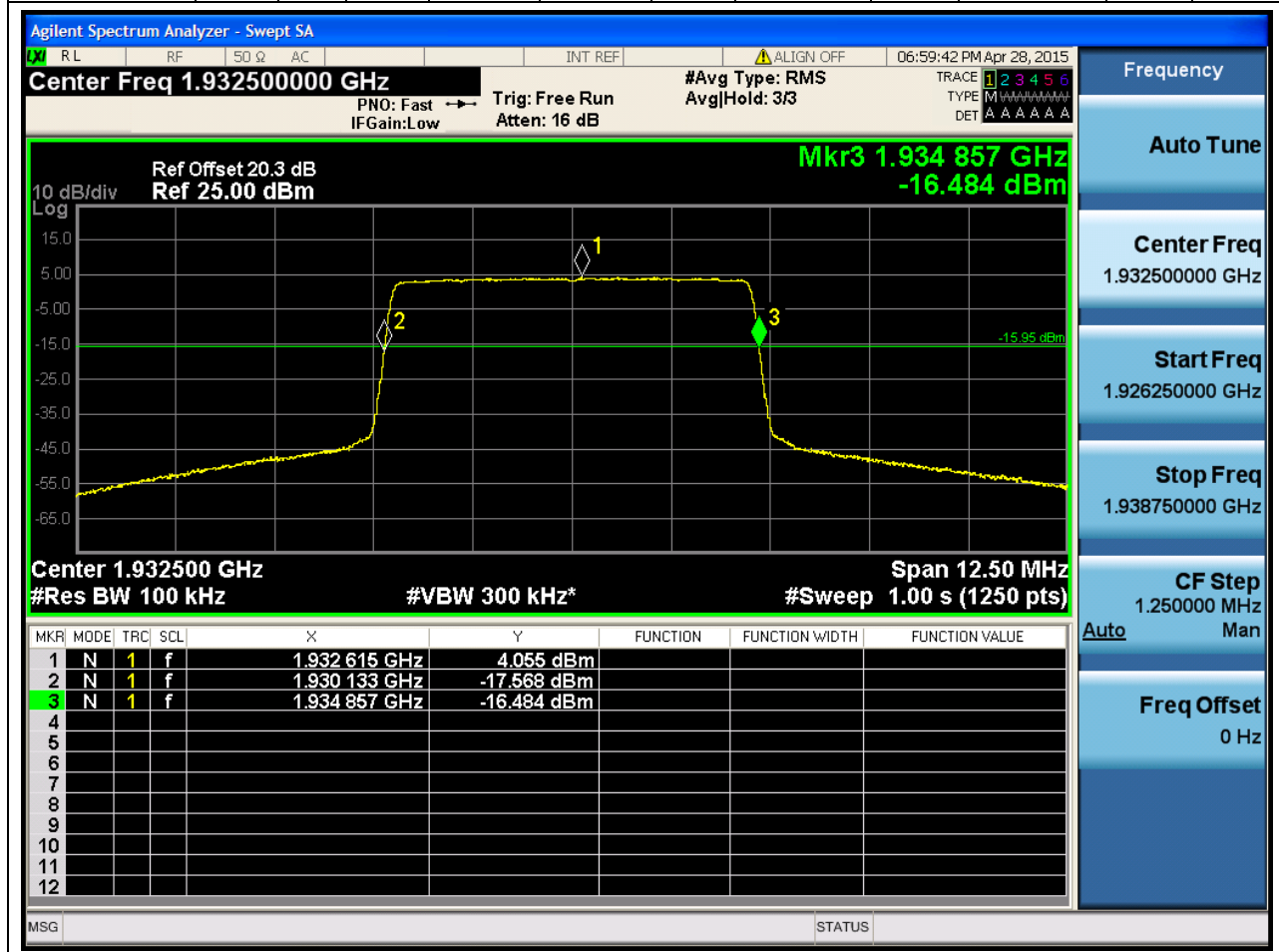
Date: 30.OCT.2015 10:57:27



## 2.3 Emission Bandwidth(-20dBc)

### 2.3.1 5M\_B

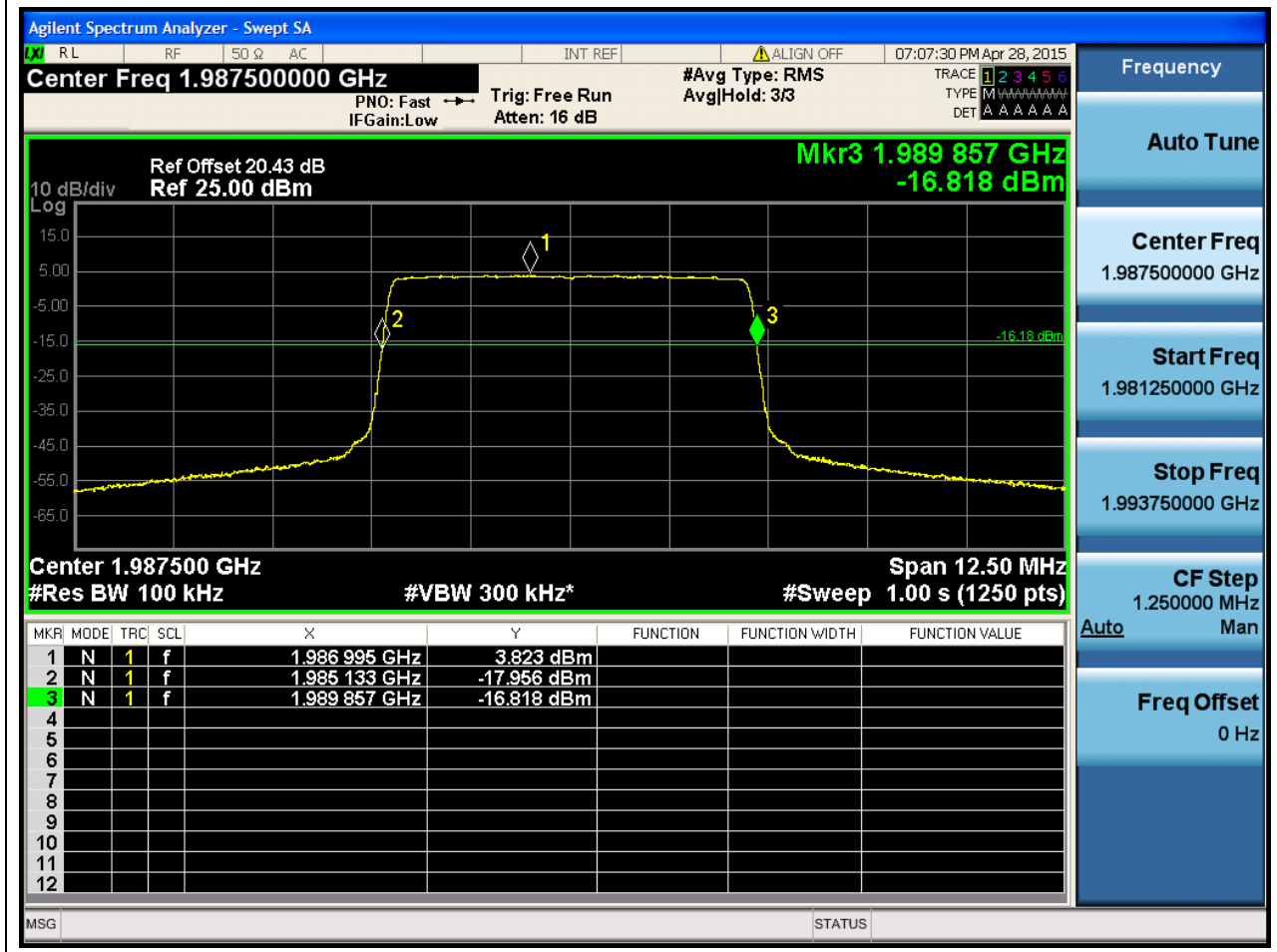
| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1932.5                | 12.5       | 20        | 0.1        | RMS       | 4.7237<br>12 | 5              | 1930.133<br>12   | 1930              | 1934.8568<br>32  | 1990              | Pass    |





### 2.3.3 5M\_T

| Center<br>Frequency[M<br>Hz] | Spa<br>n<br>[MH<br>z] | nd<br>B<br>[dB<br>] | RB<br>W<br>[MH<br>z] | Detect<br>or | ndB<br>BW<br>[MHz] | BW<br>Limi<br>t<br>[MH<br>z] | Lower<br>Freq<br>[MHz] | Low<br>er<br>Limit<br>[MHz<br>] | Upper<br>Freq<br>[MHz] | Upp<br>er<br>Limit<br>[MHz<br>] | Verdi<br>ct |
|------------------------------|-----------------------|---------------------|----------------------|--------------|--------------------|------------------------------|------------------------|---------------------------------|------------------------|---------------------------------|-------------|
| 1987.5                       | 12.5                  | 20                  | 0.1                  | RMS          | 4.7238<br>4        | 5                            | 1985.1330<br>56        | 1930                            | 1989.8568<br>96        | 1990                            | Pass        |

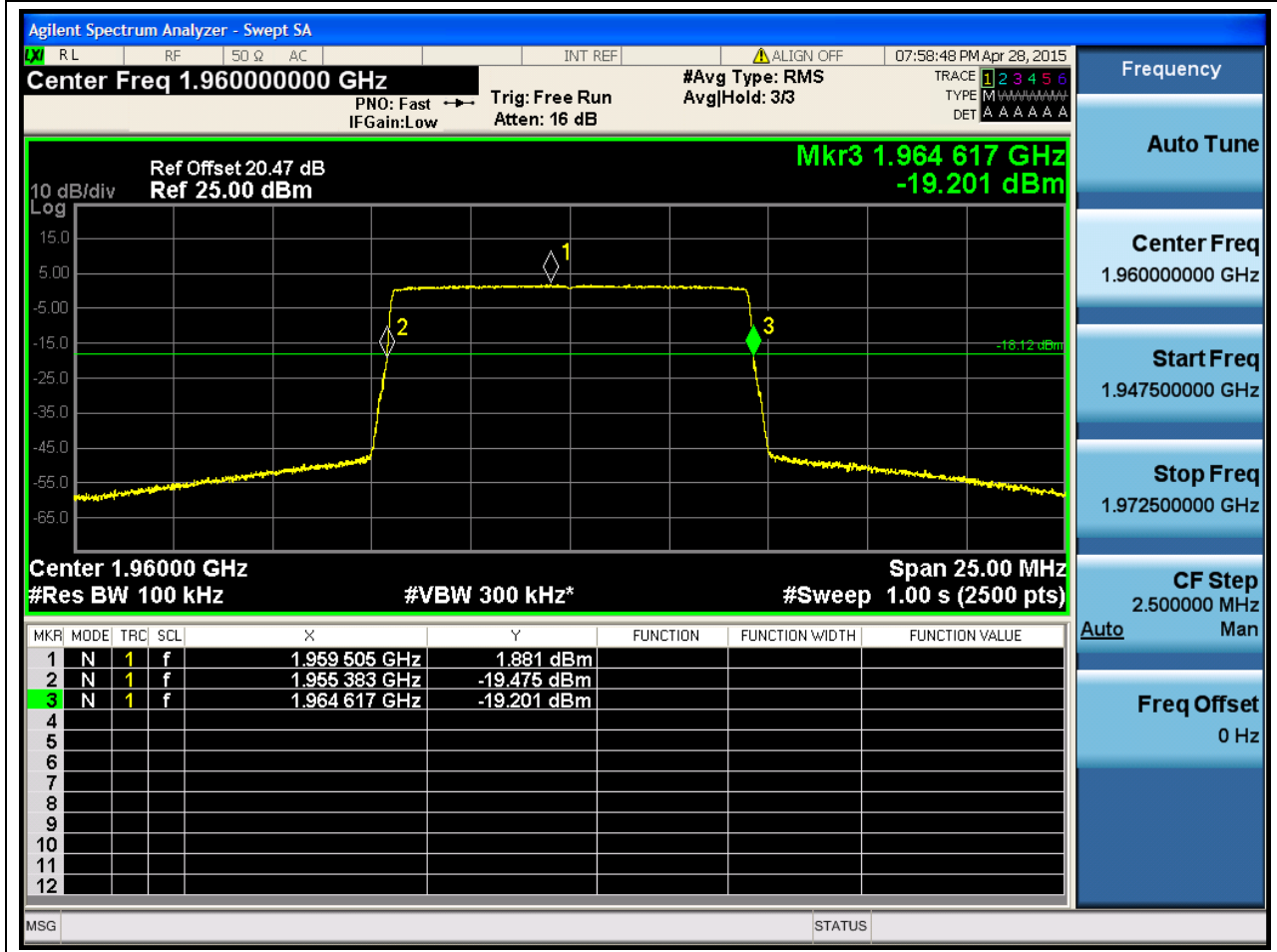






### 2.3.5 10M\_M

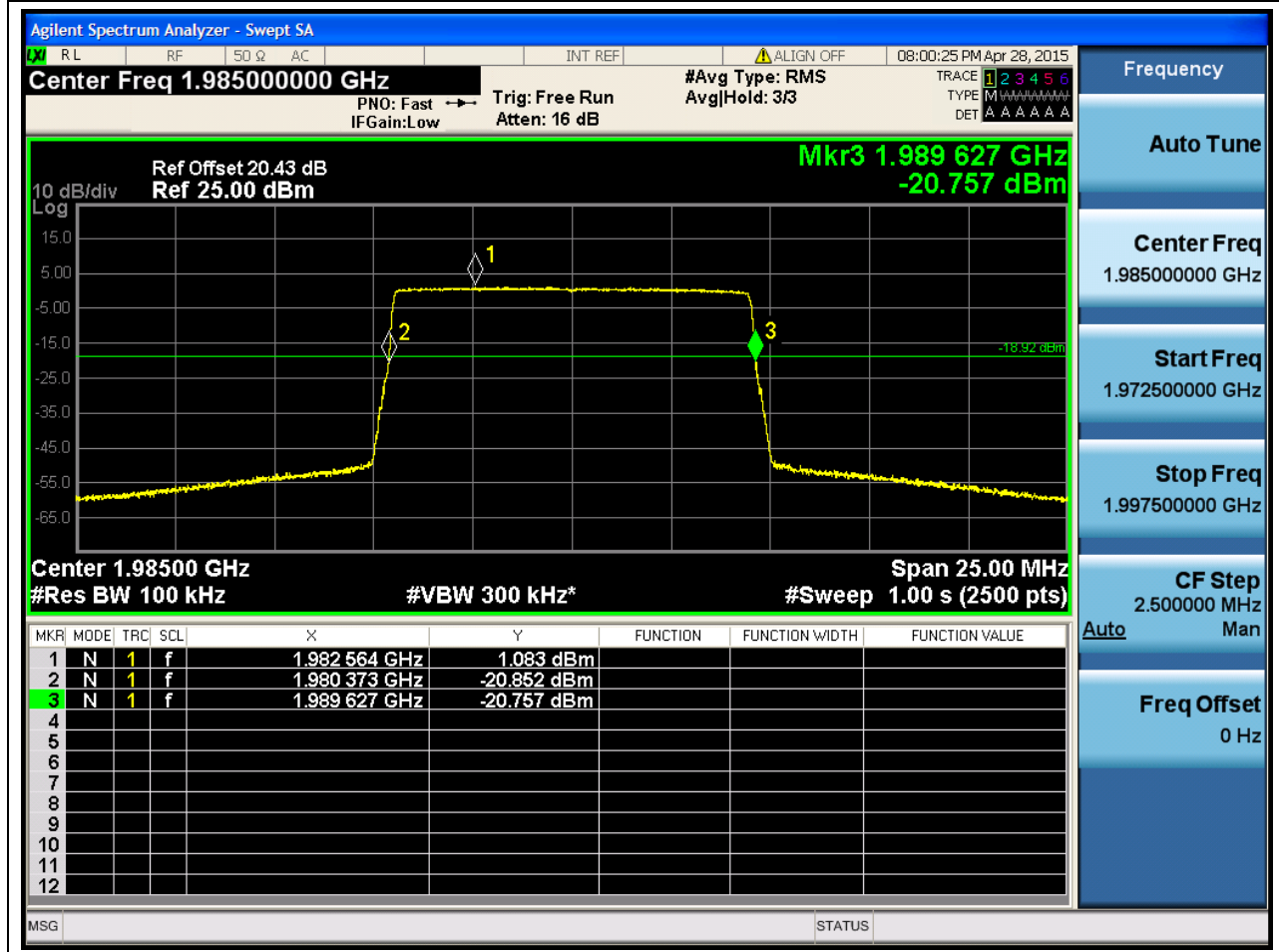
| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RB W [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|------------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1960                  | 25         | 20        | 0.1        | RMS       | 9.233664     | 10             | 1955.383168      | 1930              | 1964.616832      | 1990              | Pass    |





### 2.3.6 10M\_T

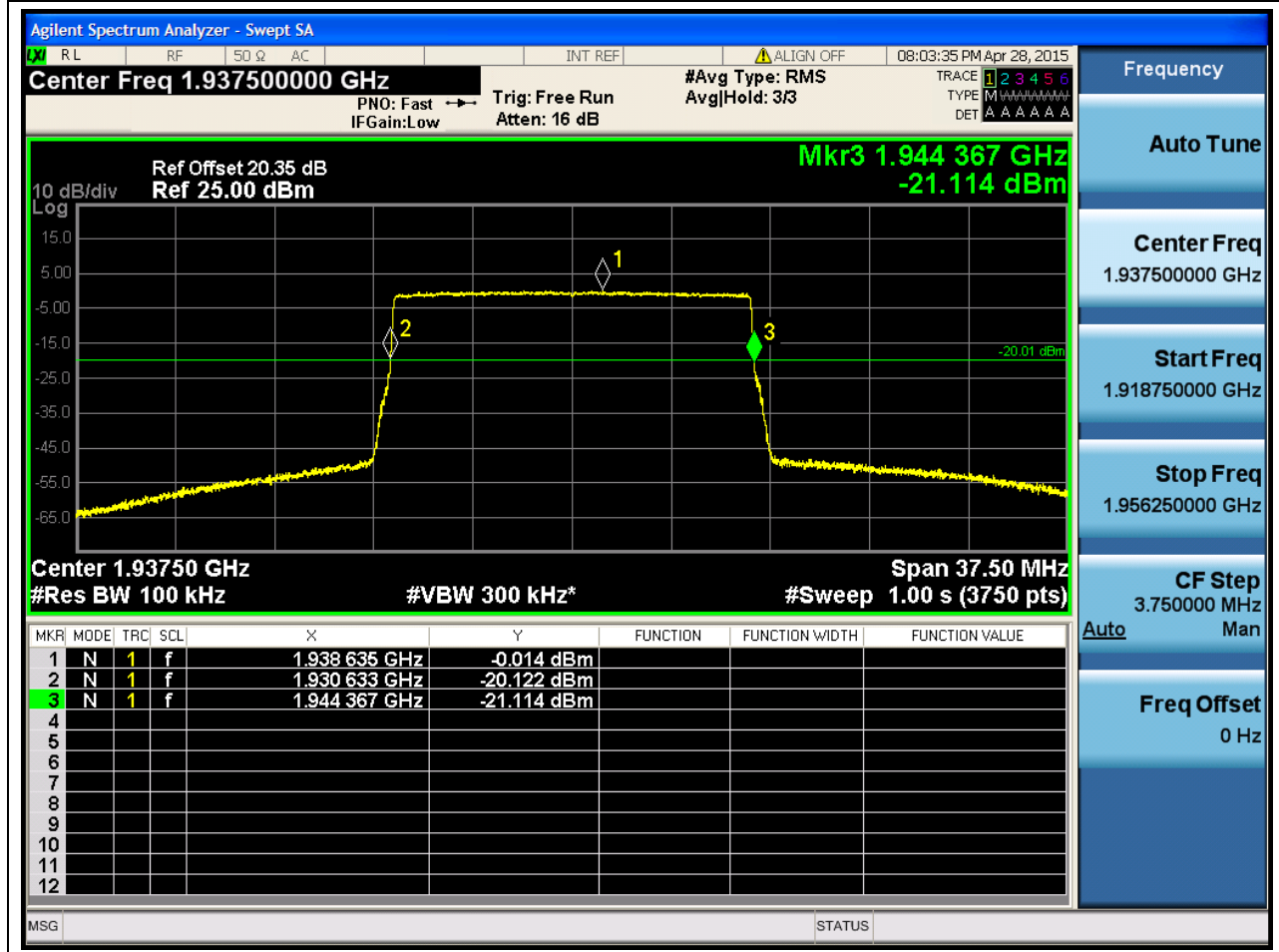
| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RBW [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|-----------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1985                  | 25         | 20        | 0.1       | RMS       | 9.25376      | 10             | 1980.37312       | 1930              | 1989.62688       | 1990              | Pass    |





### 2.3.7 15M\_B

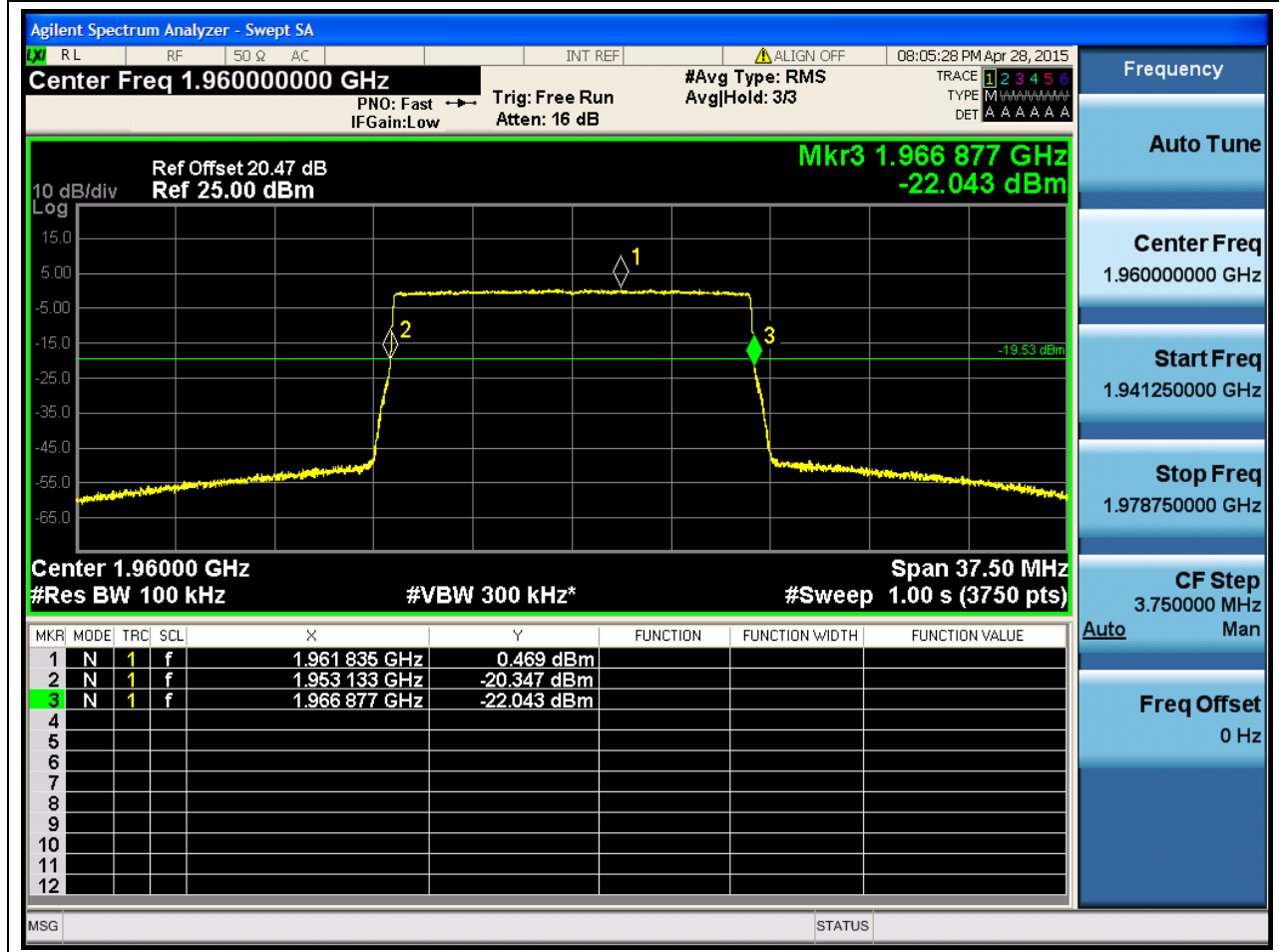
| Center Frequency[MHz] | Span [MHz] | ndB [dB] | RBW [MHz] | Detect or | ndB BW [MHz]  | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|----------|-----------|-----------|---------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1937.5                | 37.5       | 20       | 0.1       | RMS       | 13.7336<br>32 | 15             | 1930.6332<br>16  | 1930              | 1944.3668<br>48  | 1990              | Pass    |





