

### **Special Operating Conditions**

All five translators, K222DC, K230CK, K257GO, K267AI, and K297CC were operated into the five-port combiner, which is connected to the common antenna. A coupler was connected to a line section between the output of the combiner and the antenna. The sample from this coupler was fed to a Siglent SSA3021X spectrum analyzer.

An observation of the each was spectrum was noted. Emissions from 120 kHz to 240 kHz were down from the reference level at least 30 dB, exceeding 73.317 (b by 5 dB. At plus and minus 240 to 600 KHz they were down more than 47 dB. Emissions greater than 600 kHz were down at least 69 dB or more, equal or better than the suppression required for the 250-Watt power level specified in 73.317 (d. In many cases at frequencies of plus and minus 600 KHz or more, there was another facility that showed up on the spectral trace, as it was coupling into the antenna system. There were no carriers that could be identified as spurious emissions attributable to the operation of these five translators, as emissions that could not be identified were present with the translator operation discontinued. Note the signal at 95.7 MHz is KBGO, Ch 239 C2 FID33724, Waco, TX, the signal at 89.9 MHz is KBDE Ch 210 C2 FID85761, Temple, TX, and the co located KBHT Ch 285A FID21494 Bellmead, TX.

SIGLENT

2020-02-24 18:47:13



Frequency

LOG

10.0 dB

Free

LgPwr

Cont

Ref 0.00 dBm

Att 20.00 dB

Marker1

93.925956 MHz

-33.11 dBm

Center Frequency  
93.900000 MHz

1

Center Freq

93.900000 MHz

Start Freq