### 2.3.8 15M\_M

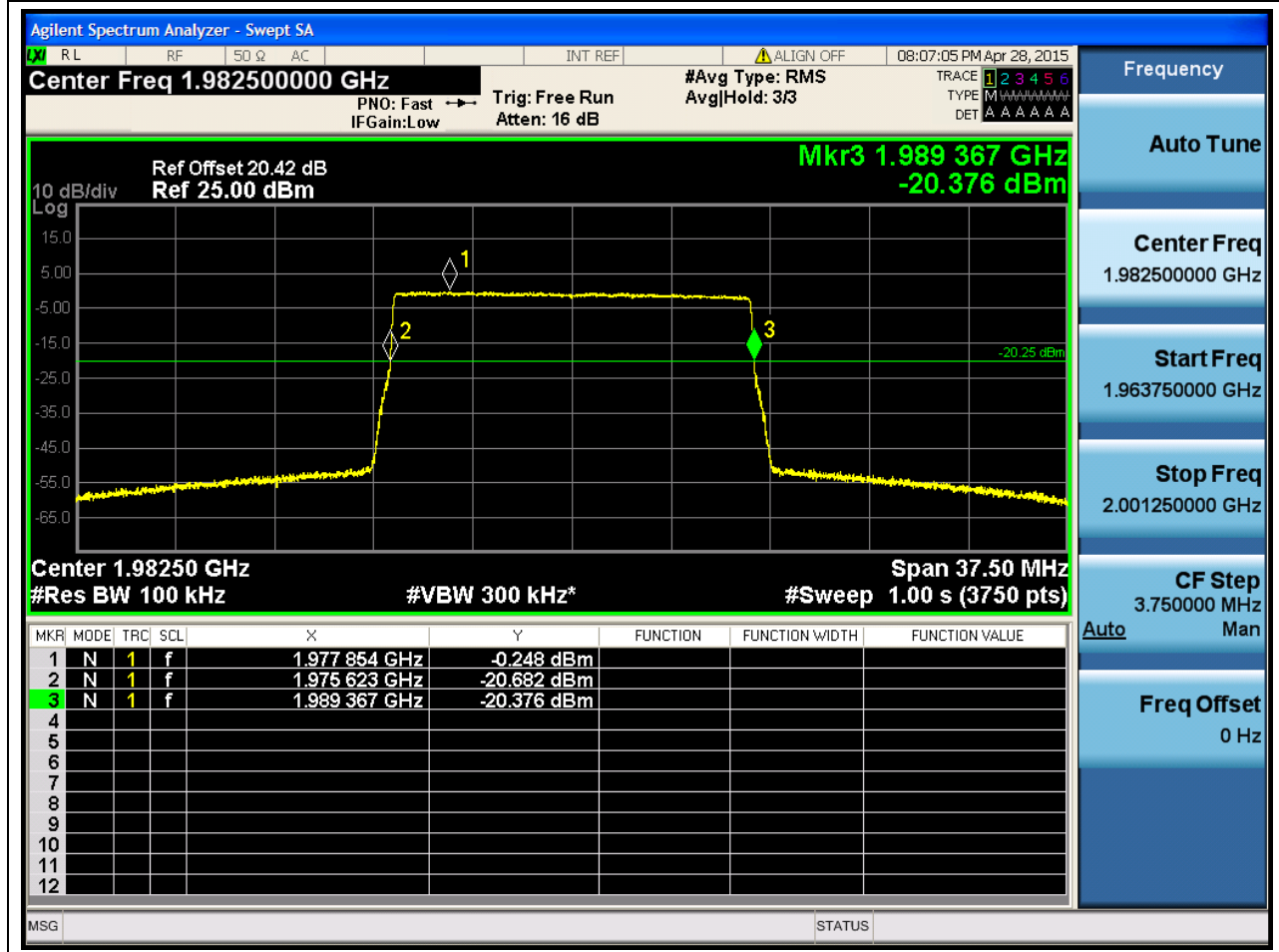
| Center Frequency[MHz] | Span [MHz] | ndB [dB] | RBW [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|----------|-----------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1960                  | 37.5       | 20       | 0.1       | RMS       | 13.743616    | 15             | 1953.133184      | 1930              | 1966.8768        | 1990              | Pass    |





### 2.3.9 15M\_T

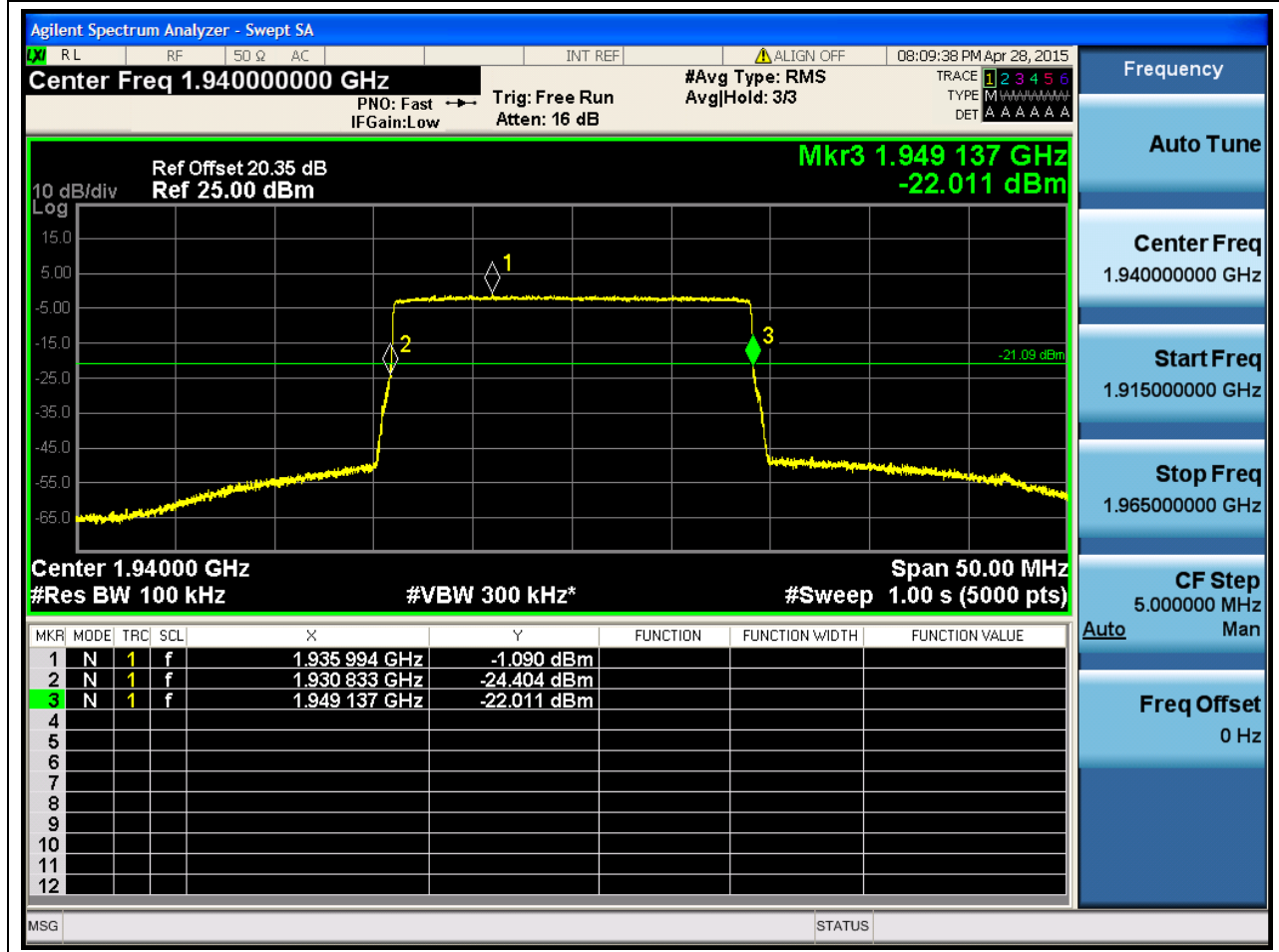
| Center Frequency[MHz] | Span [MHz] | ndB [dB] | RBW [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|----------|-----------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1982.5                | 37.5       | 20       | 0.1       | RMS       | 13.743616    | 15             | 1975.623168      | 1930              | 1989.366784      | 1990              | Pass    |





### 2.3.10 20M\_B

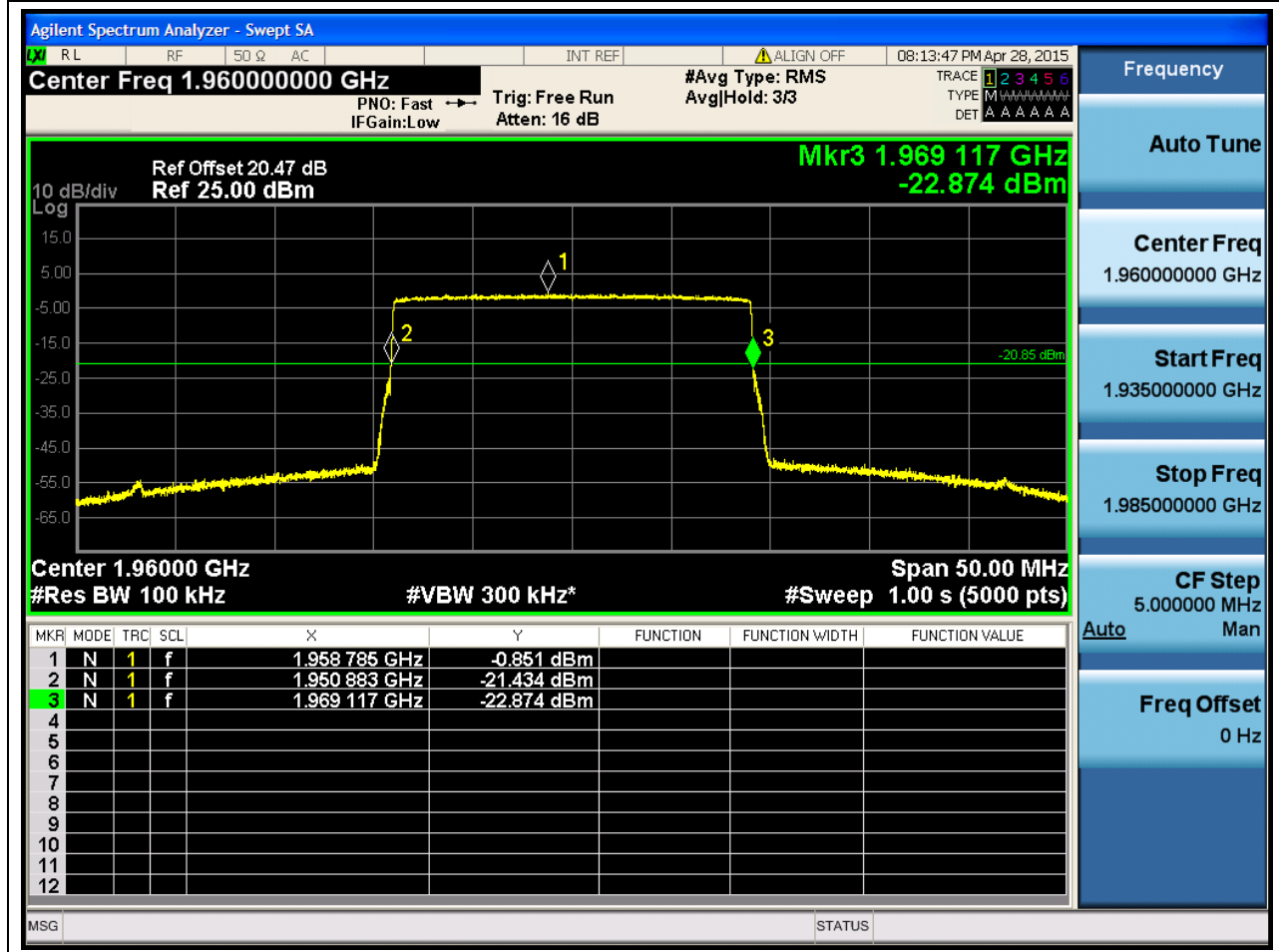
| Center Frequency[MHz] | Span [MHz] | ndB [dB] | RBW [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|----------|-----------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1940                  | 50         | 20       | 0.1       | RMS       | 18.303616    | 20             | 1930.833152      | 1930              | 1949.136768      | 1990              | Pass    |





### 2.3.11 20M\_M

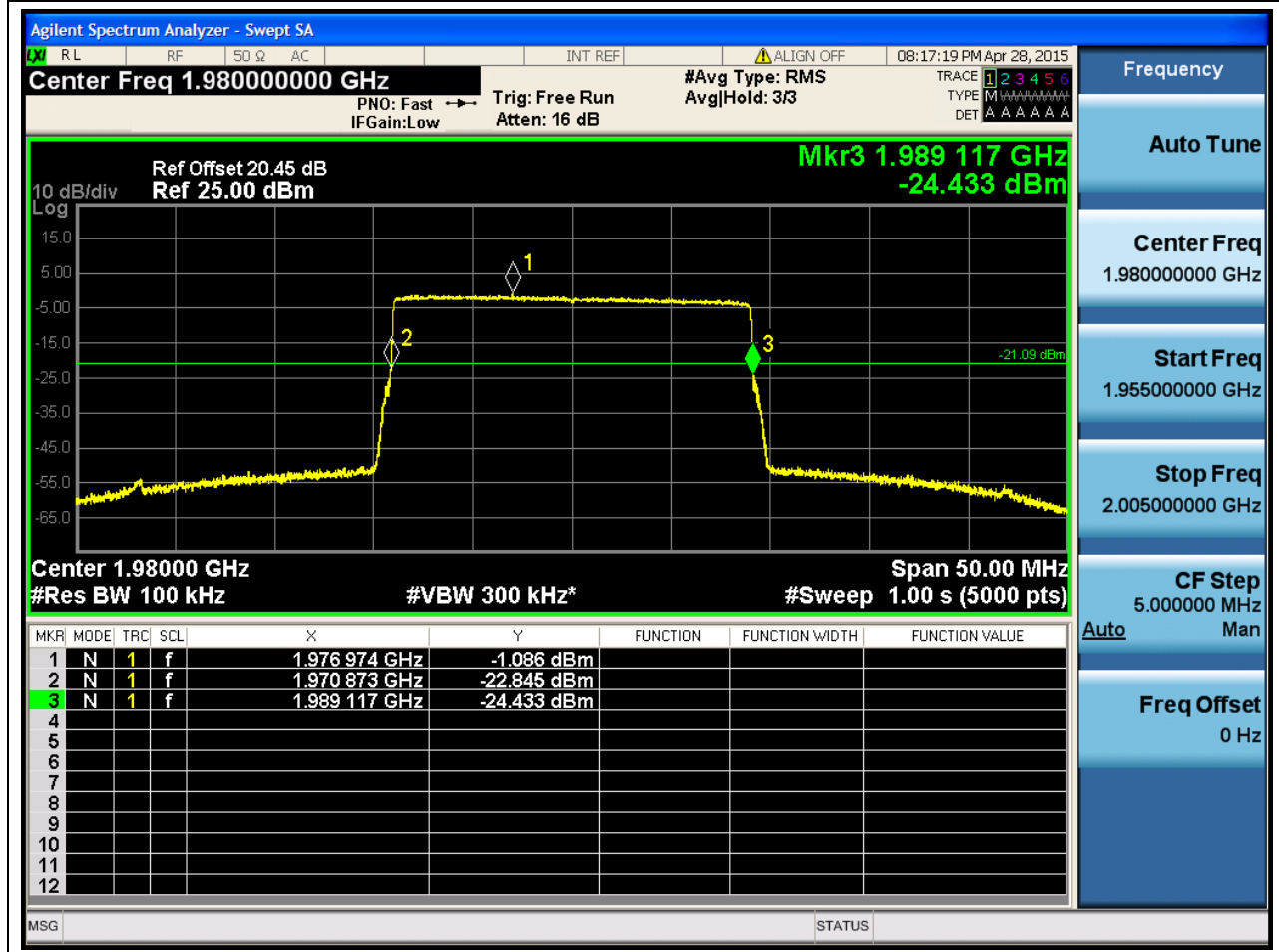
| Center Frequency[MHz] | Span [MHz] | nd B [dB] | RBW [MHz] | Detector | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|-----------|-----------|----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1960                  | 50         | 20        | 0.1       | RMS      | 18.2336      | 20             | 1950.8832        | 1930              | 1969.1168        | 1990              | Pass    |





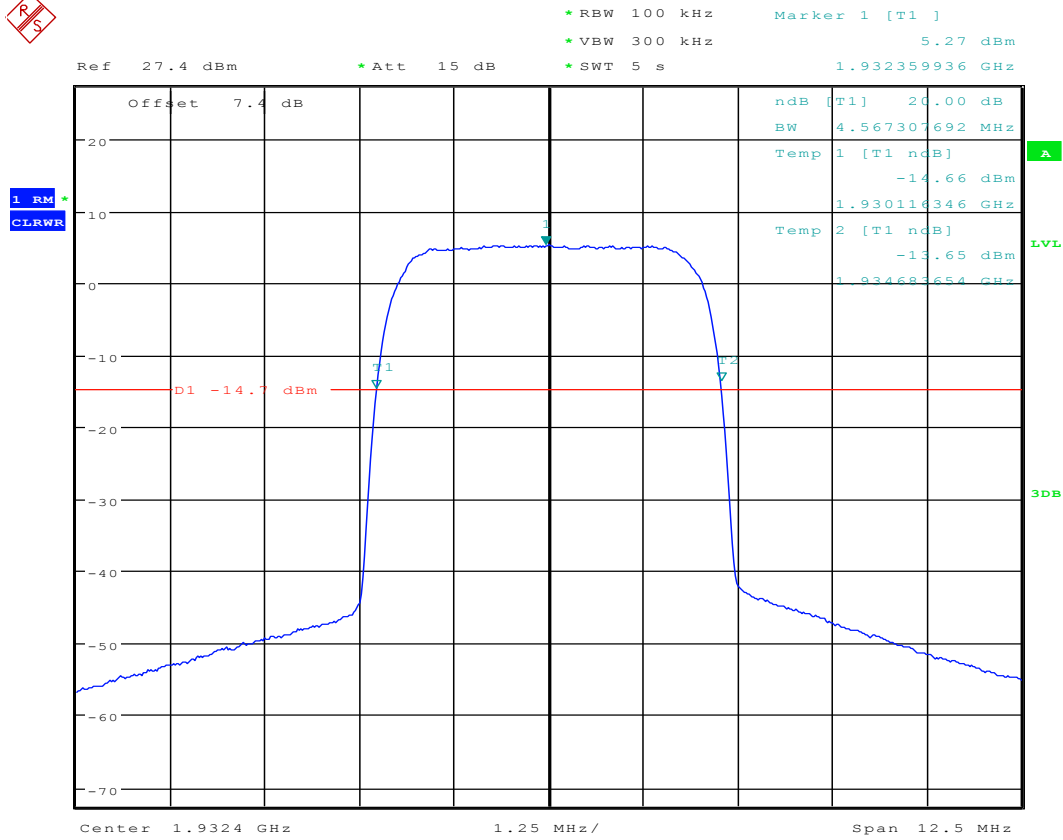
### 2.3.12 20M\_T

| Center Frequency[MHz] | Span [MHz] | ndB [dB] | RBW [MHz] | Detect or | ndB BW [MHz] | BW Limit [MHz] | Lower Freq [MHz] | Lower Limit [MHz] | Upper Freq [MHz] | Upper Limit [MHz] | Verdict |
|-----------------------|------------|----------|-----------|-----------|--------------|----------------|------------------|-------------------|------------------|-------------------|---------|
| 1980                  | 50         | 20       | 0.1       | RMS       | 18.243584    | 20             | 1970.873216      | 1930              | 1989.1168        | 1990              | Pass    |





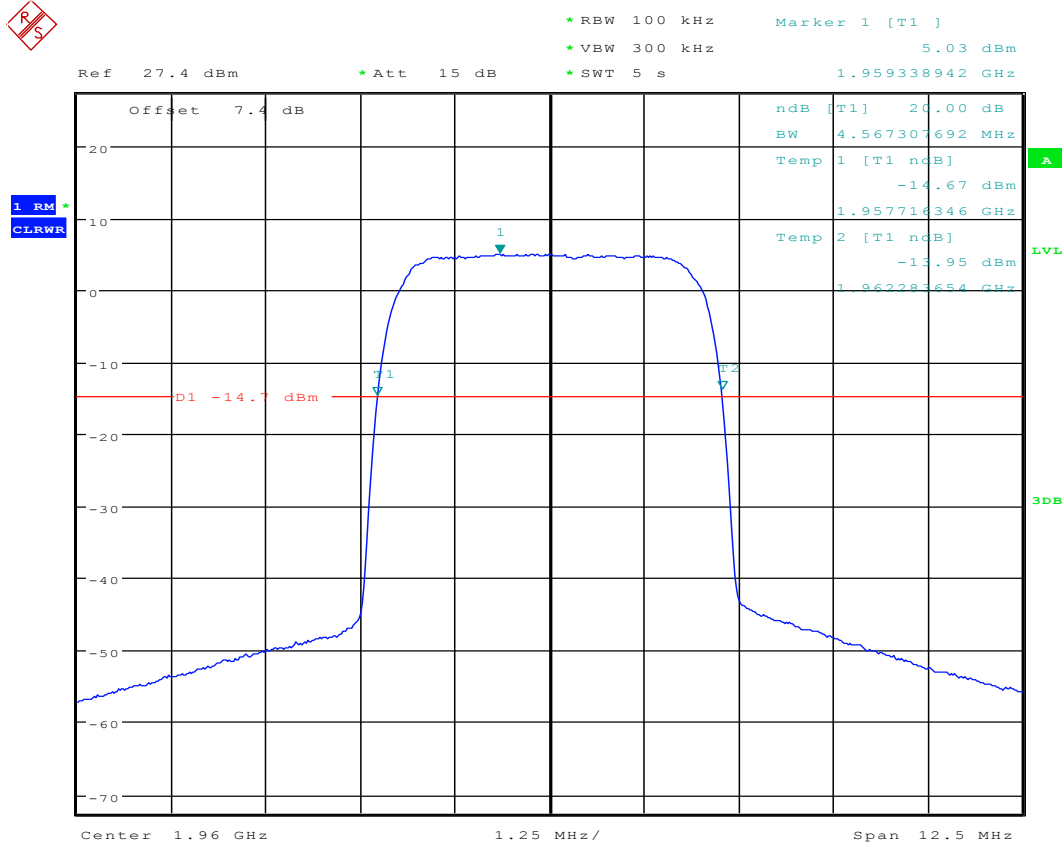
### 2.3.13 1U\_B



Date: 30.OCT.2015 10:35:06



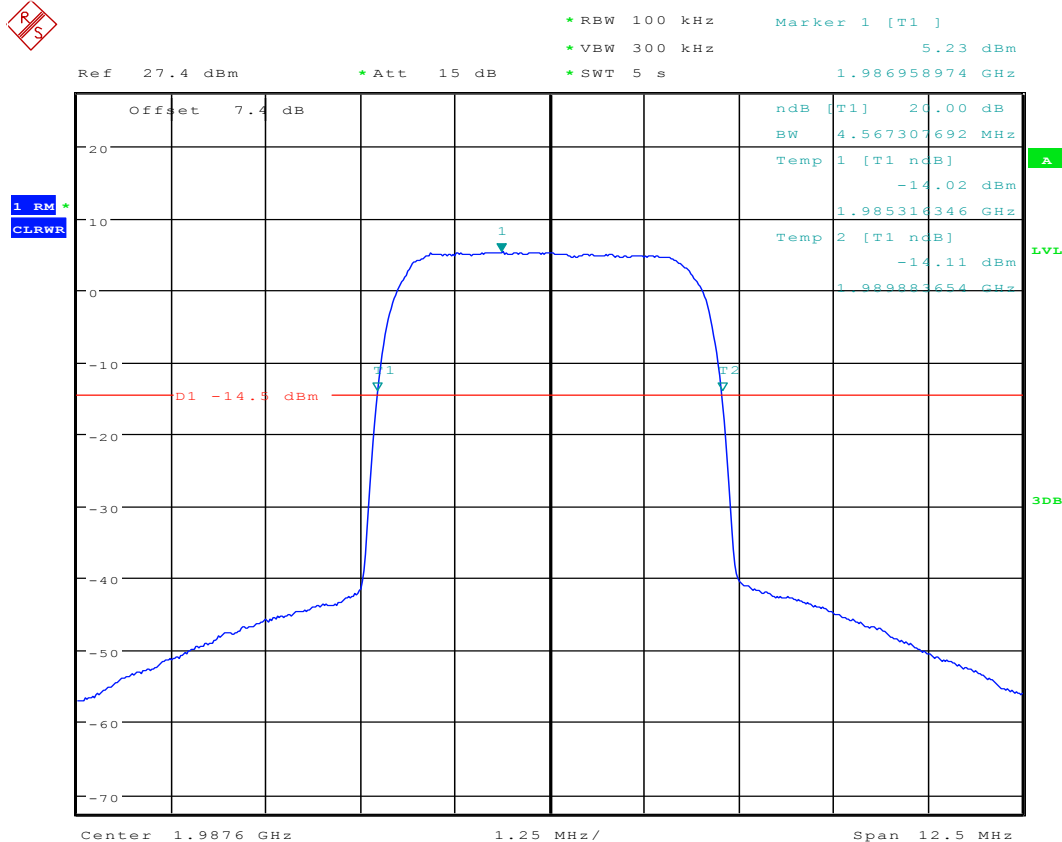
## 2.3.14 1U\_M



Date: 30.OCT.2015 10:39:07



## 2.3.15 1U\_T



Date: 30.OCT.2015 10:56:40



## Appendix C2: Band Edges Compliance



## 1 Result Table

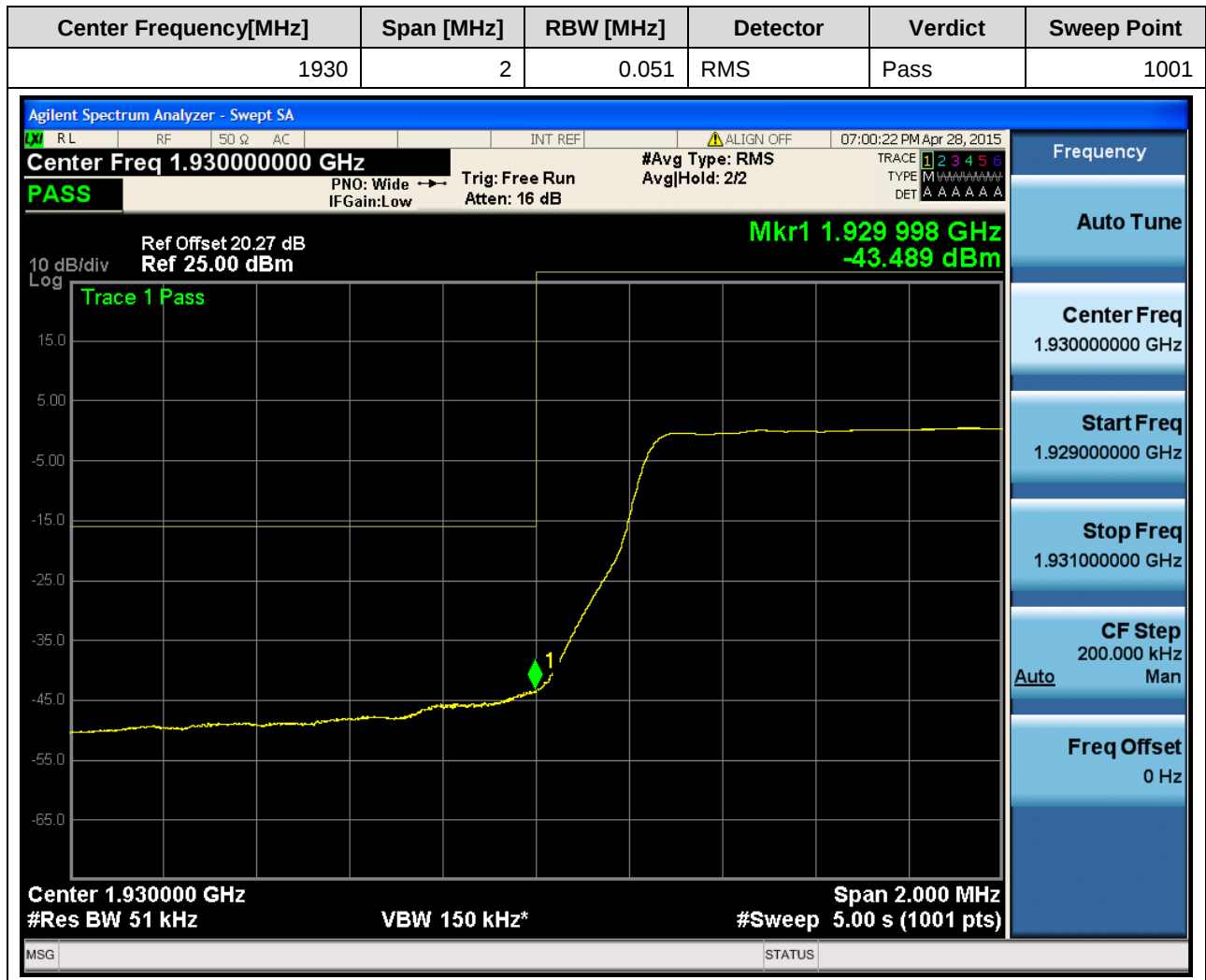
NOTE: The offset of measurement filter -3dB point may be considered when identifying the maximum emission for e.g. the CDMA, WCDMA, WiMAX, LTE systems.

| EUT Conf. | Maximum Emission [dBm] | Verdict |
|-----------|------------------------|---------|
| 5M_B      | <-13                   | Pass    |
| 5M_T      | <-13                   | Pass    |
| 20M_B     | <-13                   | Pass    |
| 20M_T     | <-13                   | Pass    |
| 1U_B      | <-13                   | Pass    |
| 1U_T      | <-13                   | Pass    |
| 1U1L5M_B  | <-13                   | Pass    |
| 1U1L5M_T  | <-13                   | Pass    |