92.509519 MHz

Stop Freq

95.290481 MHz

Freq Step

278.096 kHz

Auto

Manual

Peak→CF

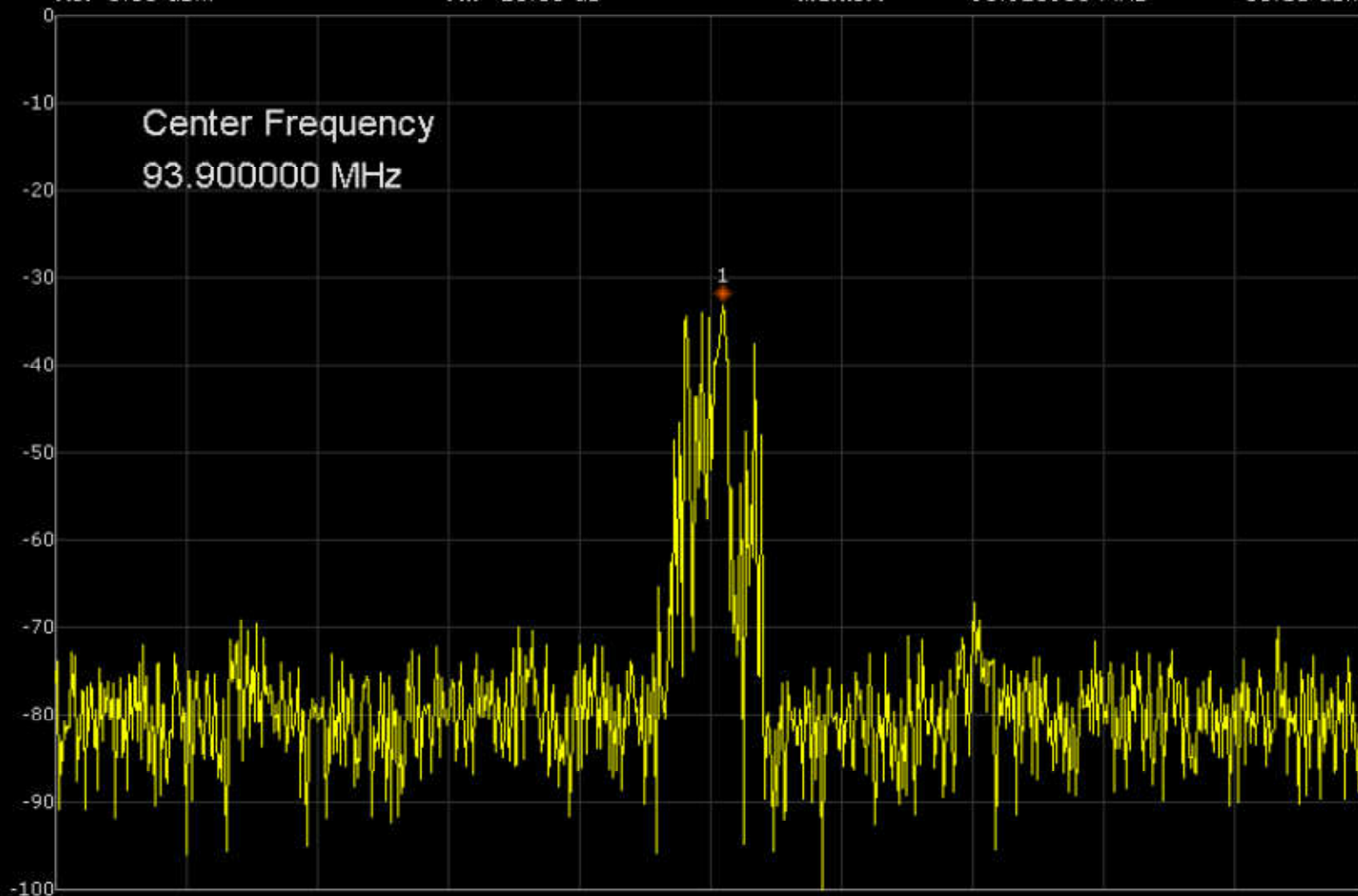
CF→Step

Freq Offset

0 Hz

A C&W

P-PK



Center  
RBW

93.900000 MHz  
30.000 kHz

VBW

30.000 kHz

Span  
SWT

2.780962 MHz  
67.500 ms

Local

SIGLENT

2020-02-24 18:48:12



LOG

10.0 dB

Free

LgPwr

Cont

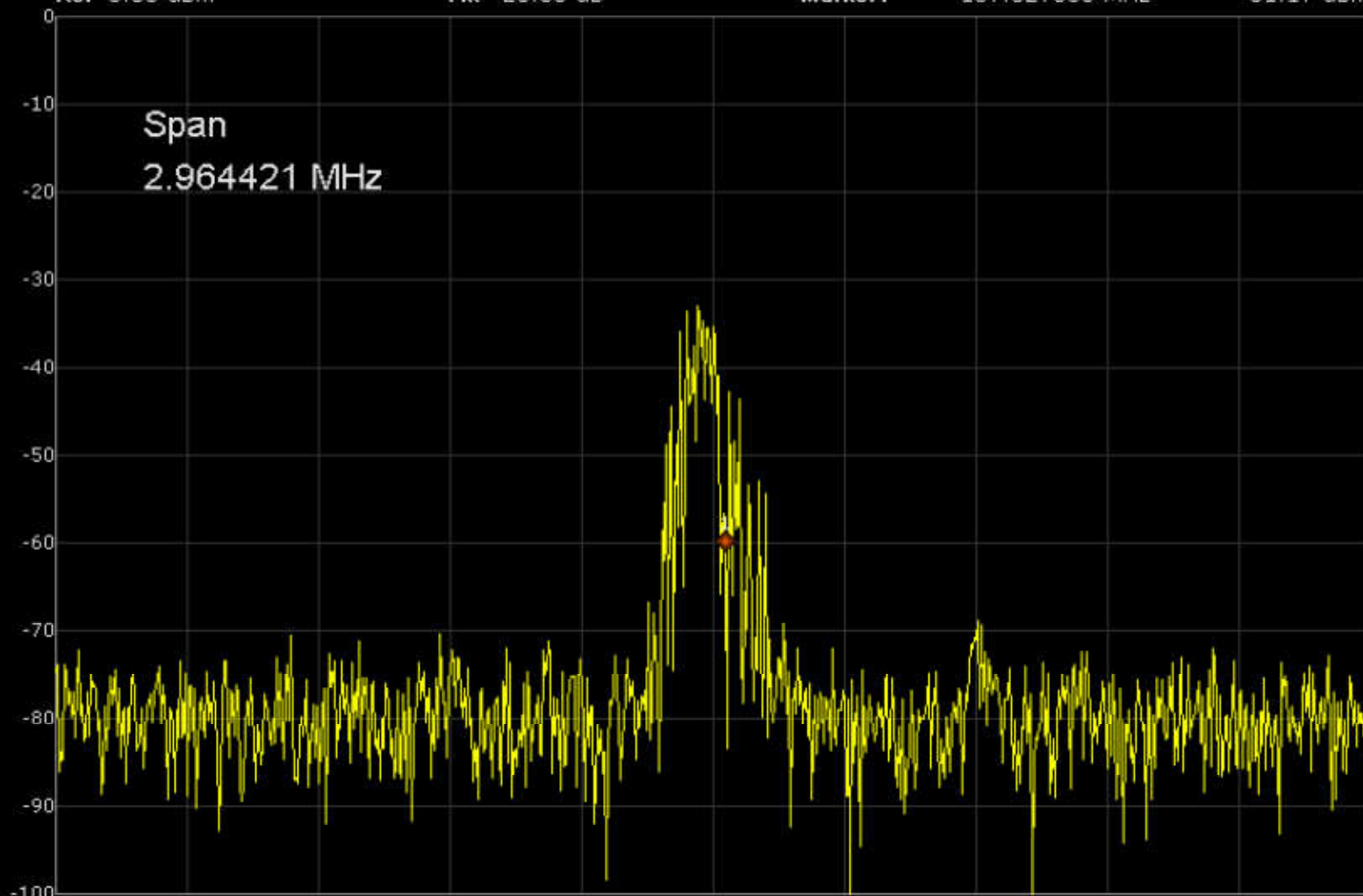
Ref 0.00 dBm

Att 20.00 dB

Marker1

107.327668 MHz

-61.17 dBm



Center 107.300000 MHz

RBW 30.000 kHz

VBW

30.000 kHz

Span

2.964421 MHz