## 2 Test Plot

### 2.1 5M\_B



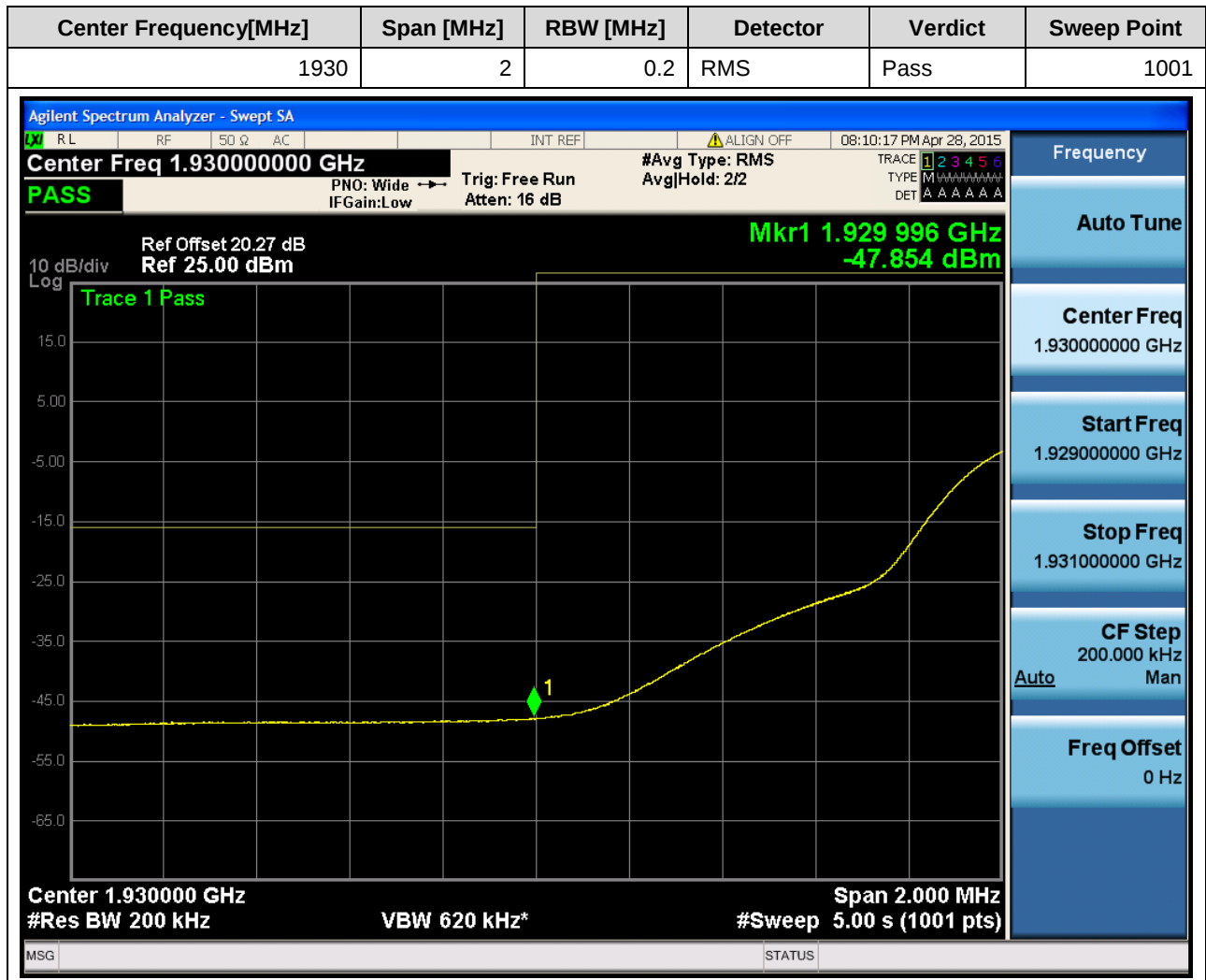


## 2.2 5M\_T



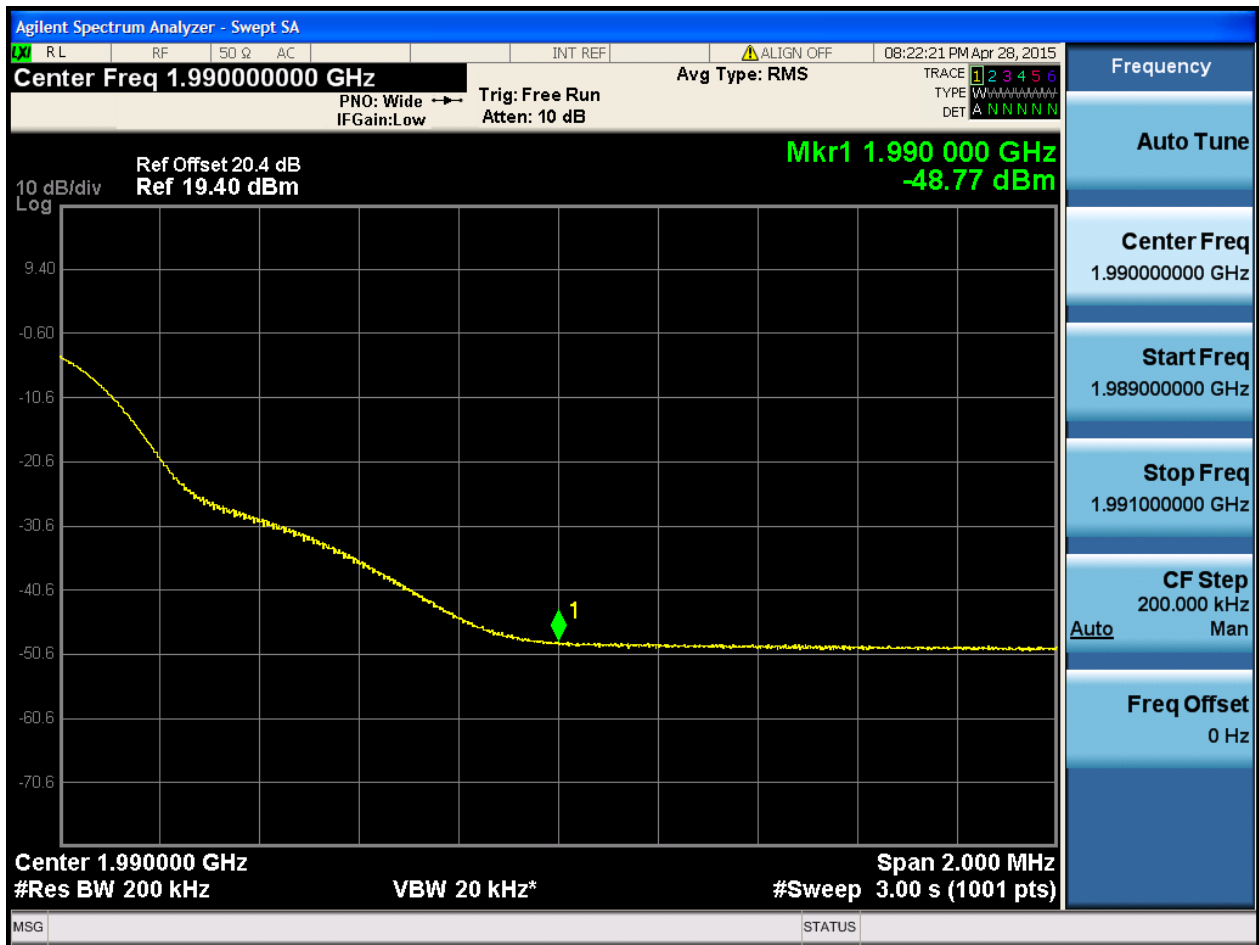


## 2.3 20M\_B



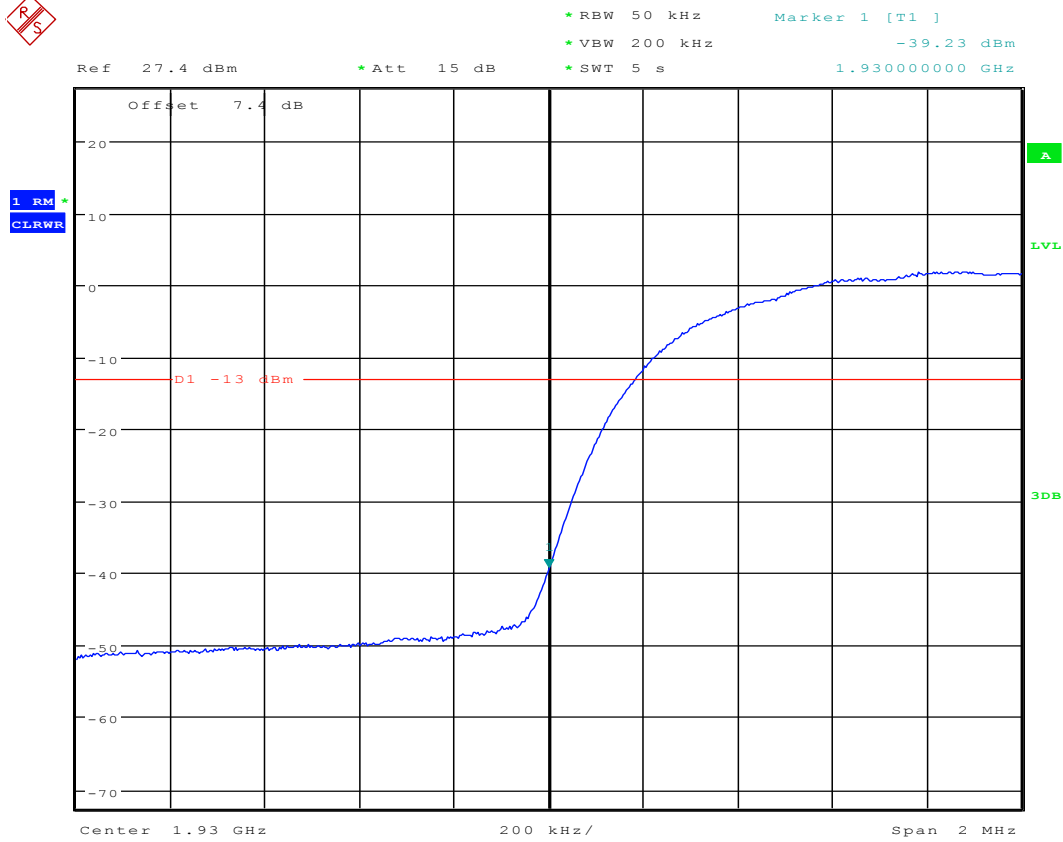


## 2.4 20M\_T





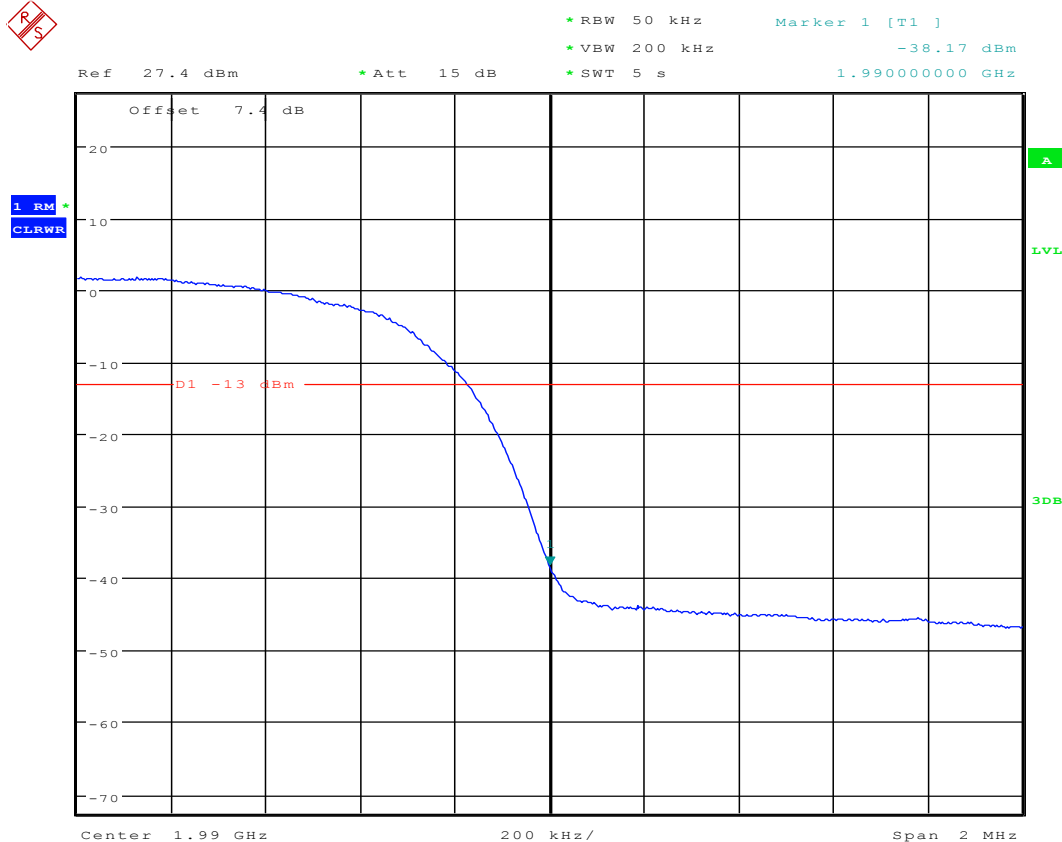
## 2.5 1U\_B



Date: 30.OCT.2015 11:19:42



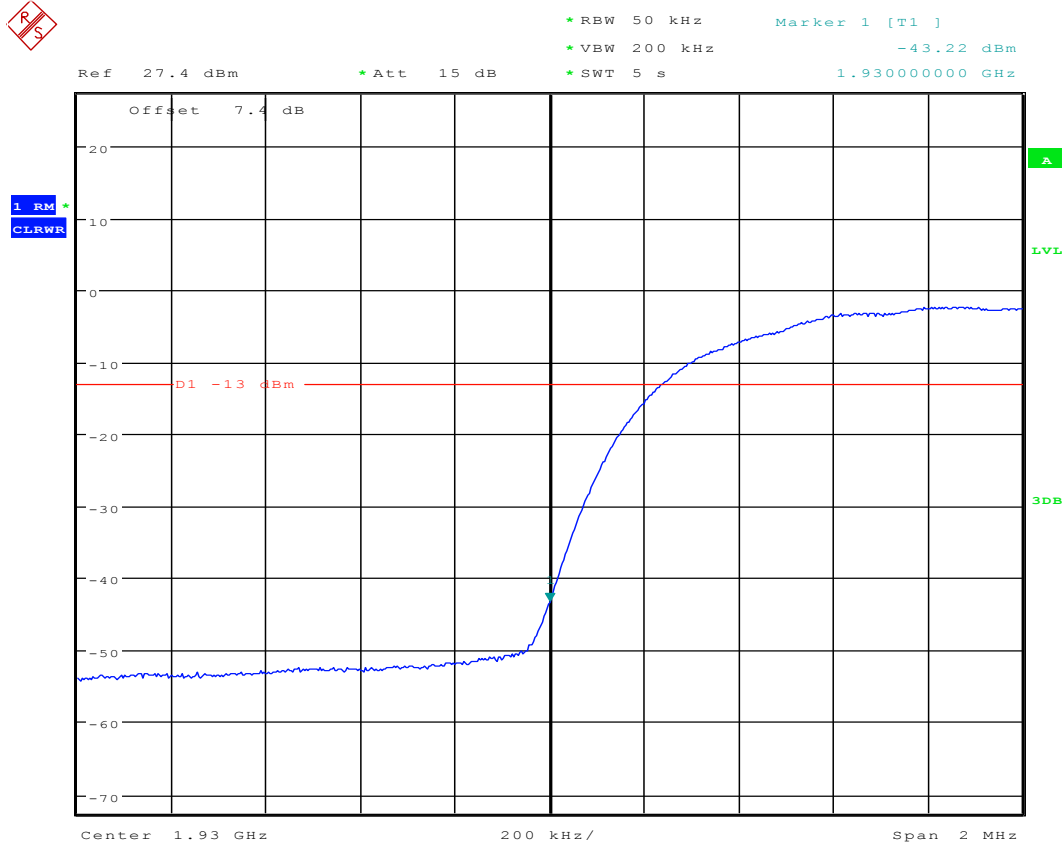
## 2.6 1U\_T



Date: 30.OCT.2015 11:15:56

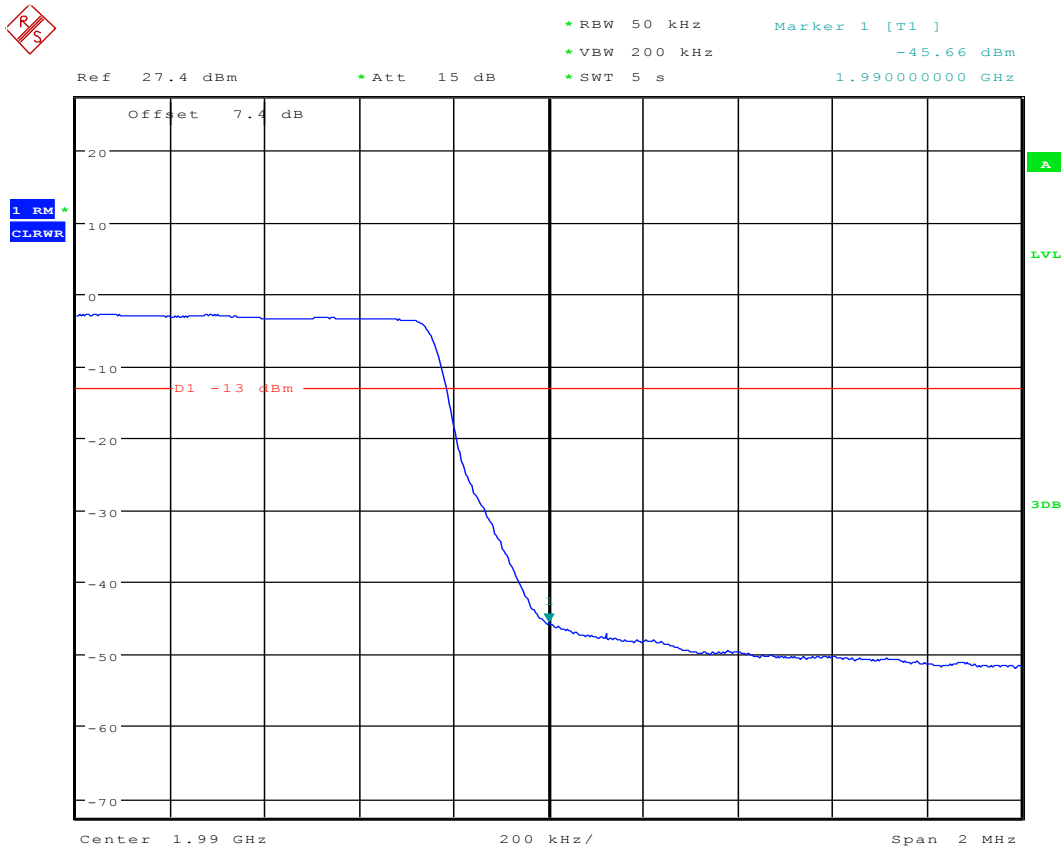


## 2.7 1U1L5M\_B



Date: 30.OCT.2015 13:19:49

## 2.8 1U1L5M \_T



Date: 30.OCT.2015 13:25:06



## **Appendix D2: Spurious Emission at Antenna Terminals**

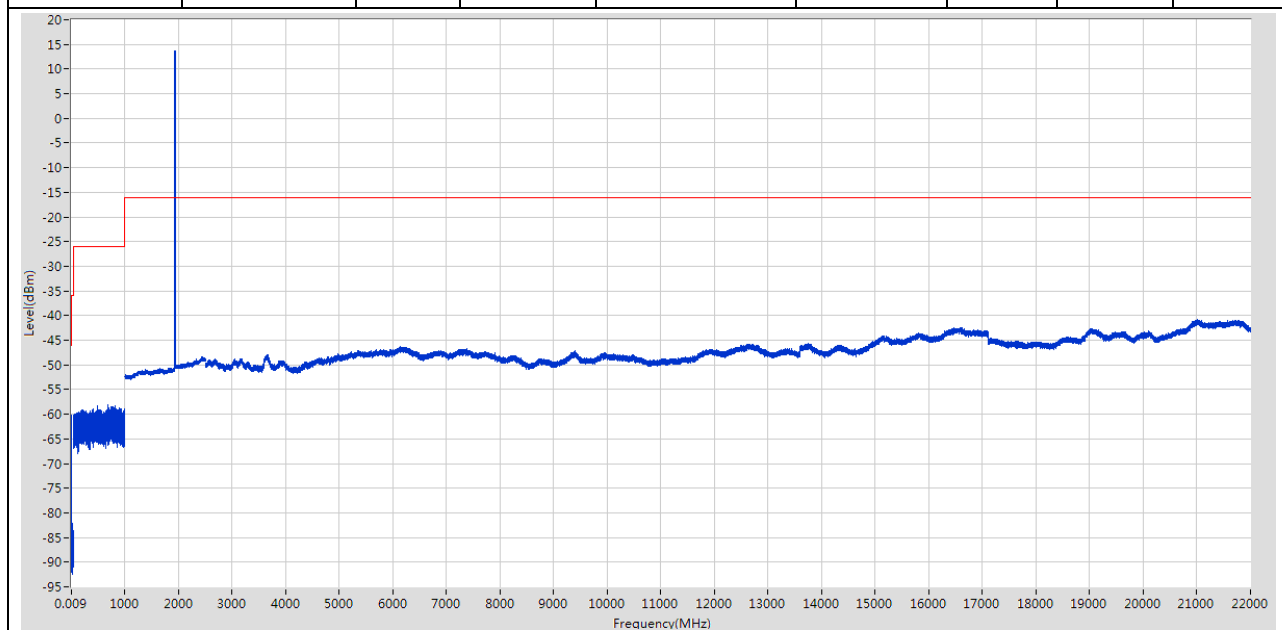
## 1 Result Table

| EUT Conf. | Maximum Emission [dBm] | Verdict |
|-----------|------------------------|---------|
| 5M_B      | <-13                   | Pass    |
| 5M_M      | <-13                   | Pass    |
| 5M_T      | <-13                   | Pass    |
| 20M_B     | <-13                   | Pass    |
| 20M_M     | <-13                   | Pass    |
| 20M_T     | <-13                   | Pass    |
| 1U_B      | <-13                   | Pass    |
| 1U_M      | <-13                   | Pass    |
| 1U_T      | <-13                   | Pass    |
| 1U1L5M_B  | <-13                   | Pass    |
| 1U1L5M_M  | <-13                   | Pass    |
| 1U1L5M_T  | <-13                   | Pass    |

## 2 Test Plot

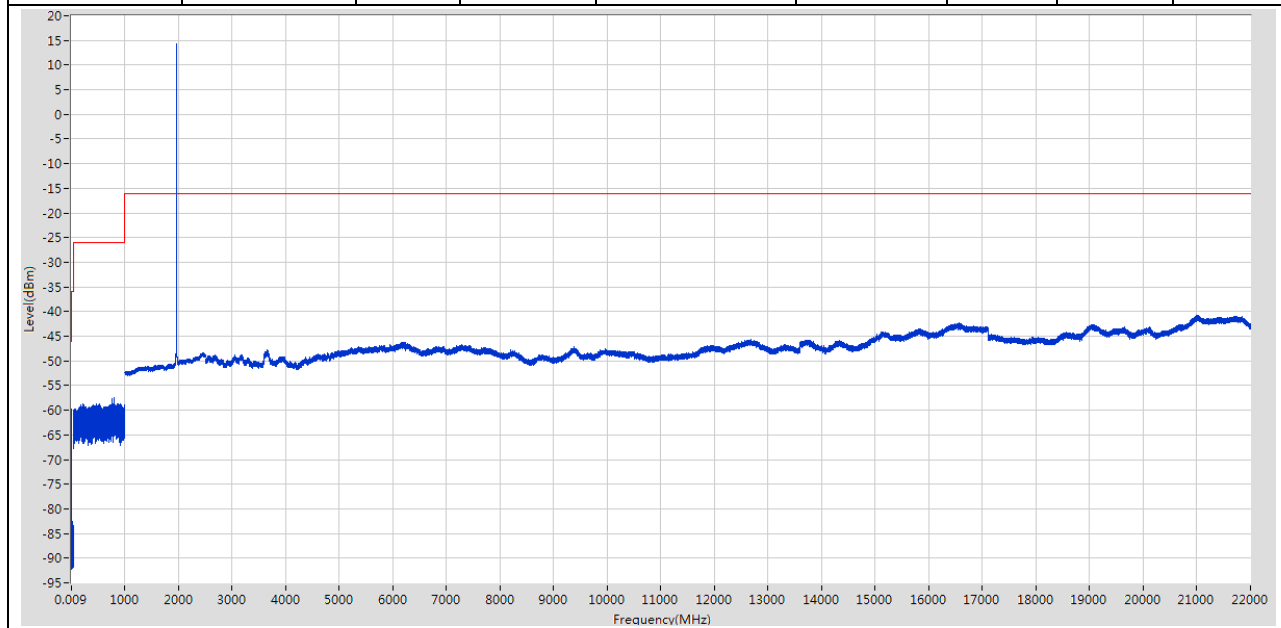
### 2.1 5M\_B

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | RMS      | 9 k            | -60.27         | -46         | Pass    | 1001        |
| 0.15                  | 30                   | 0.01      | RMS      | 158.001 k      | -64.14         | -36         | Pass    | 14925       |
| 30                    | 1000                 | 0.1       | RMS      | 682.556313 M   | -58.1          | -26         | Pass    | 48500       |
| 1000                  | 2500                 | 1         | RMS      | 1932.724363 M  | 13.73          | -16         | ---     | 7500        |
| 2500                  | 22000                | 1         | RMS      | 21014.543682 M | -40.82         | -16         | Pass    | 97500       |



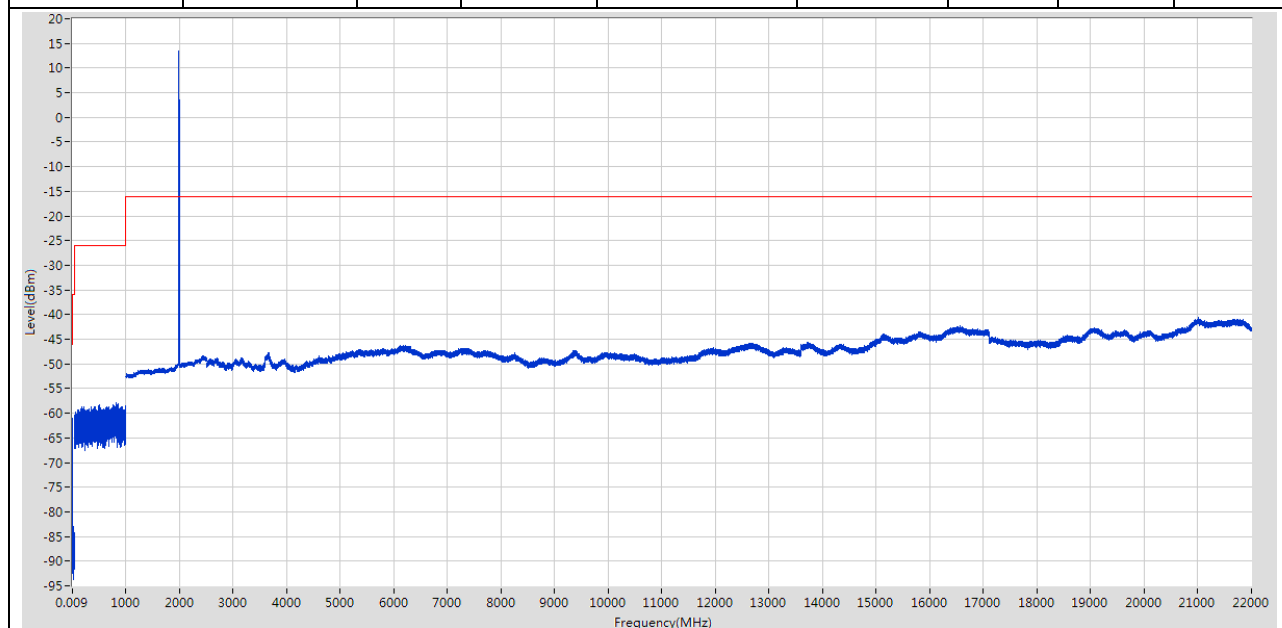
## 2.2 5M\_M

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | RMS      | 9 k            | -59.77         | -46         | Pass    | 1001        |
| 0.15                  | 30                   | 0.01      | RMS      | 156 k          | -63.59         | -36         | Pass    | 14925       |
| 30                    | 1000                 | 0.1       | RMS      | 794.979124 M   | -57.43         | -26         | Pass    | 48500       |
| 1000                  | 2500                 | 1         | RMS      | 1959.527937 M  | 14.24          | -16         | ---     | 7500        |
| 2500                  | 22000                | 1         | RMS      | 21019.743979 M | -40.79         | -16         | Pass    | 97500       |



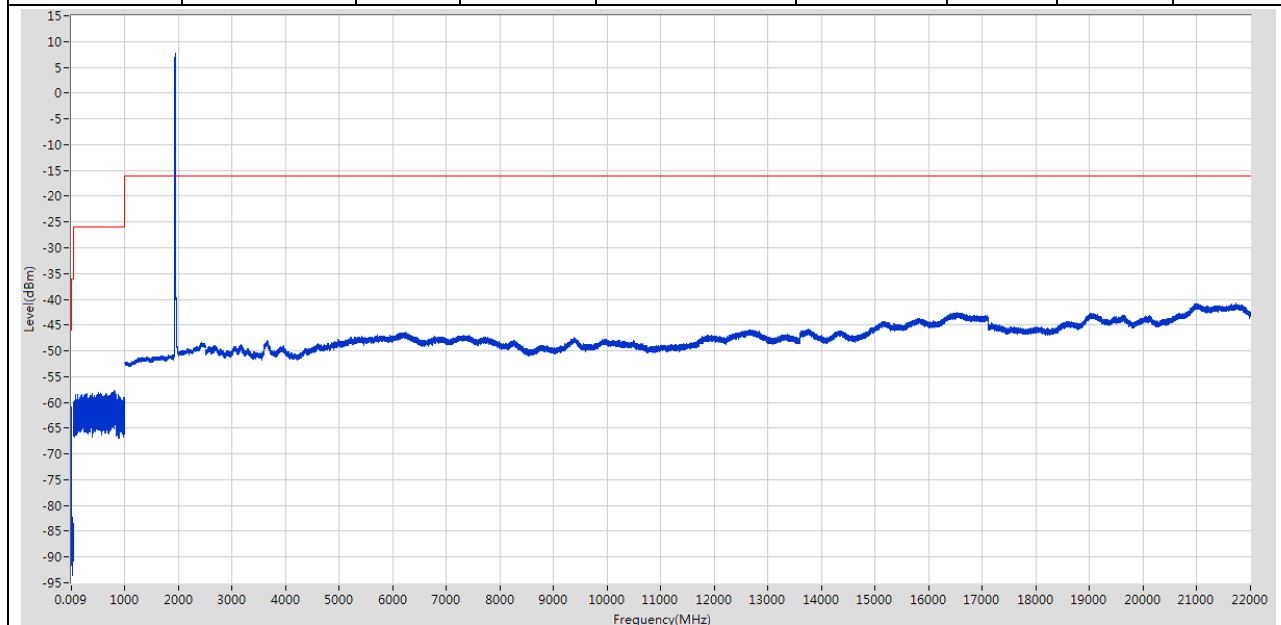
## 2.3 5M\_T

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | RMS      | 9 k            | -61.03         | -46         | Pass    | 1001        |
| 0.15                  | 30                   | 0.01      | RMS      | 150 k          | -64.96         | -36         | Pass    | 14925       |
| 30                    | 1000                 | 0.1       | RMS      | 805.899397 M   | -57.92         | -26         | Pass    | 48500       |
| 1000                  | 2500                 | 1         | RMS      | 1987.331644 M  | 13.55          | -16         | ---     | 7500        |
| 2500                  | 22000                | 1         | RMS      | 21016.543796 M | -40.63         | -16         | Pass    | 97500       |



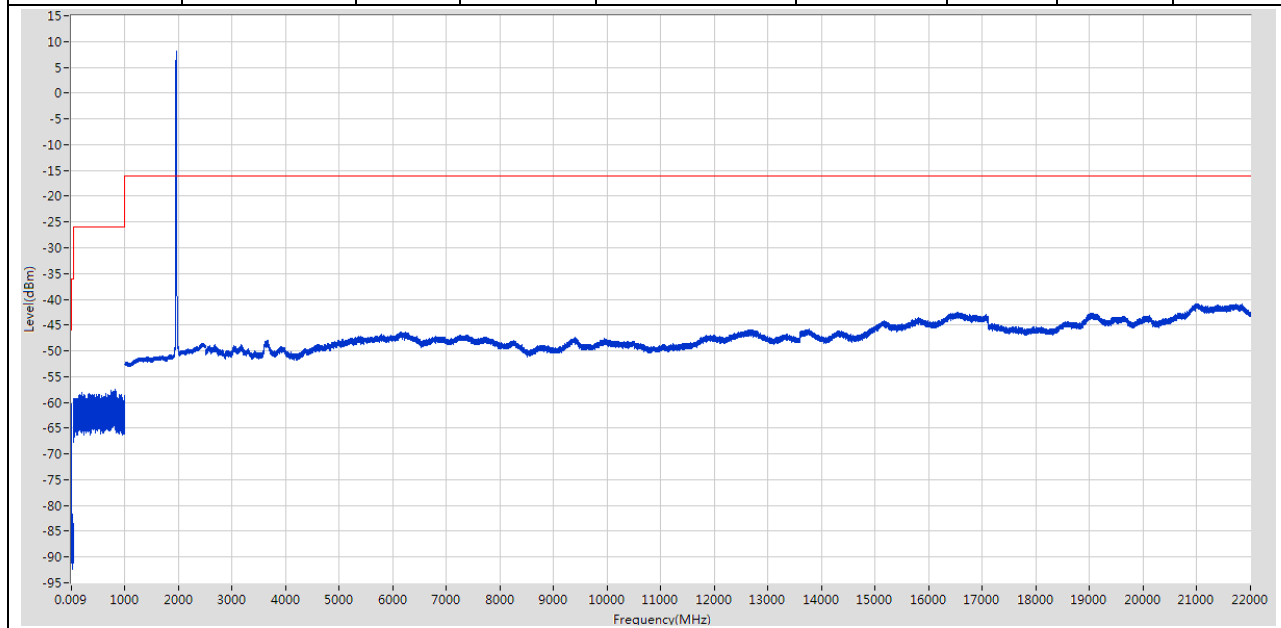
## 2.4 20M\_B

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | RMS      | 9.282 k        | -60.99         | -46         | Pass    | 1001        |
| 0.15                  | 30                   | 0.01      | RMS      | 150 k          | -64.42         | -36         | Pass    | 14925       |
| 30                    | 1000                 | 0.1       | RMS      | 804.979374 M   | -57.65         | -26         | Pass    | 48500       |
| 1000                  | 2500                 | 1         | RMS      | 1936.52487 M   | 7.74           | -16         | ---     | 7500        |
| 2500                  | 22000                | 1         | RMS      | 21725.584317 M | -40.7          | -16         | Pass    | 97500       |



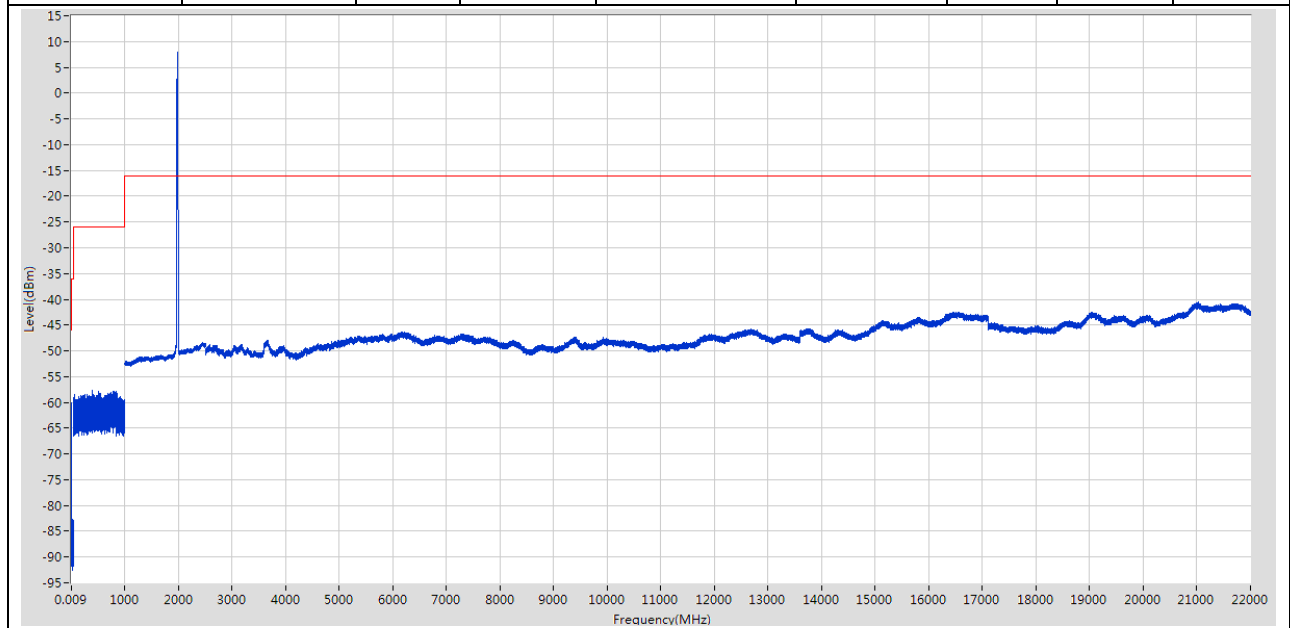
## 2.5 20M\_M

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | RMS      | 9 k            | -60.24         | -46         | Pass    | 1001        |
| 0.15                  | 30                   | 0.01      | RMS      | 152 k          | -63.44         | -36         | Pass    | 14925       |
| 30                    | 1000                 | 0.1       | RMS      | 816.879672 M   | -57.53         | -26         | Pass    | 48500       |
| 1000                  | 2500                 | 1         | RMS      | 1960.928124 M  | 8.07           | -16         | ---     | 7500        |
| 2500                  | 22000                | 1         | RMS      | 21014.743693 M | -40.81         | -16         | Pass    | 97500       |



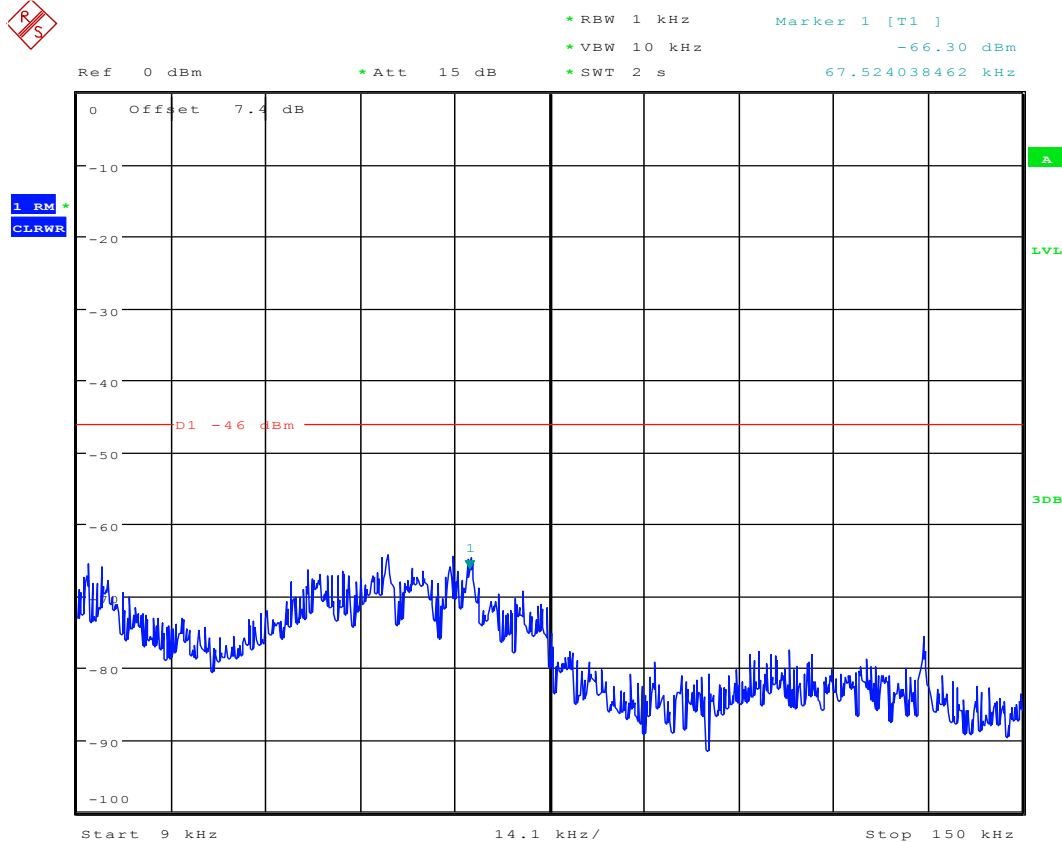
## 2.6 20M\_T

| Start Frequency [MHz] | Stop Frequency [MHz] | RBW [MHz] | Detector | Frequency [Hz] | Emission [dBm] | Limit [dBm] | Verdict | Sweep Point |
|-----------------------|----------------------|-----------|----------|----------------|----------------|-------------|---------|-------------|
| 0.009                 | 0.15                 | 0.001     | RMS      | 9 k            | -60.16         | -46         | Pass    | 1001        |
| 0.15                  | 30                   | 0.01      | RMS      | 152 k          | -64.72         | -36         | Pass    | 14925       |
| 30                    | 1000                 | 0.1       | RMS      | 395.349133 M   | -57.71         | -26         | Pass    | 48500       |
| 1000                  | 2500                 | 1         | RMS      | 1973.729831 M  | 7.93           | -16         | ---     | 7500        |
| 2500                  | 22000                | 1         | RMS      | 21029.544539 M | -40.5          | -16         | Pass    | 97500       |

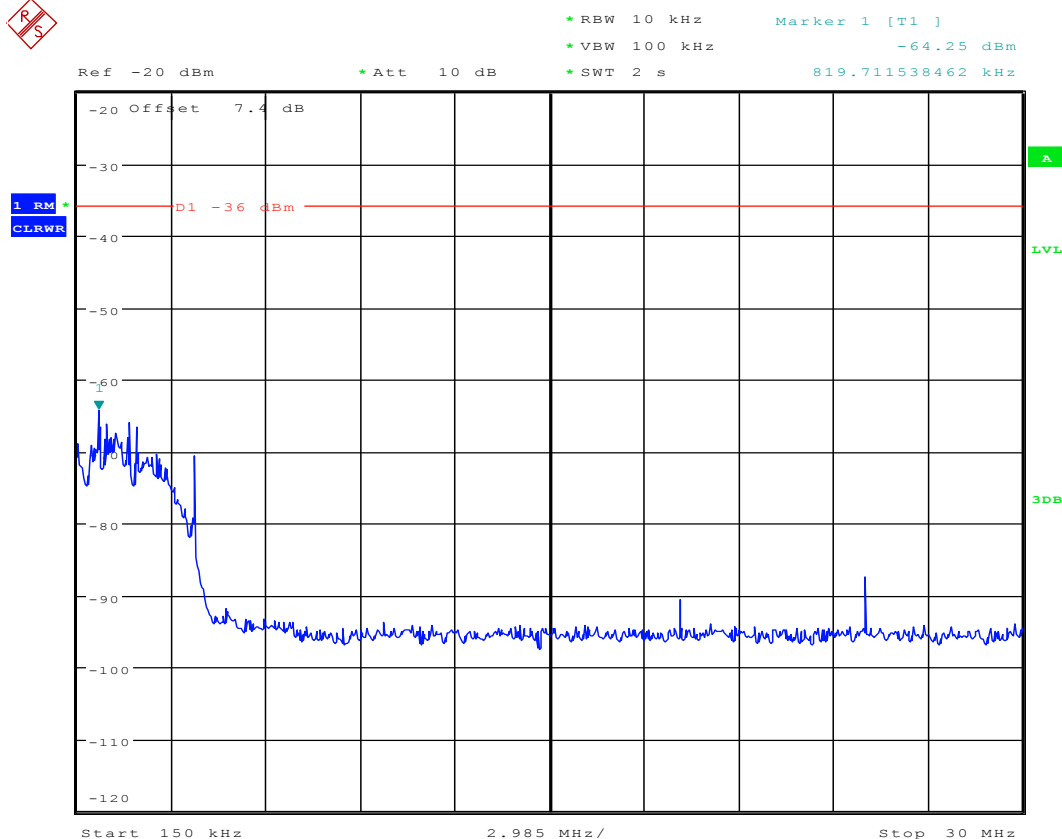




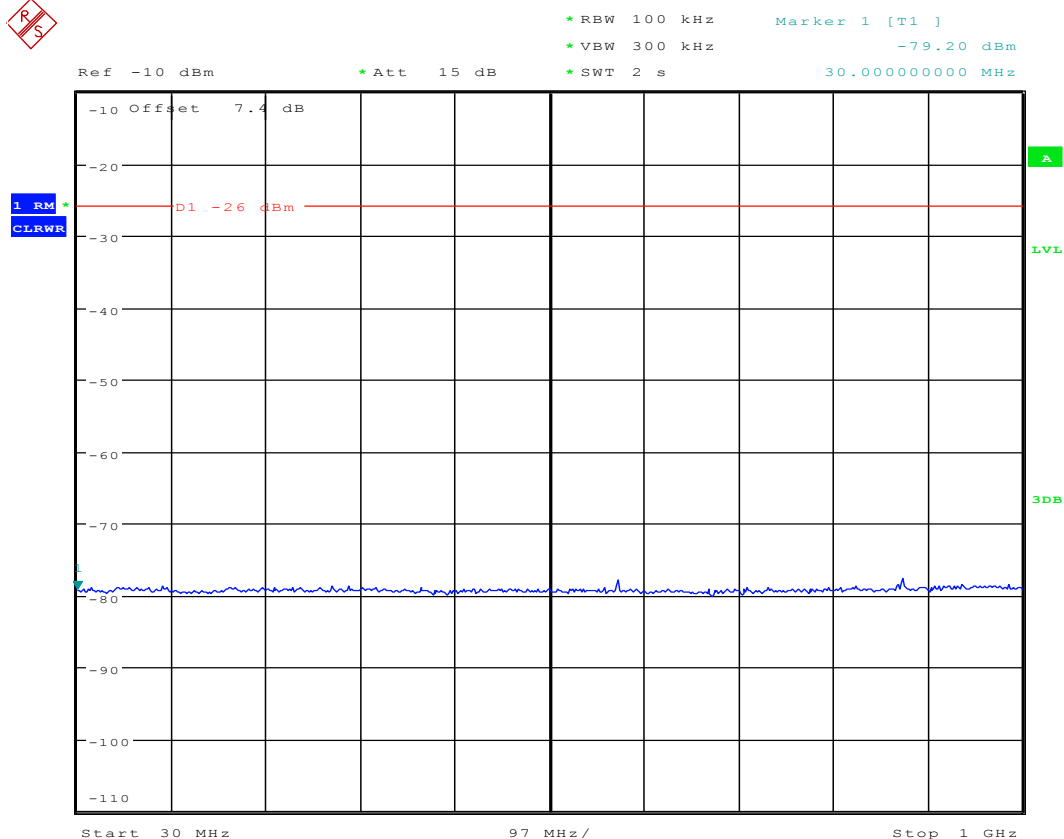
## 2.7 1U\_B



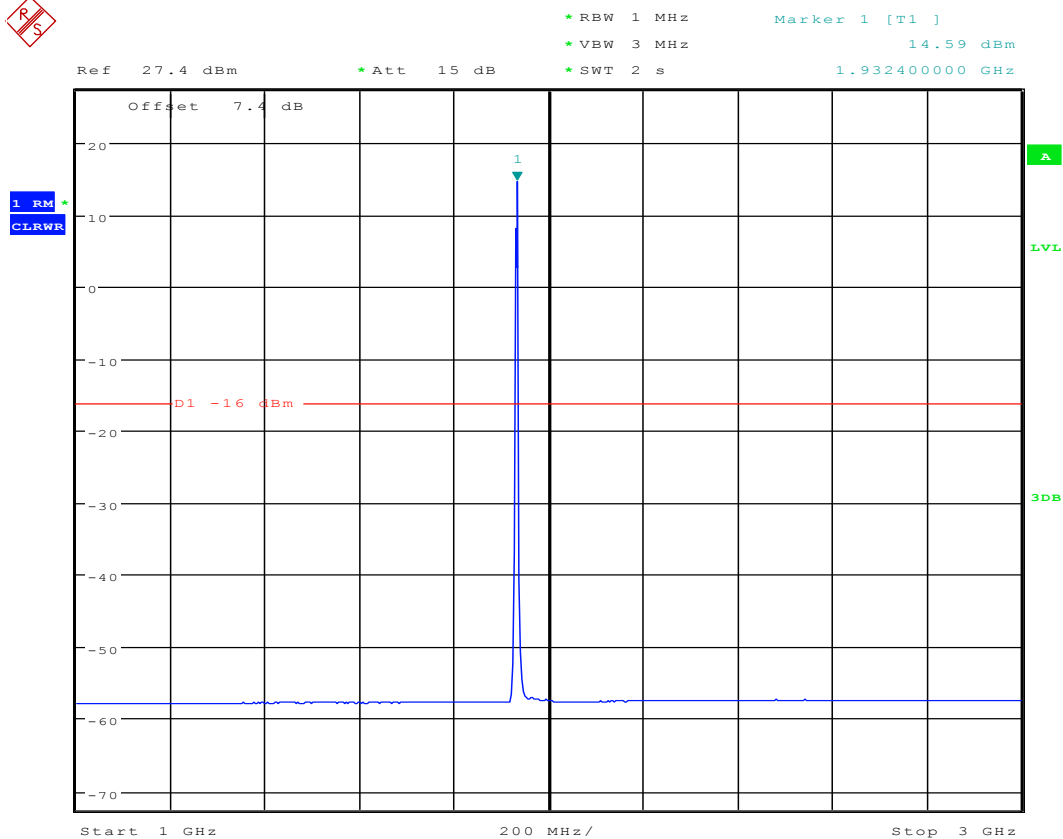
Date: 30.OCT.2015 14:06:45



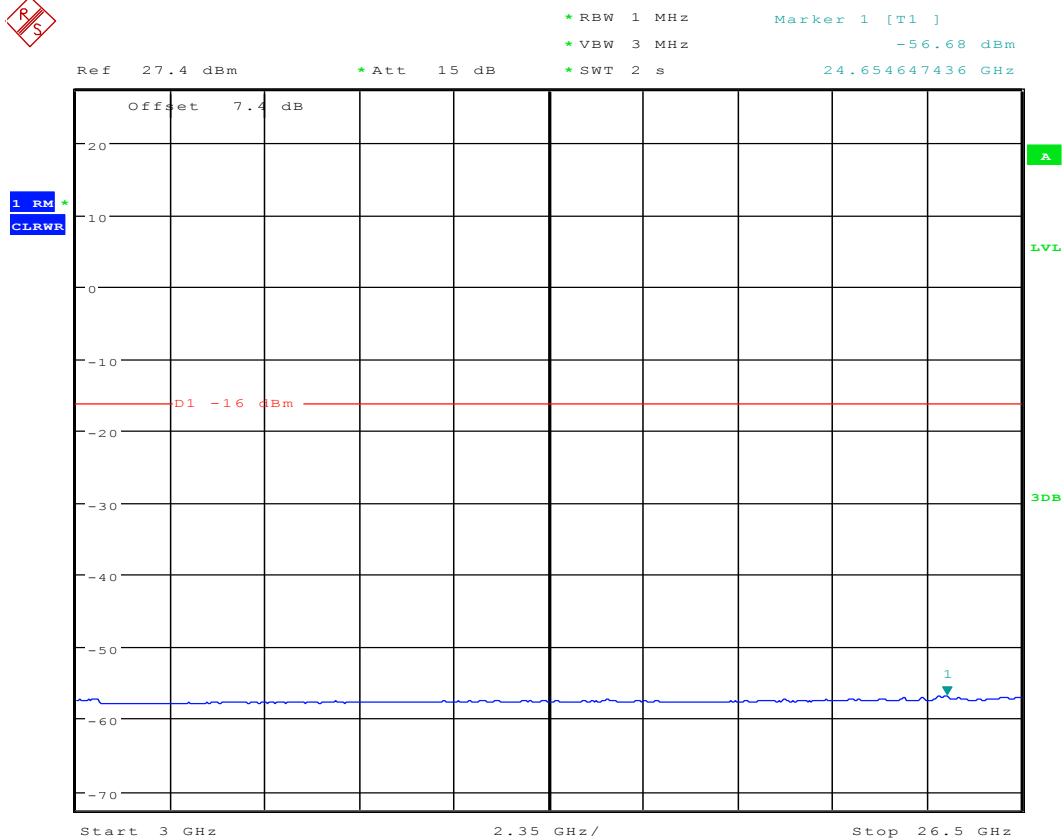
Date: 29.OCT.2015 16:24:12



Date: 30.OCT.2015 14:13:51



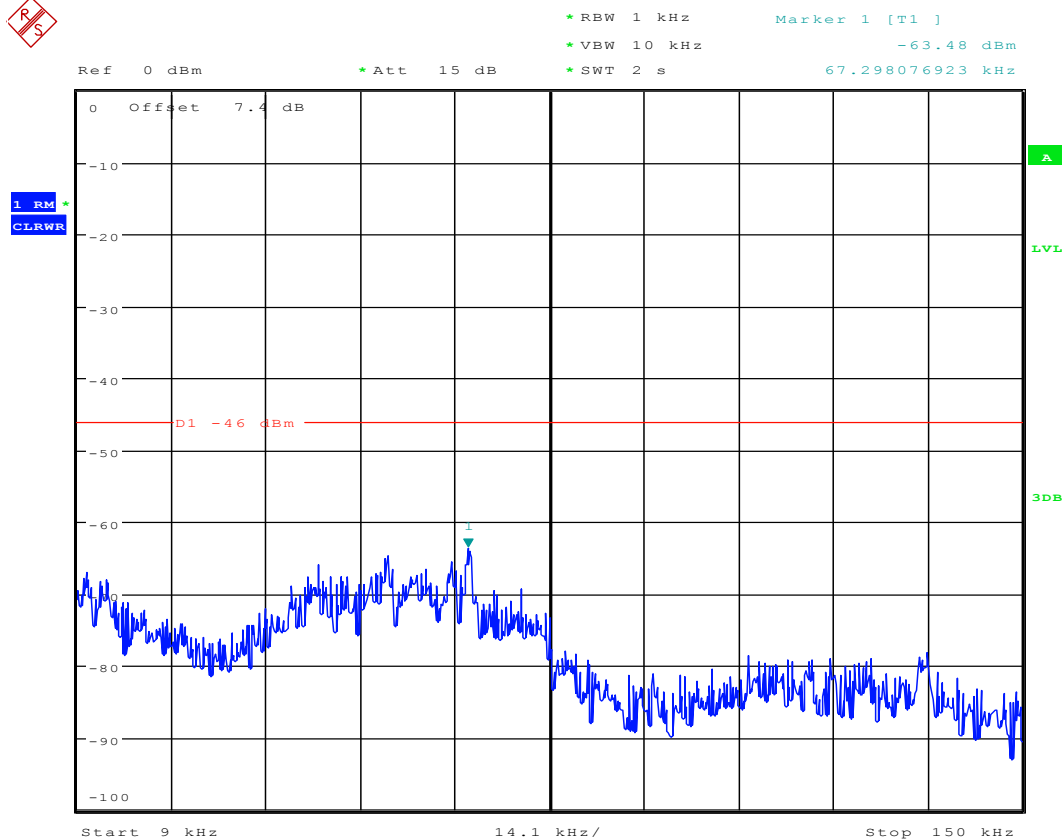
Date: 5.NOV.2015 19:17:23



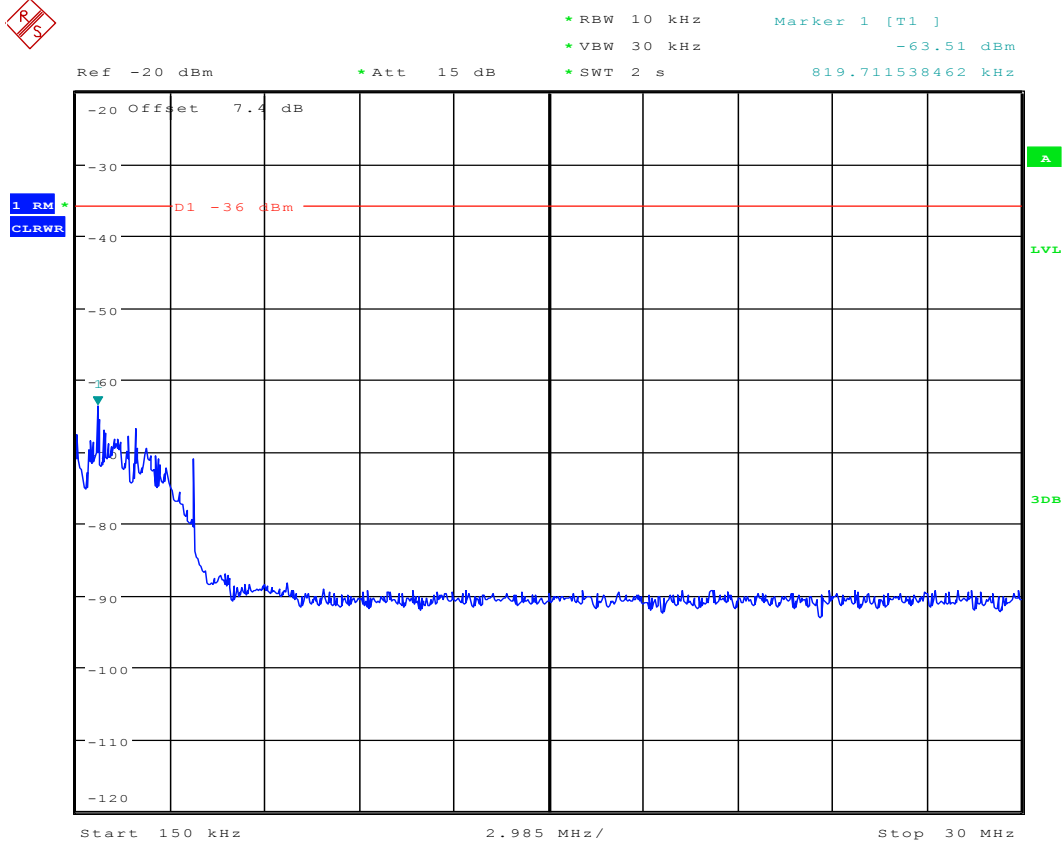
Date: 5.NOV.2015 19:17:48



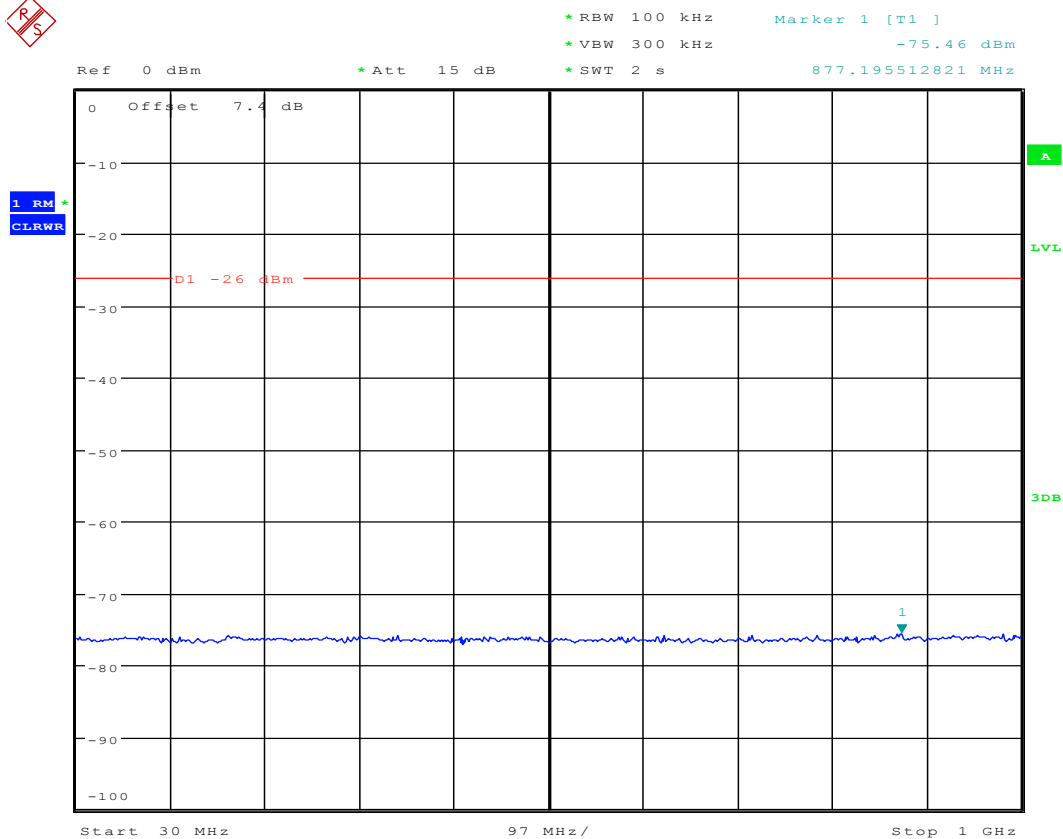
## 2.8 1U\_M



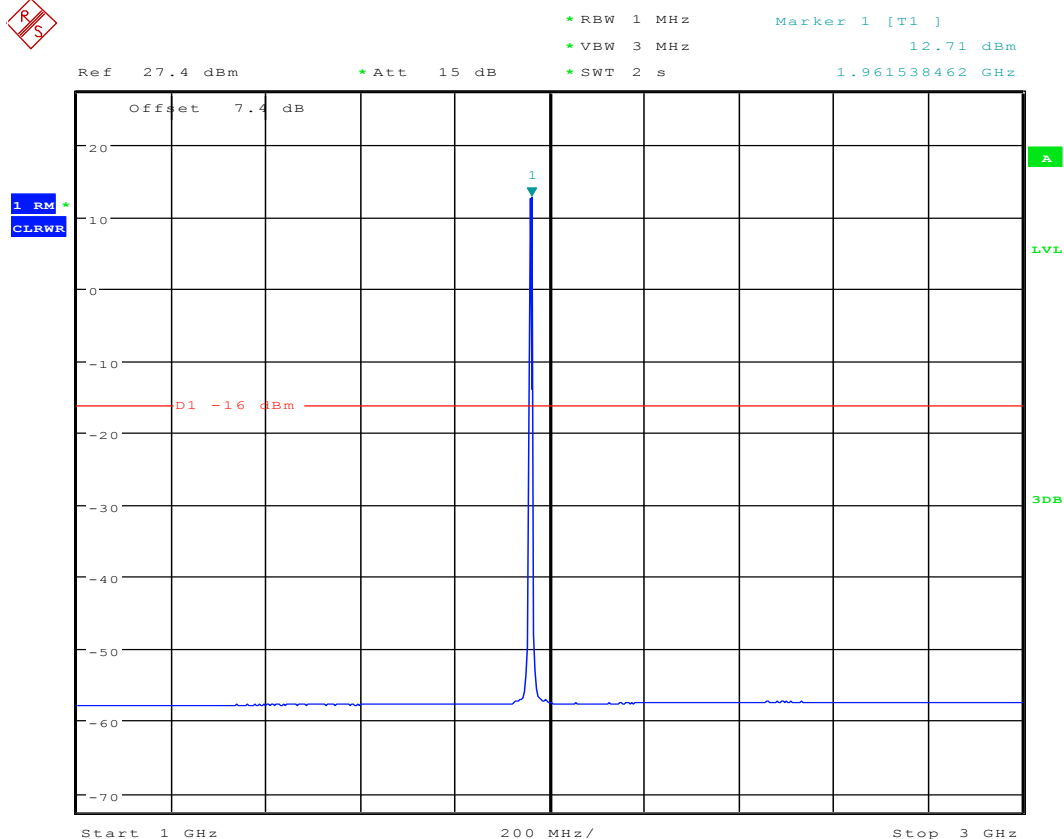
Date: 30.OCT.2015 14:24:37



Date: 30.OCT.2015 14:26:29



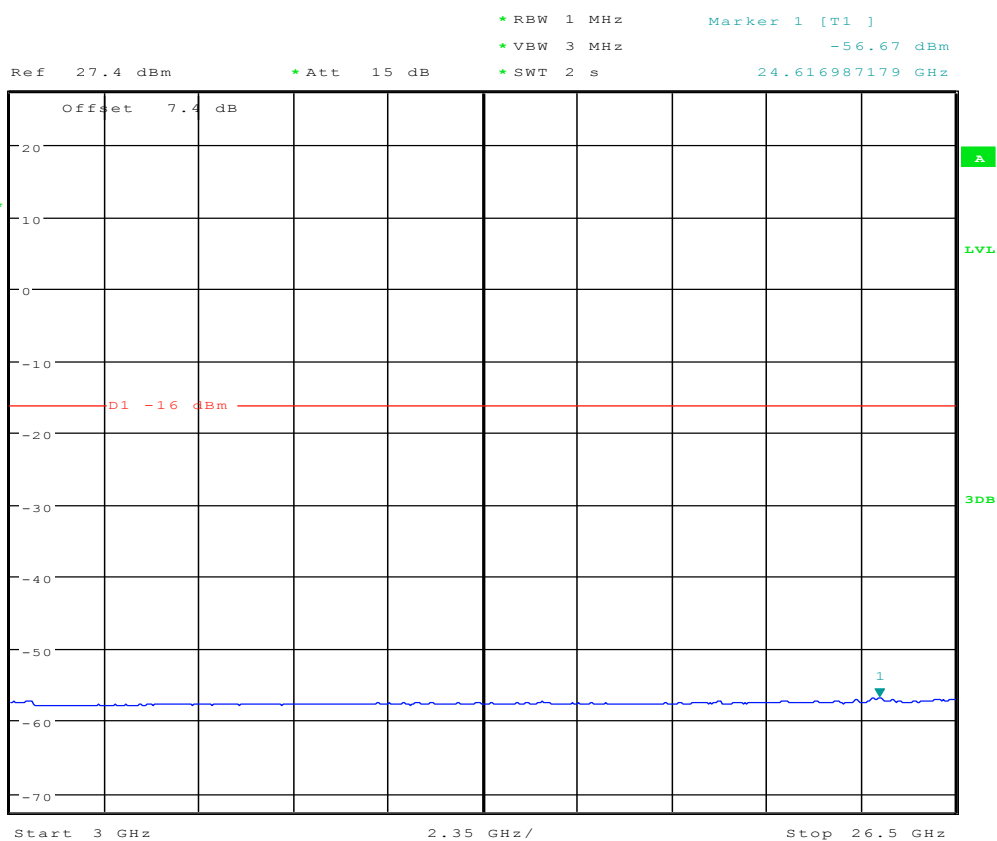
Date: 30.OCT.2015 14:28:01



Date: 5.NOV.2015 19:19:55



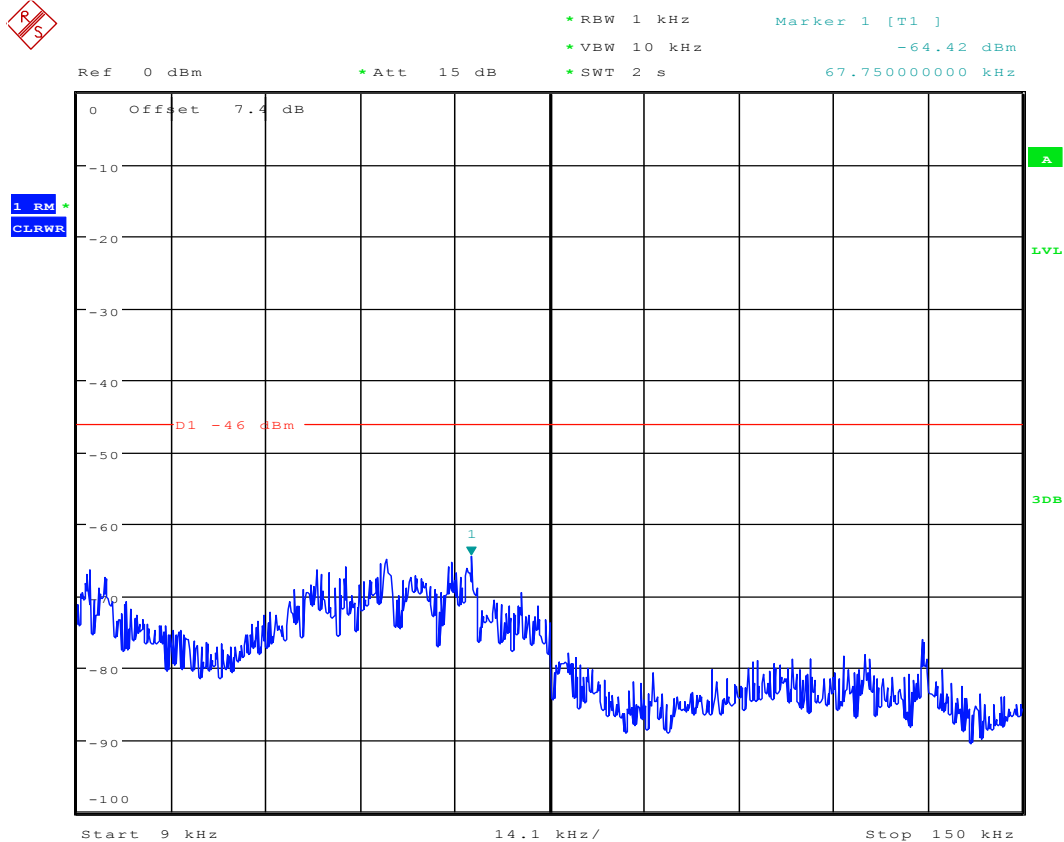
1 RM  
CLRWB



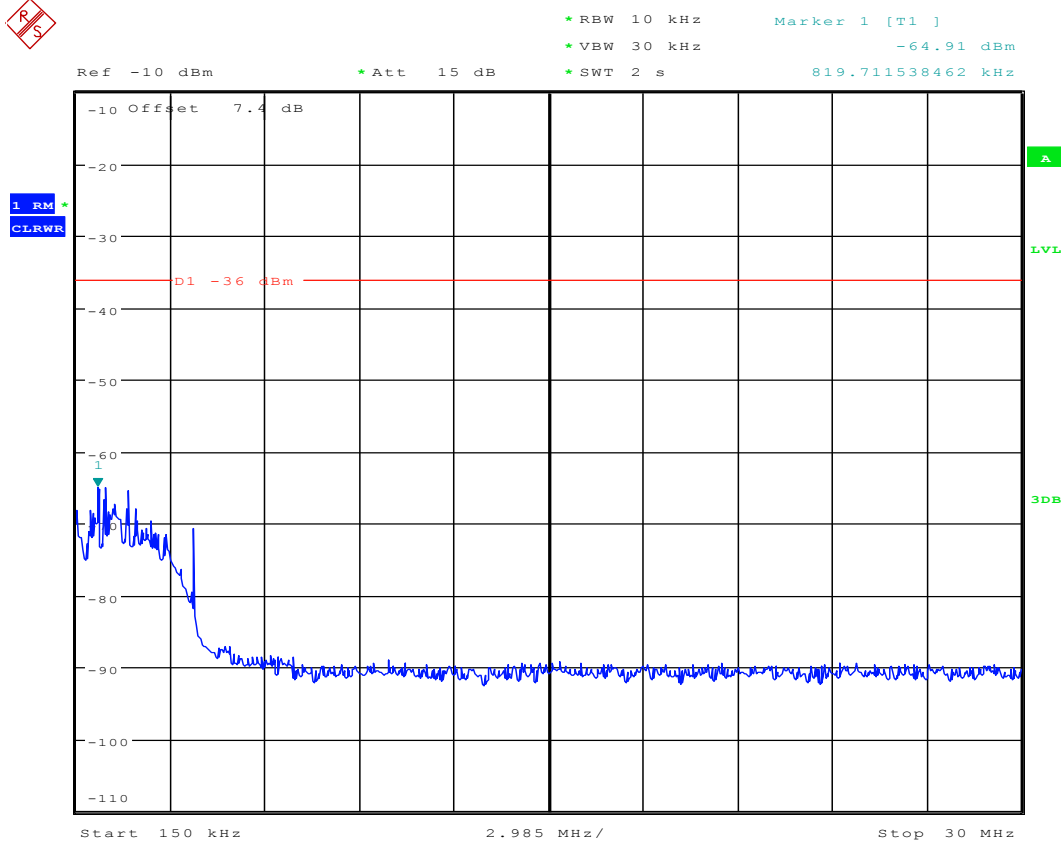
Date: 5.NOV.2015 19:19:32



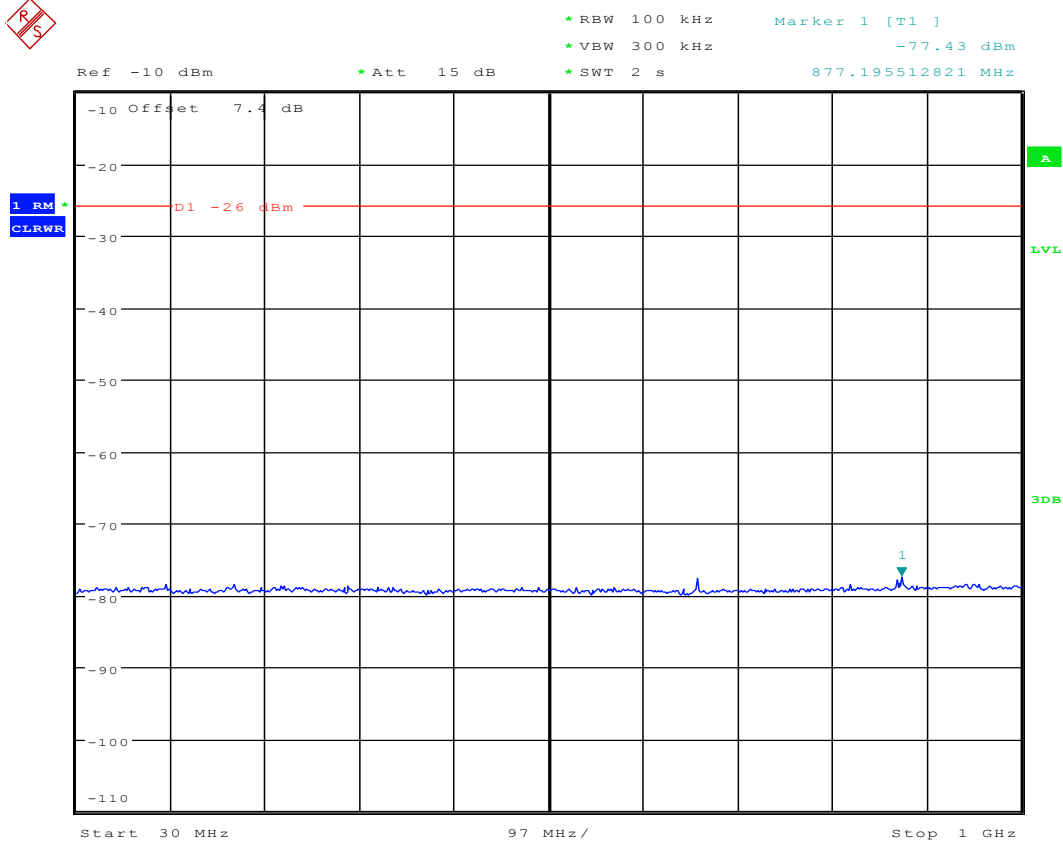
## 2.9 1U\_T



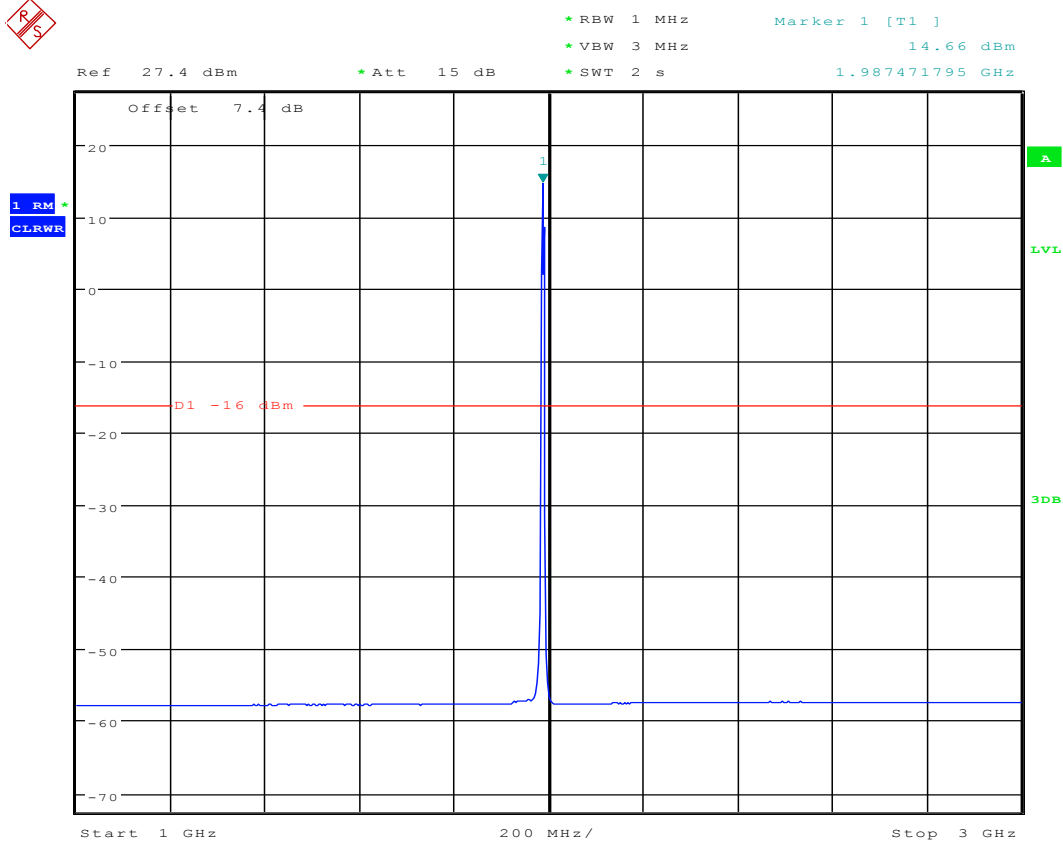
Date: 30.OCT.2015 14:52:09



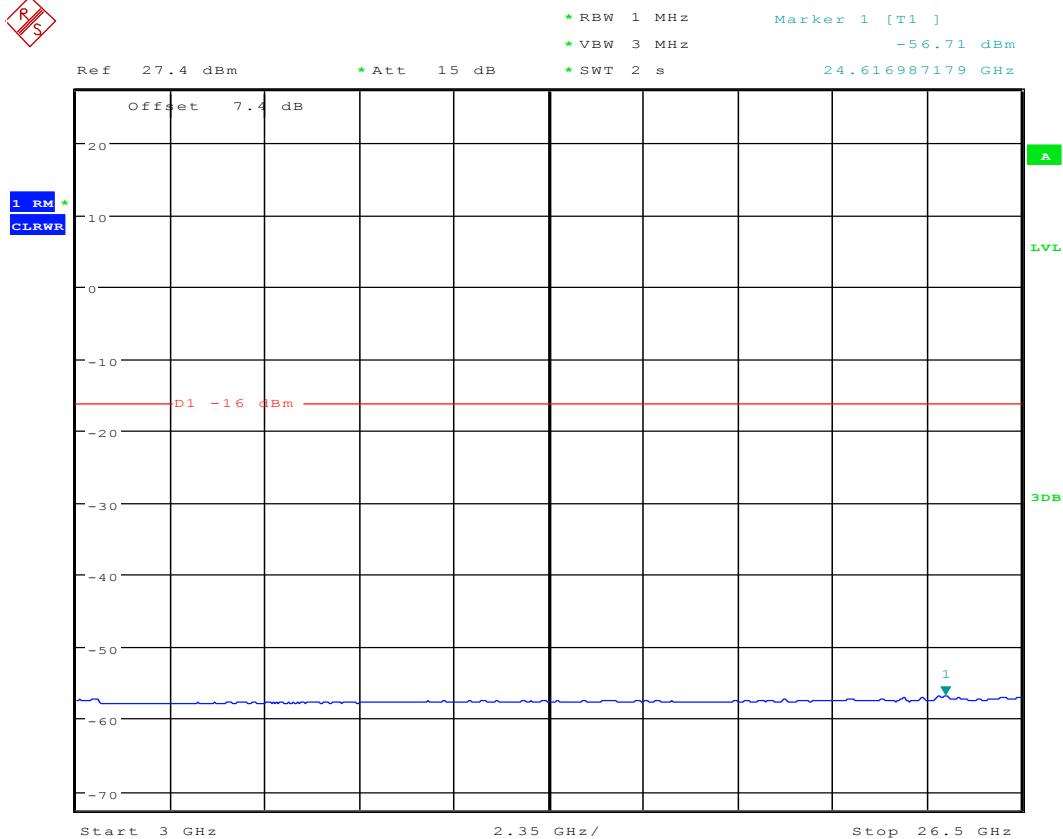
Date: 30.OCT.2015 14:53:50



Date: 30.OCT.2015 14:54:47



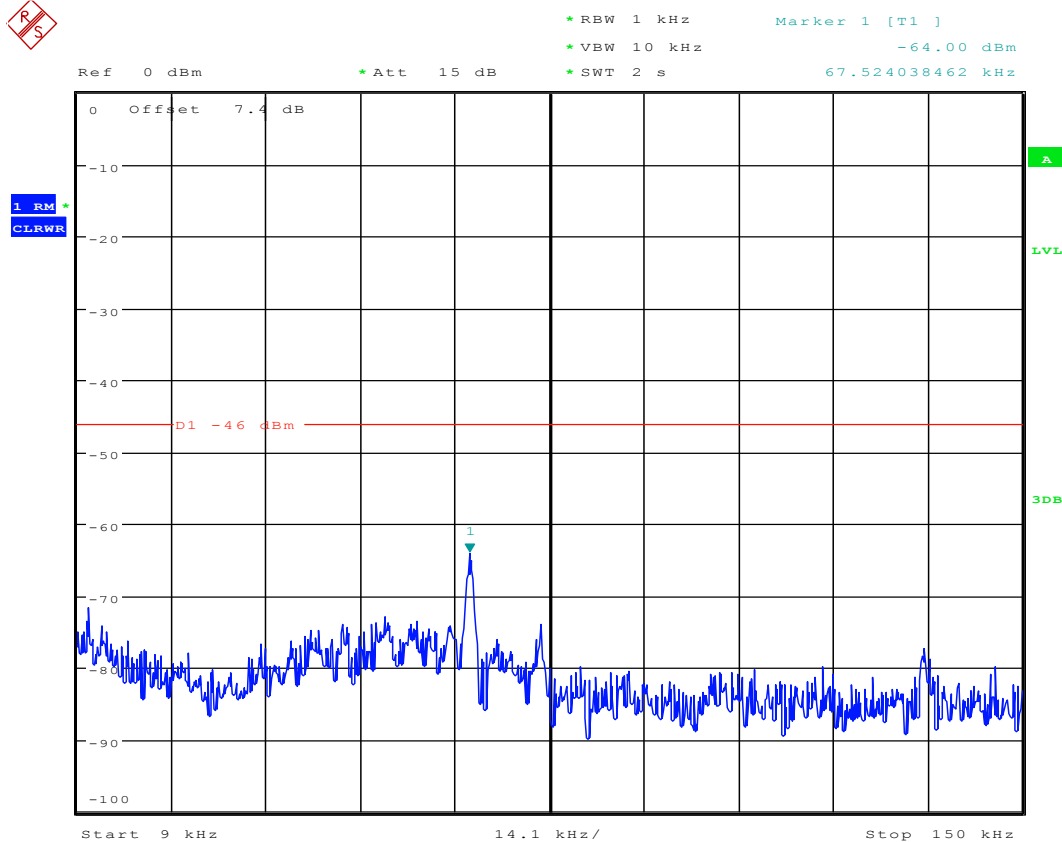
Date: 5.NOV.2015 19:25:21



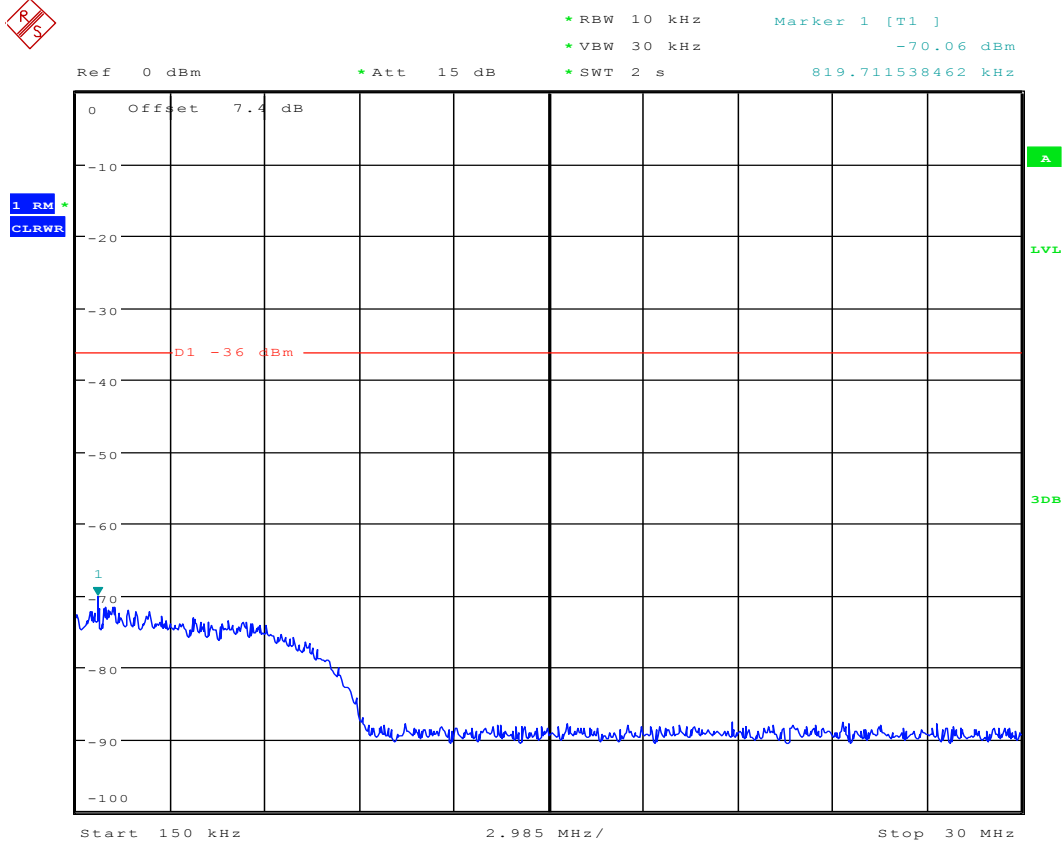
Date: 5.NOV.2015 19:25:47



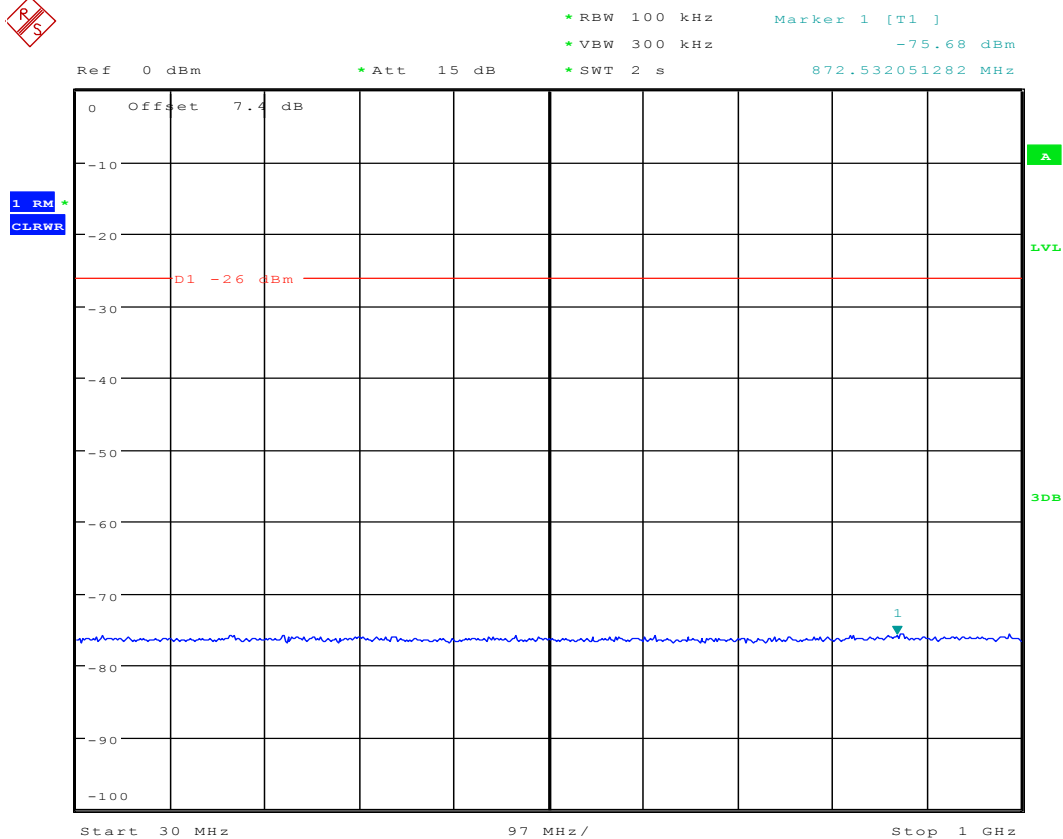
## 2.10 1U1L5M\_B



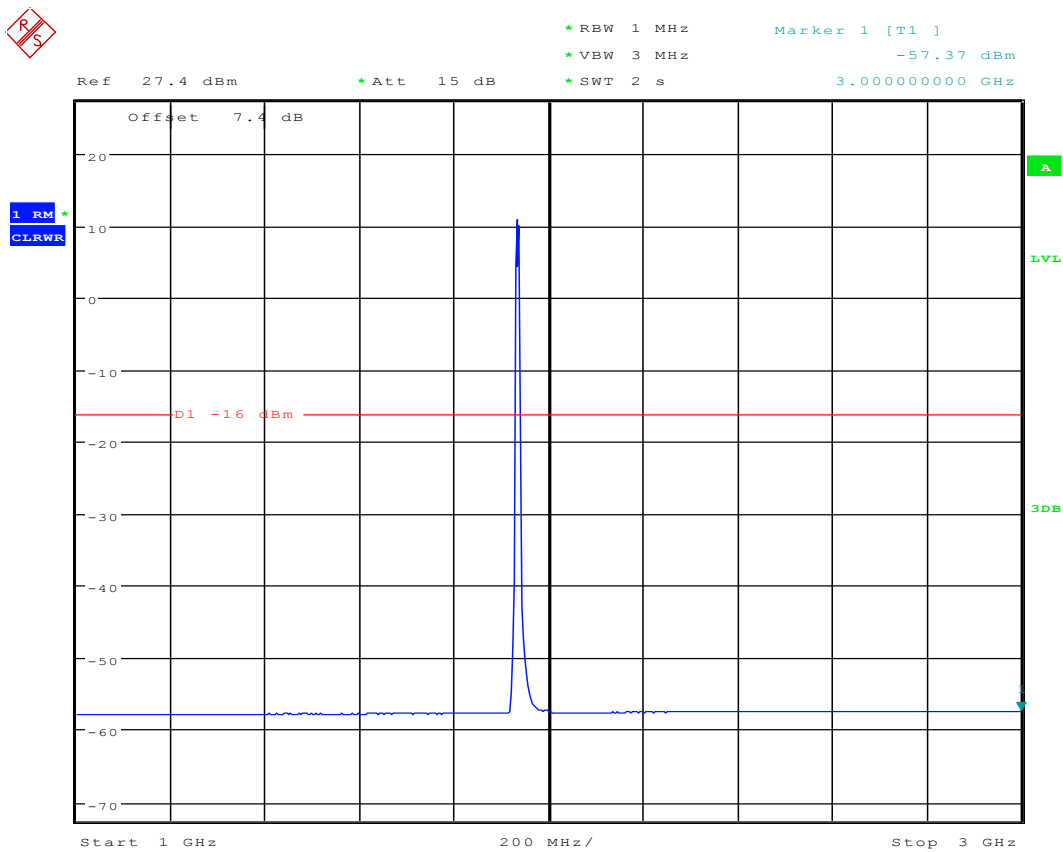
Date: 30.OCT.2015 15:03:06



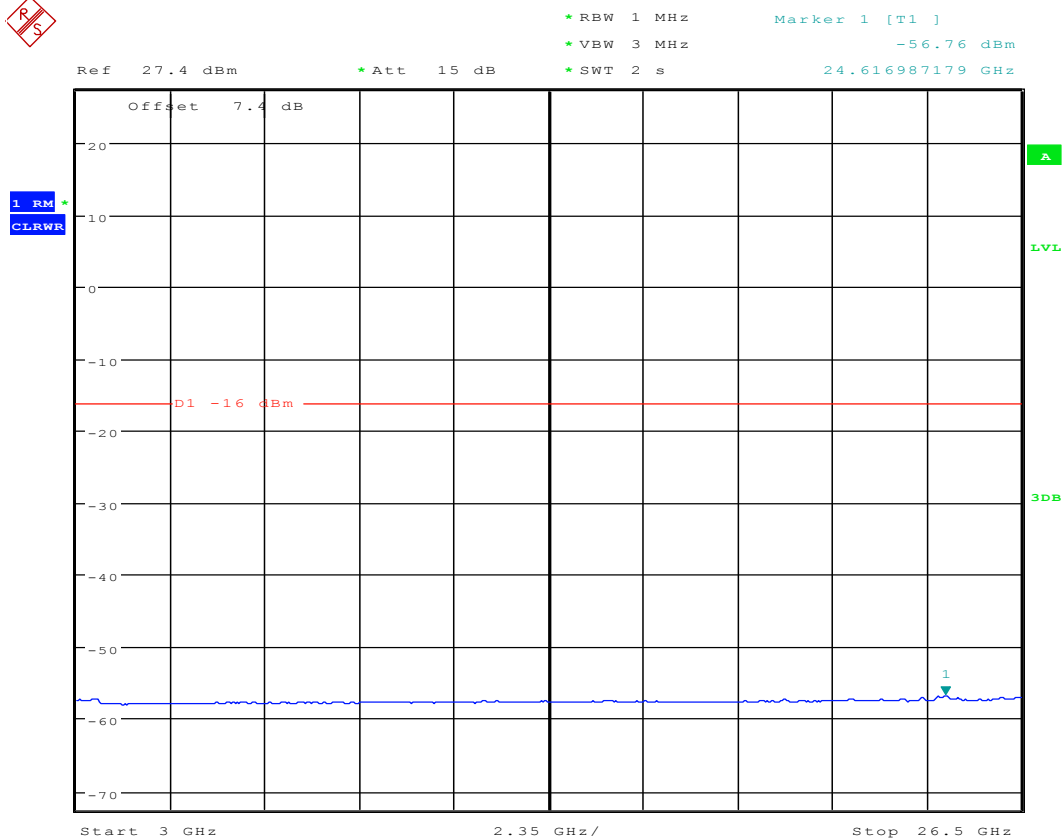
Date: 30.OCT.2015 15:04:00



Date: 30.OCT.2015 15:05:01



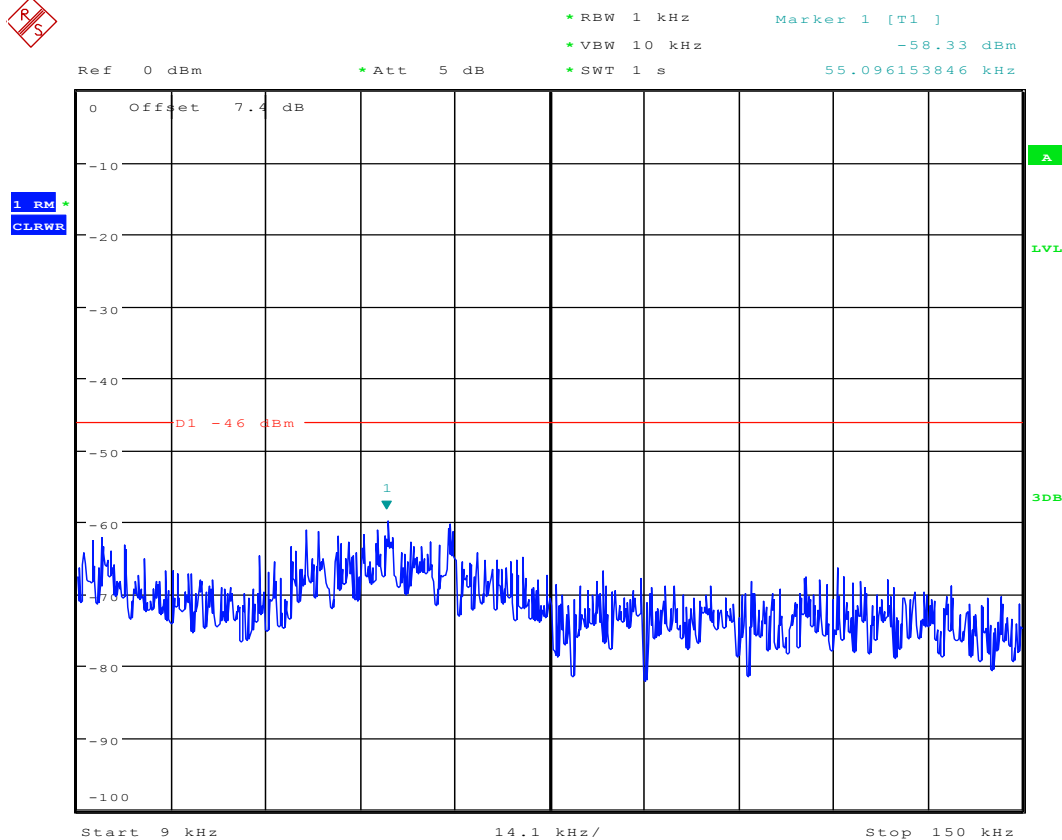
Date: 5.NOV.2015 19:28:28



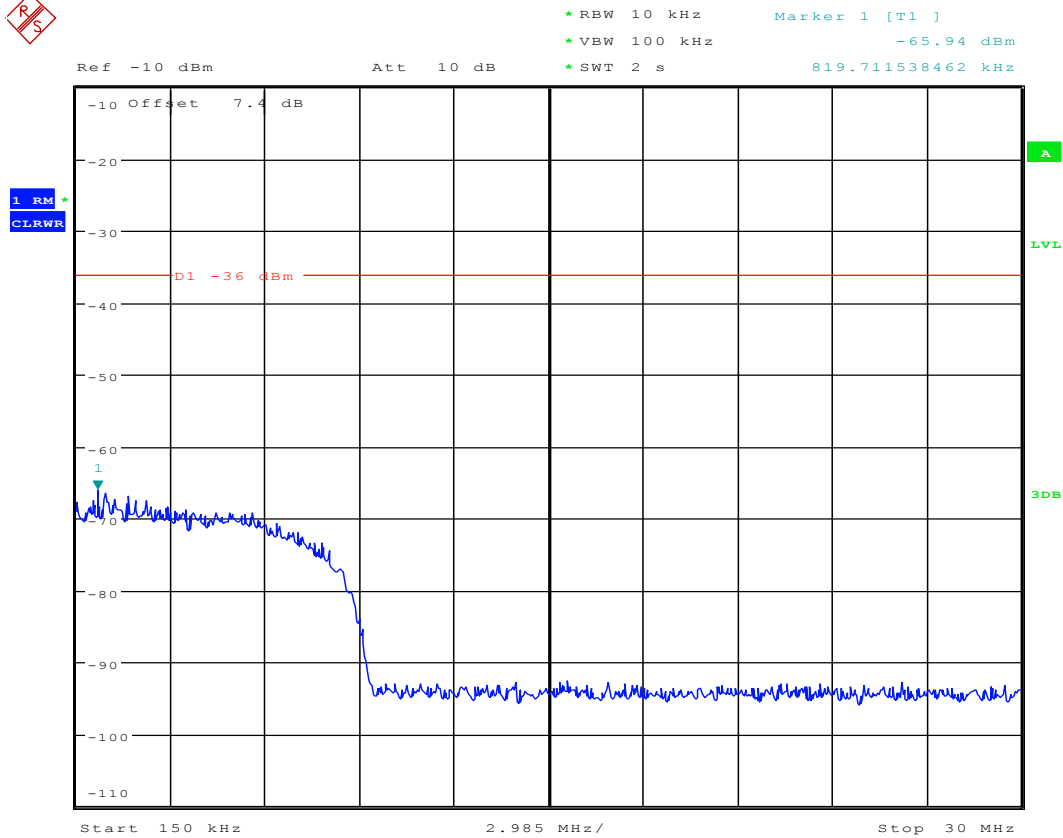
Date: 5.NOV.2015 19:28:06



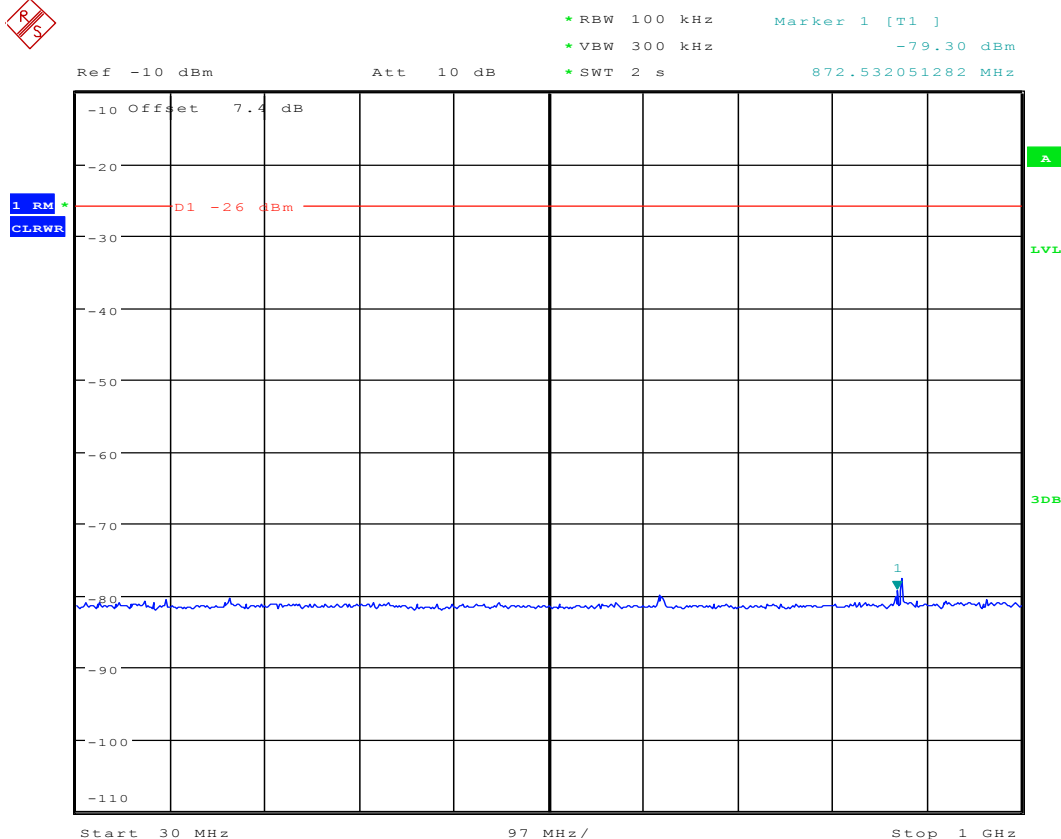
## 2.11 1U1L5M\_M



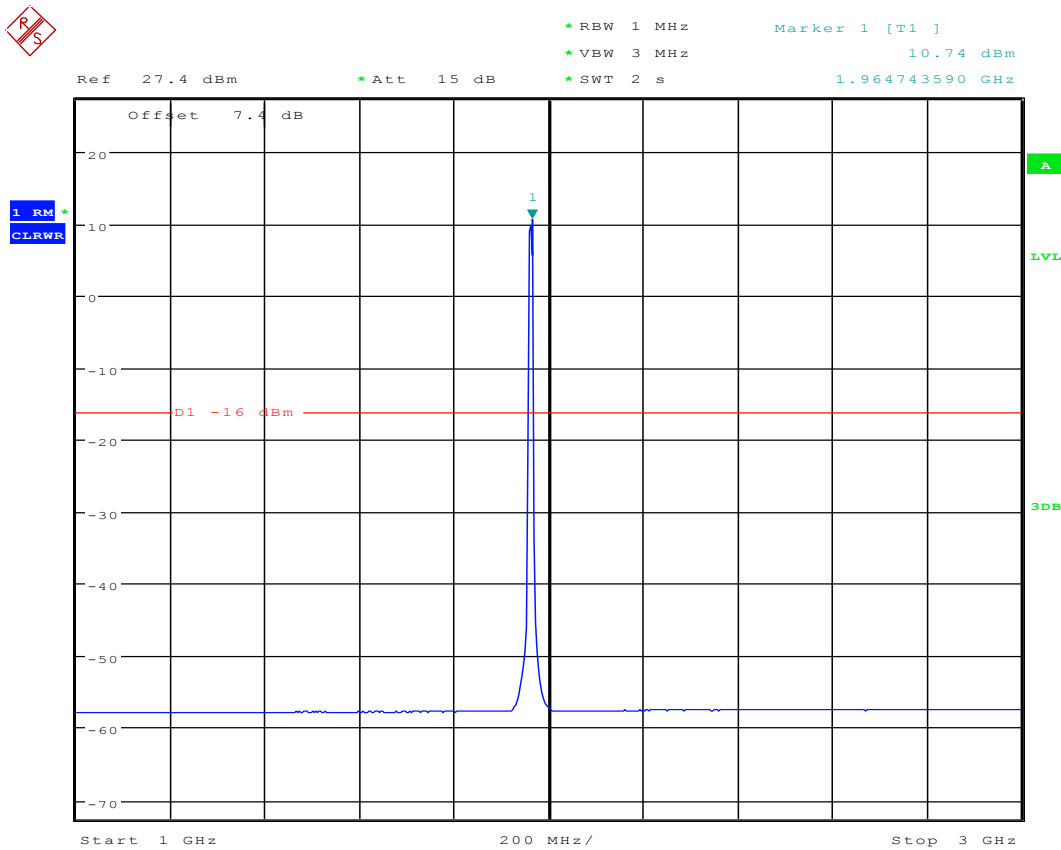