SWT

67.500 ms

Span

Span

2.964421 MHz

Full Span

Zero Span

Zoom In

Zoom Out

Last Span

X-scale

Log

Lin

Local

A C&W  
P-PK

SIGLENT

2020-02-25 10:32:55



LOG

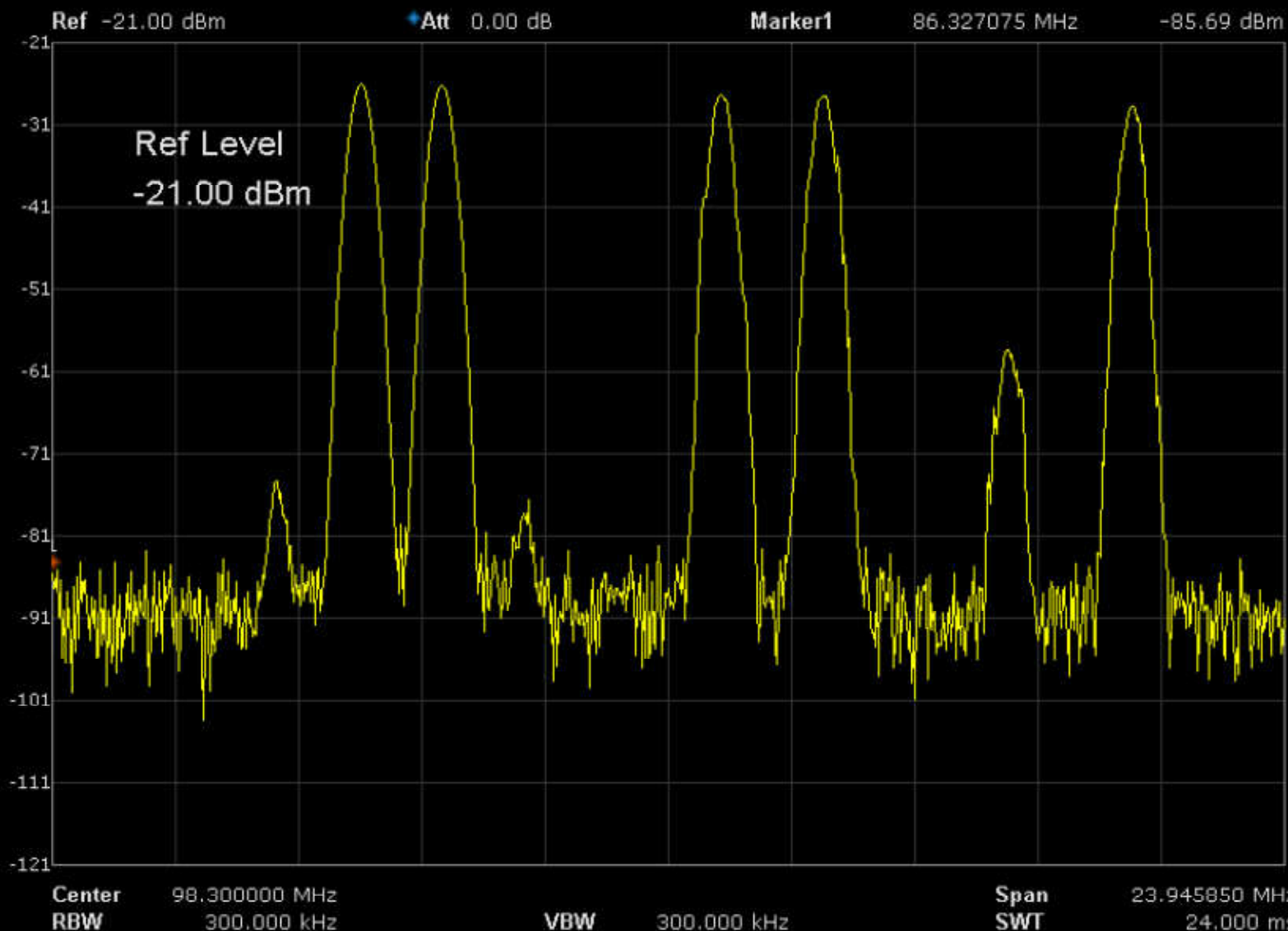
10.0 dB

Free

LgPwr

Cont

A C&W  
P-PK



Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local

SIGLENT

2020-02-25 10:20:02



LOG

10.0 dB

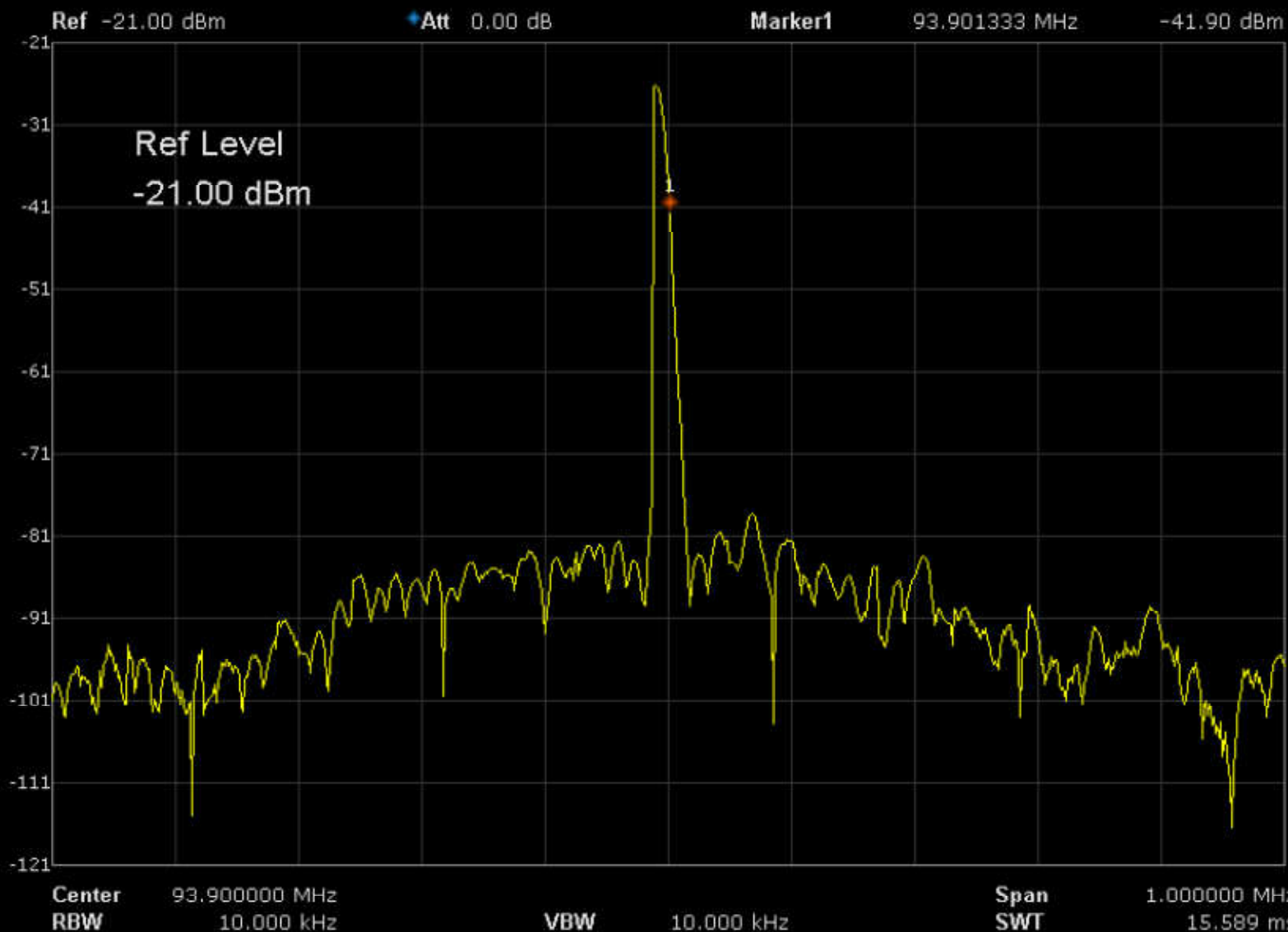
Free

LgPwr

Cont

FFT

A C&W  
P-PK



Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local

SIGLENT

2020-02-25 10:19:20



LOG

10.0 dB

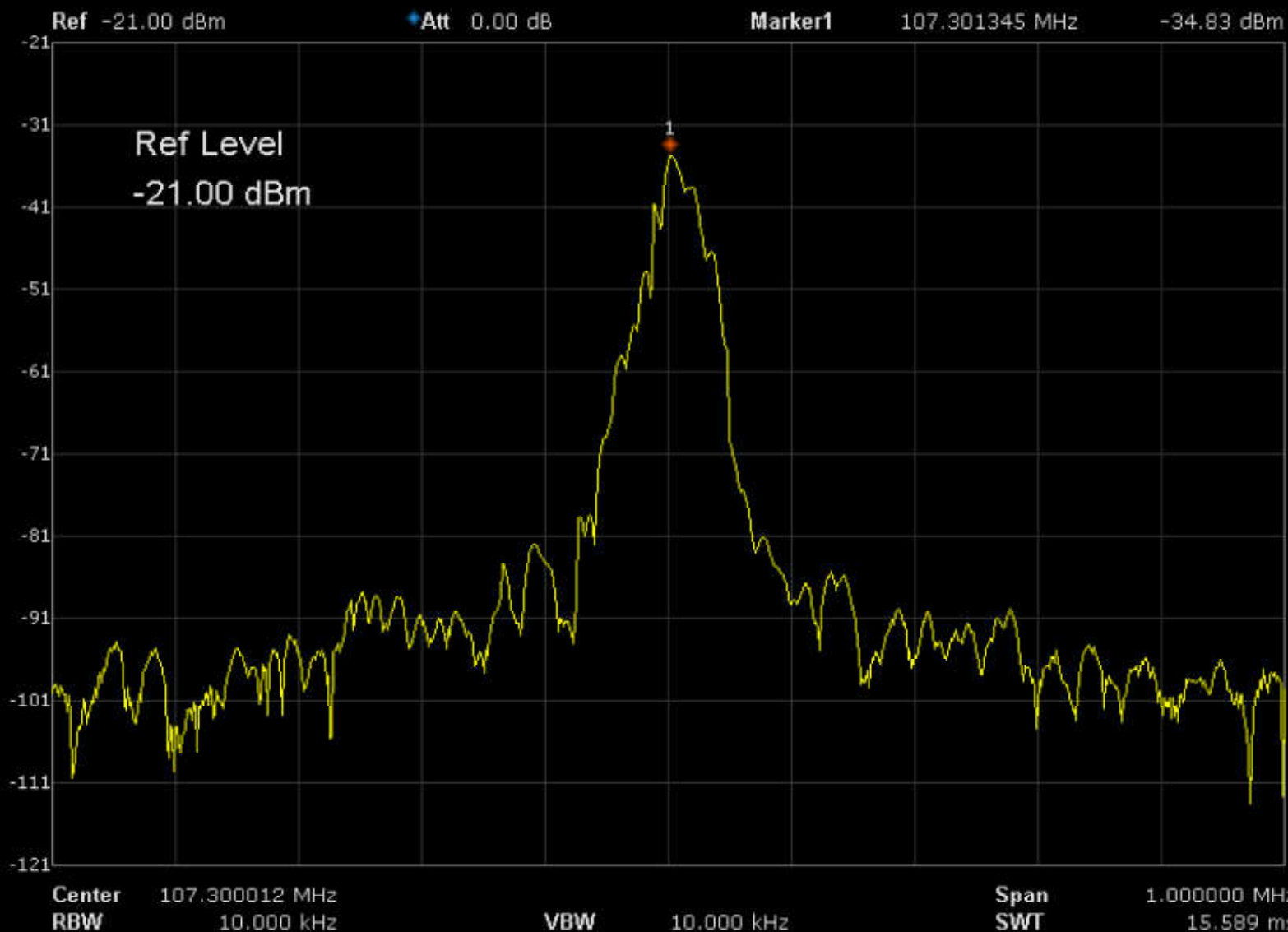
Free

LgPwr

Cont

FFT

A C&W  
P-PK



Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local

SIGLENT

2020-02-25 10:21:50



LOG

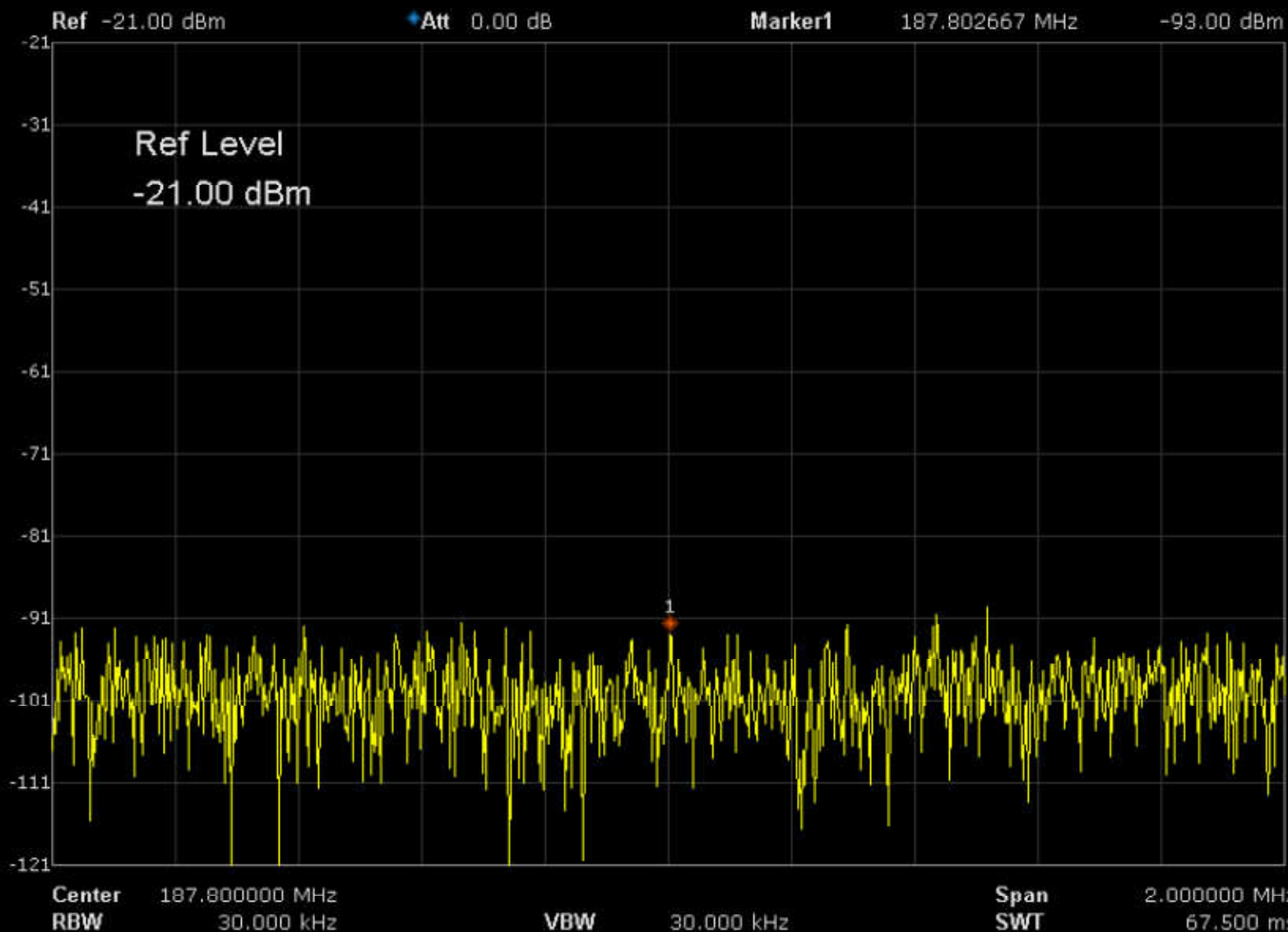
10.0 dB

Free

LgPwr

Cont

A C&W  
P-PK



Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local



SIGLENT

2020-02-25 10:30:07



LOG

10.0 dB

Free

LgPwr

Cont

Ref -21.00 dBm

Att 0.00 dB

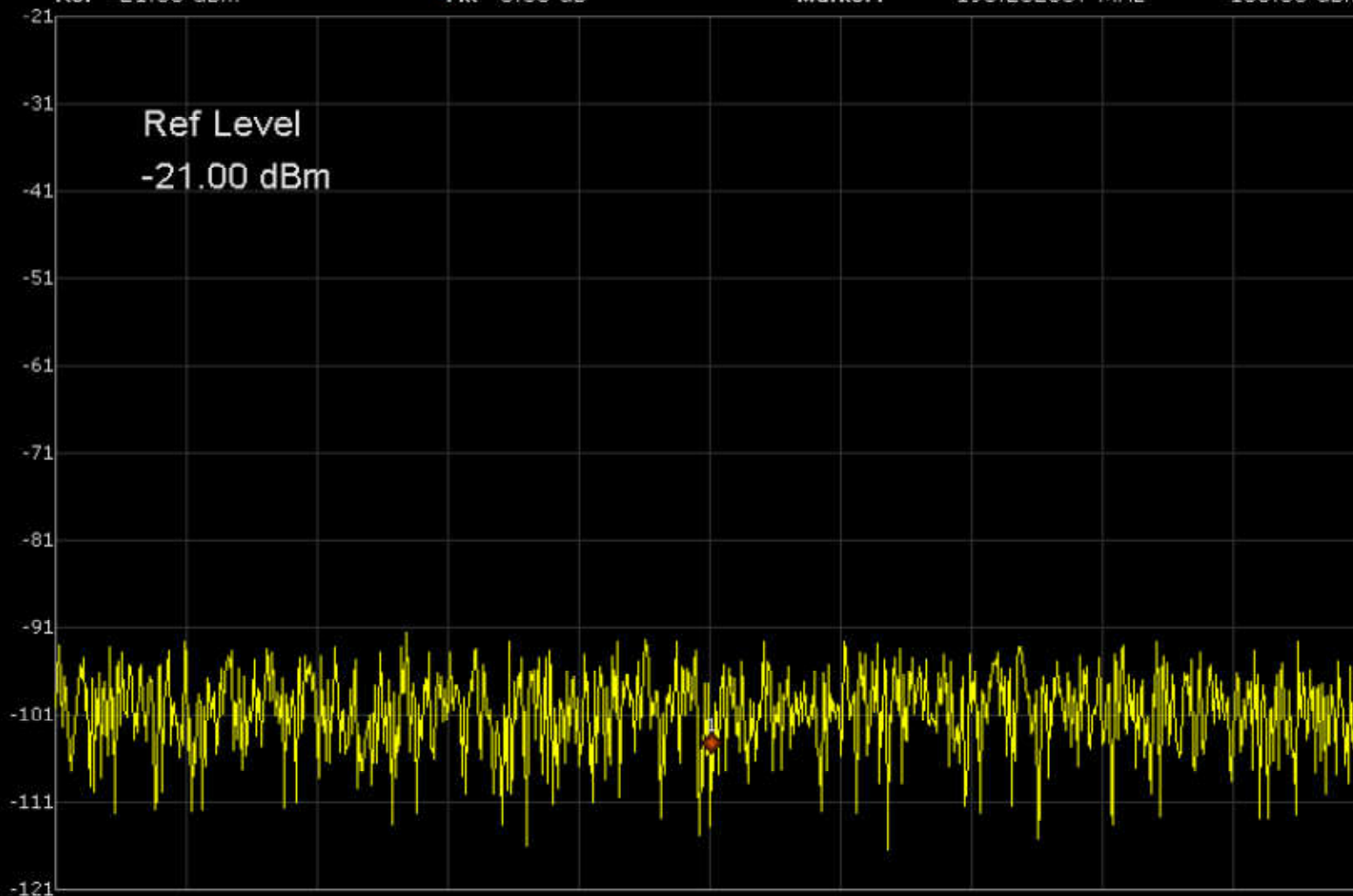
Marker1

193.202667 MHz

-105.66 dBm