Date: 29.OCT.2015 19:08:40



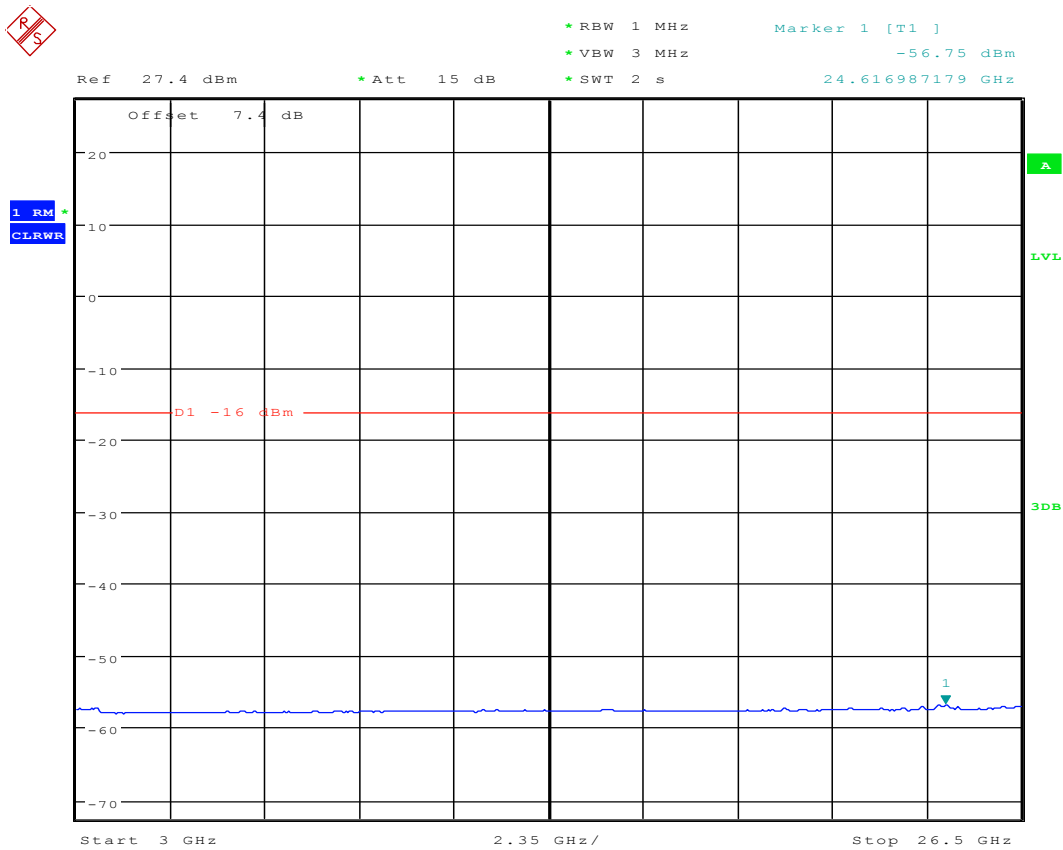
Date: 30.OCT.2015 15:44:06



Date: 30.OCT.2015 15:45:27



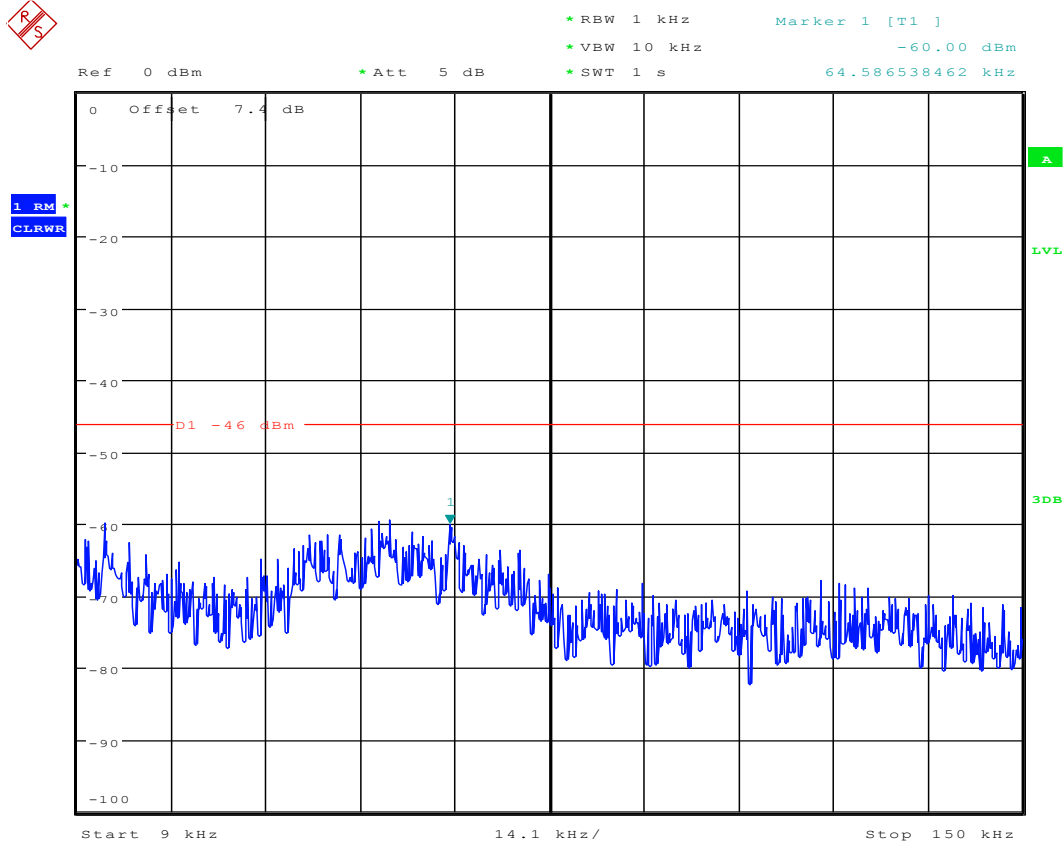
Date: 5.NOV.2015 19:30:21



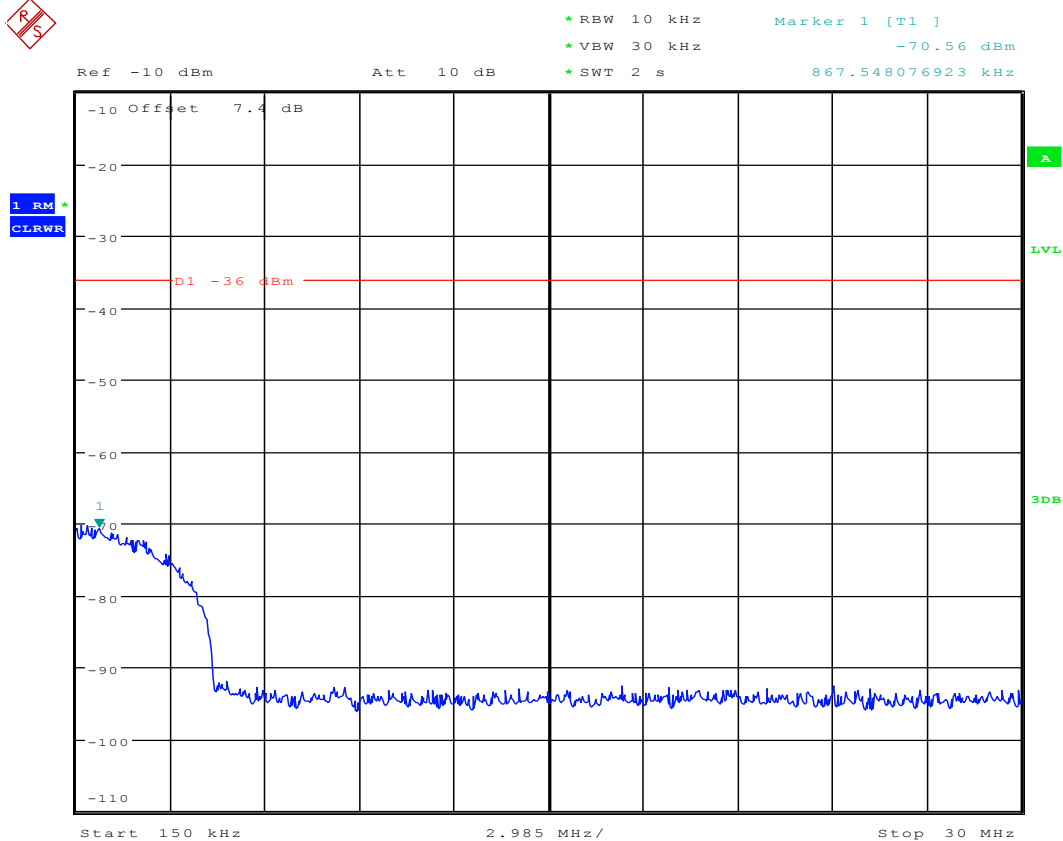
Date: 5.NOV.2015 19:30:56



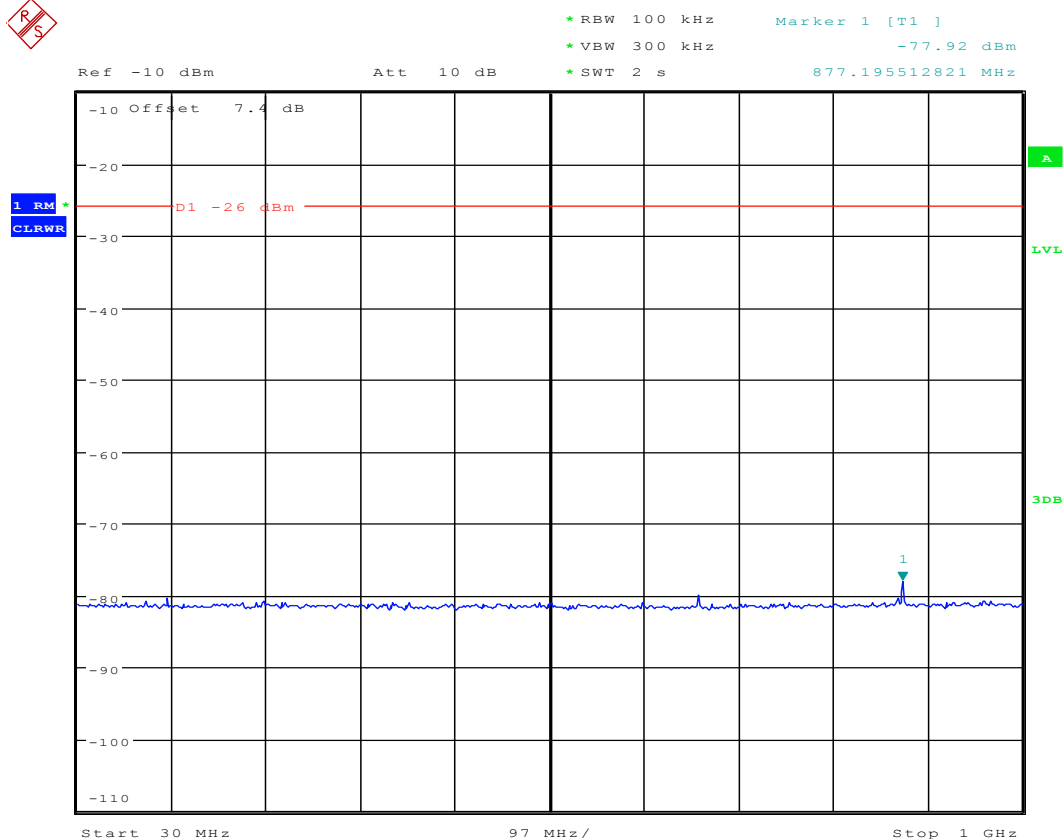
## 2.12 1U1L5M\_T



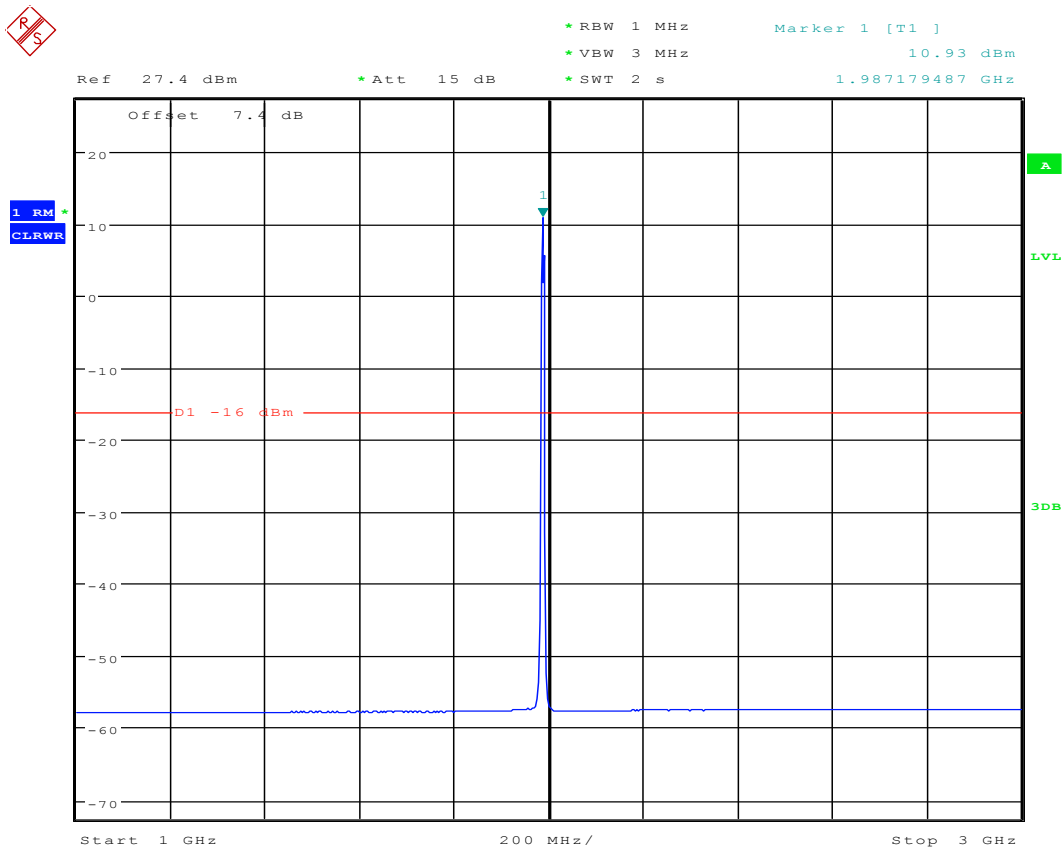
Date: 30.OCT.2015 08:14:46



Date: 30.OCT.2015 16:01:44



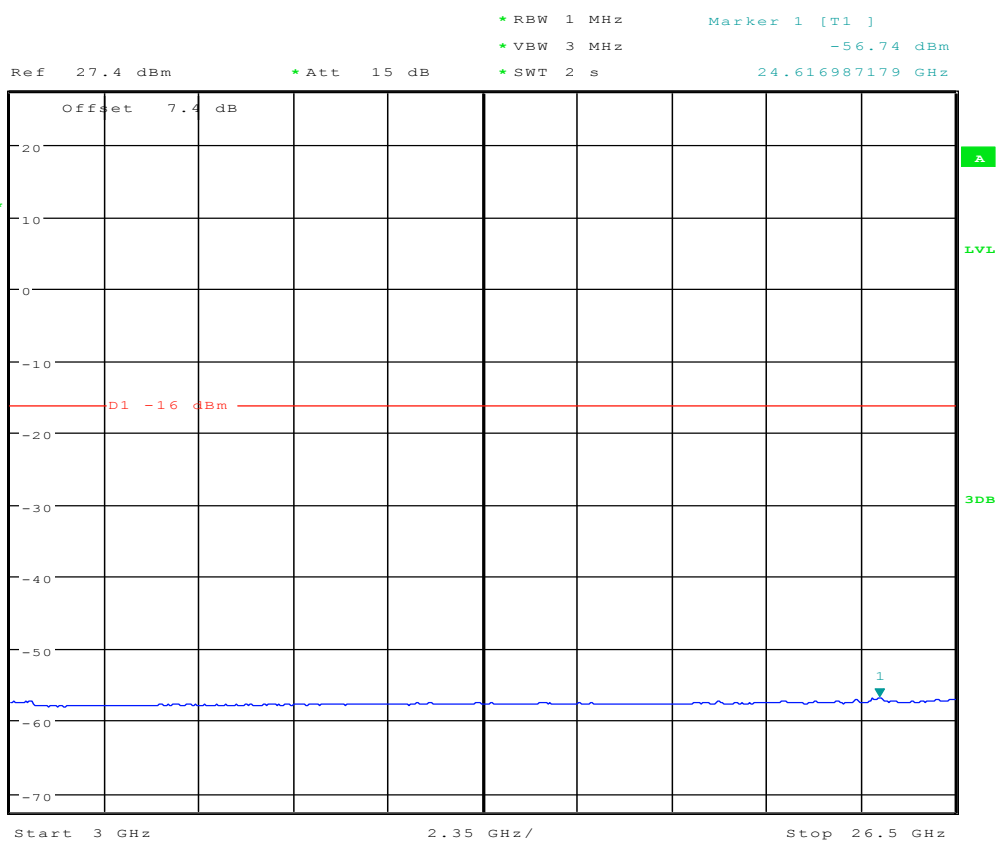
Date: 30.OCT.2015 16:04:39



Date: 5.NOV.2015 19:33:07



1 RM  
CLRWB



Date: 5.NOV.2015 19:32:50



## **Appendix E2: Radiated (Spurious) Emissions**



## 1 Result Table

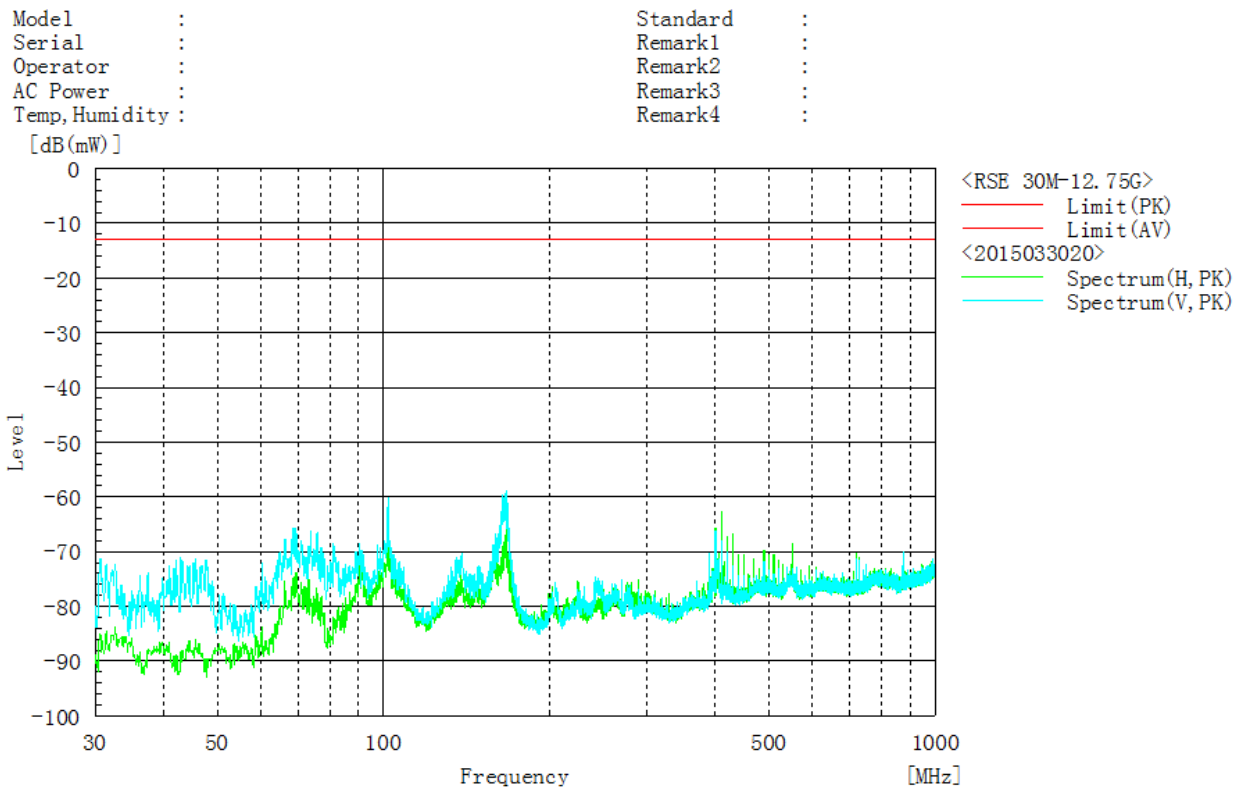
| EUT Conf.         | Measured Curve Conformed to the Emission Limit? | Verdict |
|-------------------|-------------------------------------------------|---------|
| 5M_M (Worst case) | Yes                                             | Pass    |

Note: The setting of analyzer is below

| Frequency range  | RBW  | Detector |
|------------------|------|----------|
| 30MHz to 1GHz    | 1MHz | Average  |
| 1GHz to 18GHz    | 1MHz | Average  |
| 18GHz to 26.5GHz | 1MHz | Average  |

## 2 Test Plot

### 2.1 30MHz-1GHz



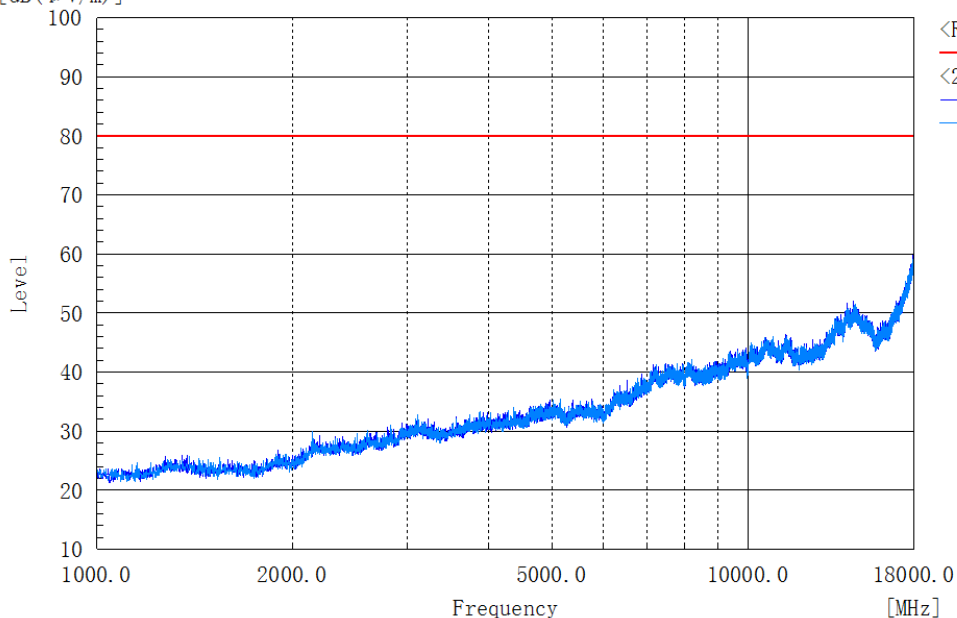


## 2.2 1GHz-18GHz

Note: the signal exceeding the limit line is the wanted signal.

|                |   |          |   |                                |
|----------------|---|----------|---|--------------------------------|
| Model          | : | Standard | : | RSE to RE_80.08dBuV_1G_40G.rli |