Ref Level  
-21.00 dBm

A C&W  
P-PK



Center 193.200000 MHz  
RBW 30.000 kHz

VBW 30.000 kHz

Span 2.000000 MHz  
SWT 67.500 ms

Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local



SIGLENT

2020-02-25 10:28:18



LOG

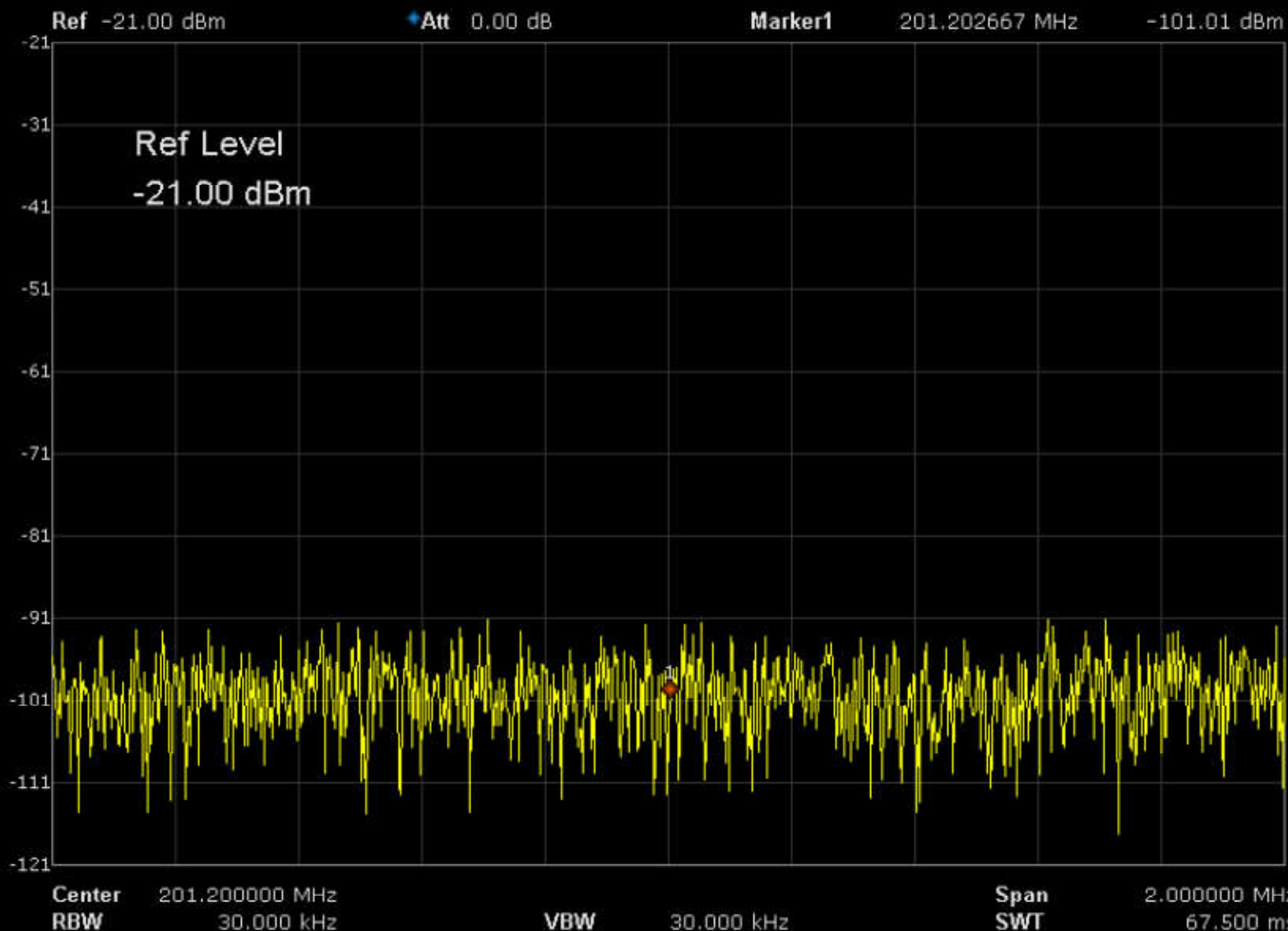
10.0 dB

Free

LgPwr

Cont

A C&W  
P-PK



Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local

SIGLENT

2020-02-25 10:22:51



LOG

10.0 dB

Free

LgPwr

Cont

Ref -21.00 dBm

Att 0.00 dB

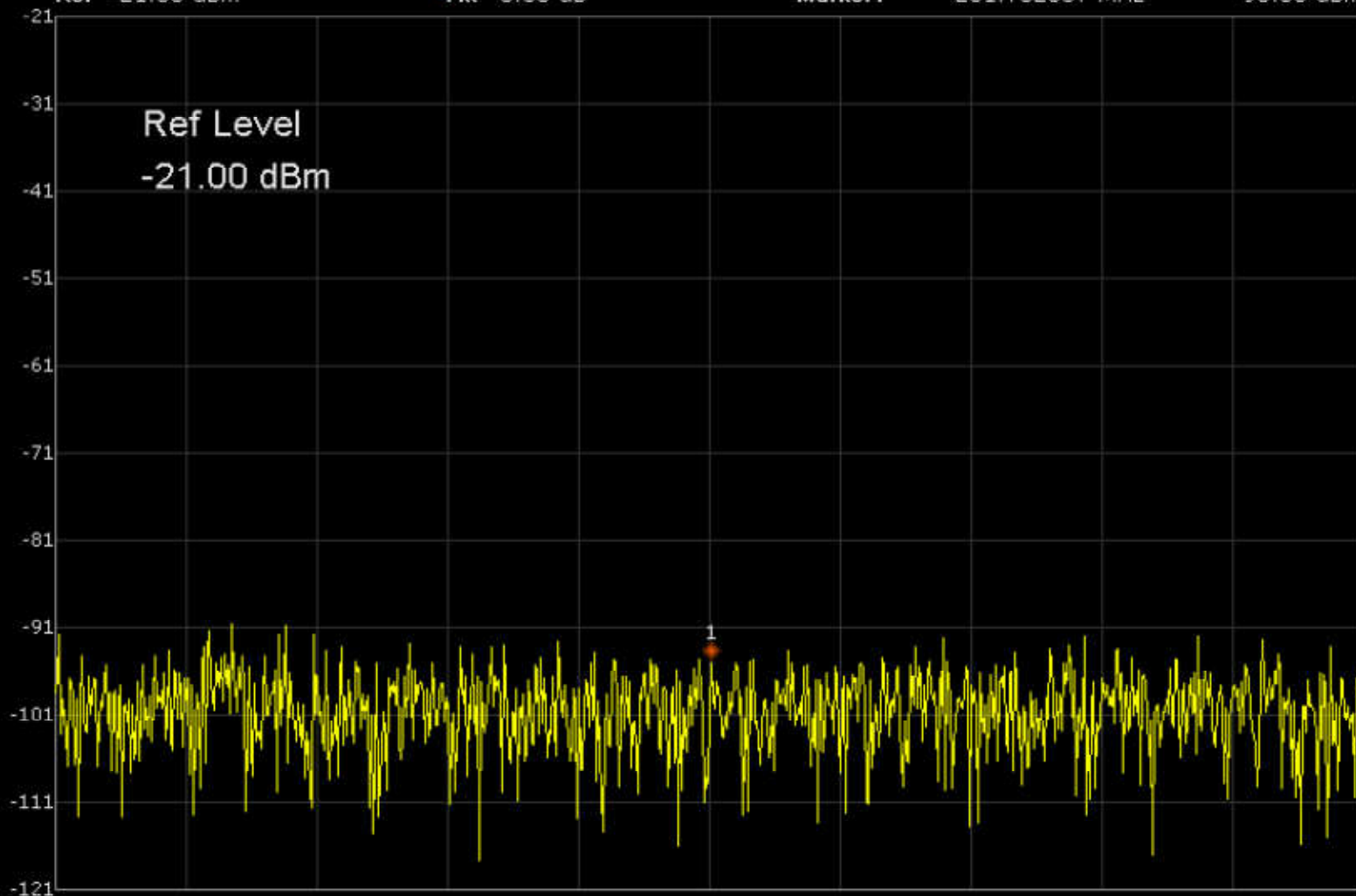
Marker1