| Serial         | : | Remark1  | : |                                |
| Operator       | : | Remark2  | : |                                |
| AC Power       | : | Remark3  | : |                                |
| Temp, Humidity | : | Remark4  | : |                                |

[dB (μV/m)]

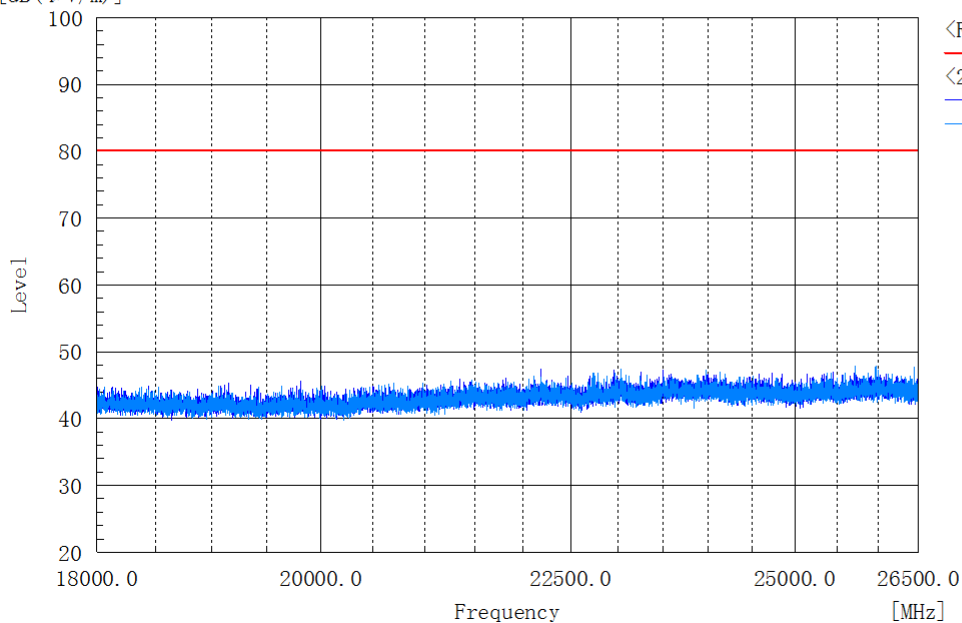




## 2.3 18GHz-26.5GHz

|                |   |          |   |                                |
|----------------|---|----------|---|--------------------------------|
| Model          | : | Standard | : | RSE to RE_80.08dBuV_1G_40G.rli |
| Serial         | : | Remark1  | : |                                |
| Operator       | : | Remark2  | : |                                |
| AC Power       | : | Remark3  | : |                                |
| Temp, Humidity | : | Remark4  | : |                                |

[dB (μV/m)]



<RSE to RE\_80.08dBuV\_1G\_40G  
Limit (AV)  
<2015033018>  
Spectrum (H, AV)  
Spectrum (V, AV)



## Appendix F2: Frequency Stability

## 1 Result Table

### 1.1 Frequency Error

(1) Frequency Error vs. Temperature:

| EUT Conf. | Voltage | Temperature | Freq. Error [Hz] | Freq. vs. rated [ppm] | Freq. vs. 20 °C [ppm] | Verdict |
|-----------|---------|-------------|------------------|-----------------------|-----------------------|---------|
| 5M_M      | 100%    | -30 °C      | 0.70382          | 0.00036               | -0.00008              | Pass    |
|           |         | -20 °C      | 1.2555           | 0.00064               | 0.00020               | Pass    |
|           |         | -10 °C      | 1.0242           | 0.00052               | 0.00008               | Pass    |