281.702667 MHz

-95.08 dBm

Ref Level  
-21.00 dBm

A C&W  
P-PK



Center 281.700000 MHz  
RBW 30.000 kHz

VBW 30.000 kHz

Span 2.000000 MHz  
SWT 67.500 ms

Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local

SIGLENT

2020-02-25 10:31:46



LOG

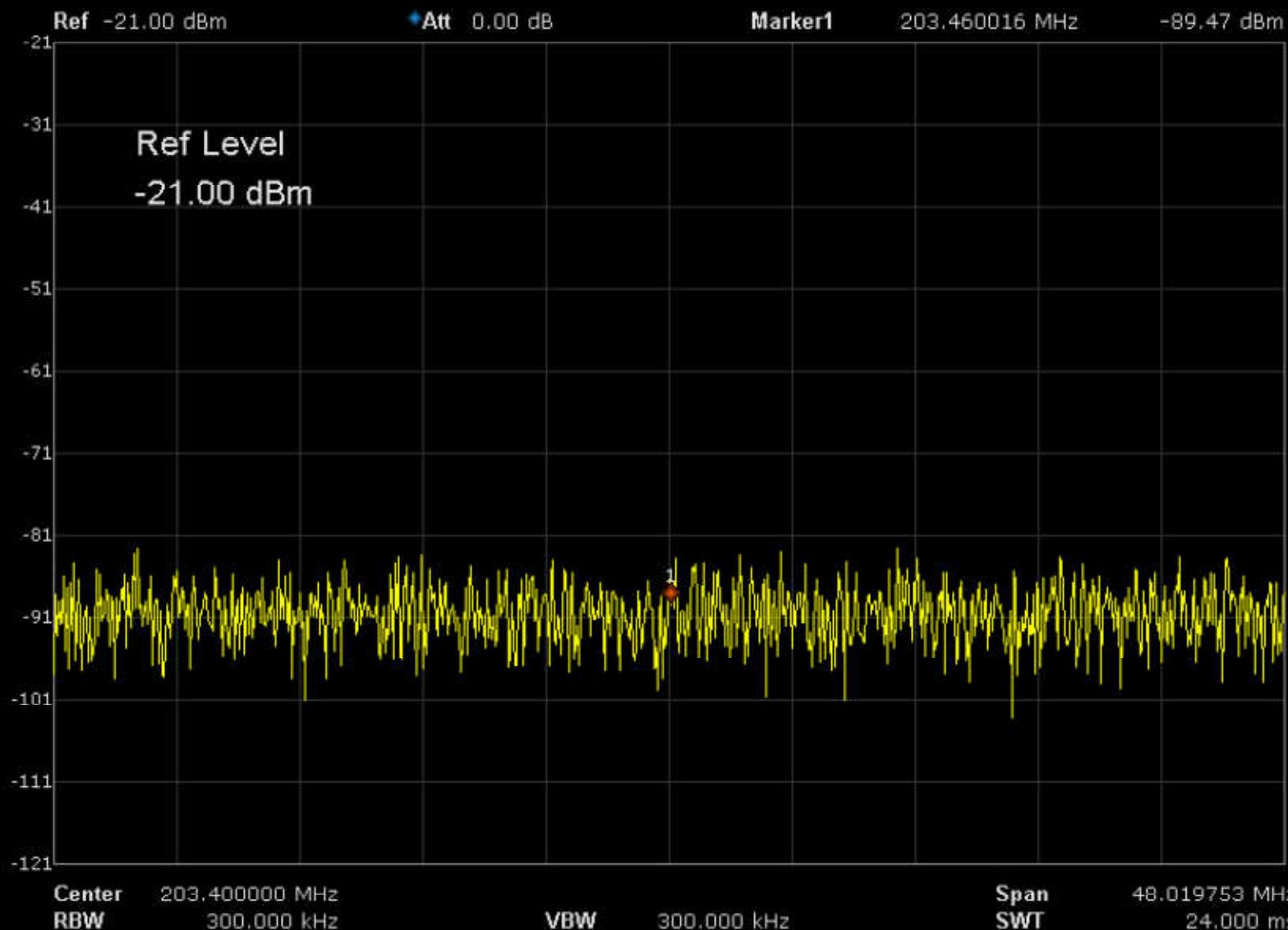
10.0 dB

Free

LgPwr

Cont

A C&W  
P-PK



Amplitude

Ref Level

-21.00 dBm

Attenuator

0.00 dB

Auto

Manual

Preamp

On

Off

Units

dBm

Scale/Div

10.00 dB

Scale Type

Log

Lin

Ref Offset

0.00 dB

Corrections

Local