|           |         | 0 °C        | 2.3924           | 0.00122               | 0.00078               | Pass    |
|           |         | +10 °C      | 0.97991          | 0.00050               | 0.00006               | Pass    |
|           |         | +20 °C      | 0.85948          | 0.00044               | 0                     | Pass    |
|           |         | +30 °C      | 1.1379           | 0.00058               | 0.00014               | Pass    |
|           |         | +40 °C      | 1.159            | 0.00059               | 0.00015               | Pass    |
|           |         | +50 °C      | 1.4807           | 0.00076               | 0.00032               | Pass    |

(2) Frequency Error vs. Voltage:

| EUT Conf. | Temperature | Voltage | Freq. Error [Hz] | Freq. vs. rated [ppm] | Freq. vs. 20 °C [ppm] | Verdict |
|-----------|-------------|---------|------------------|-----------------------|-----------------------|---------|
| 5M_M      | +20 °C      | 85 %    | 1.7688           | 0.00090               | 0.00046               | Pass    |
|           |             | 100 %   | 0.85948          | 0.00044               | 0                     | Pass    |
|           |             | 115 %   | 1.5481           | 0.00079               | 0.00035               | Pass    |

### 1.2 Frequency Range

(Not applicable)



## 2 Test Plot

NOTE: Only the test plots for the measurements of Frequency Range are supplied.

(Not applicable)



## **Appendix G2: Receiver Spurious Emissions**



## 1 Result Table

(Not applicable)

## 2 Test Plot

(Not applicable)

---

END