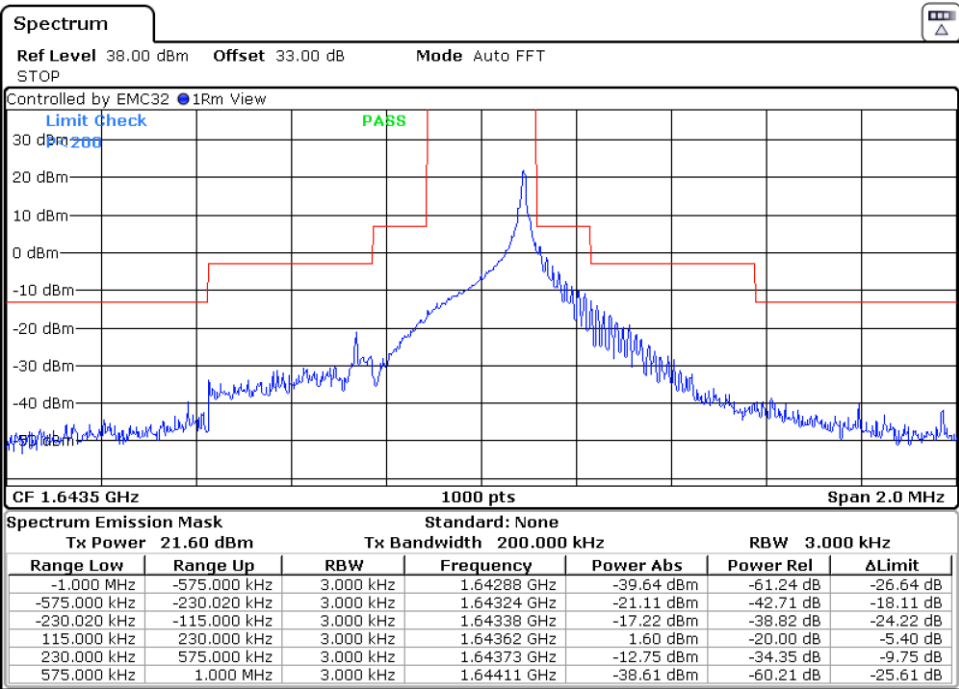
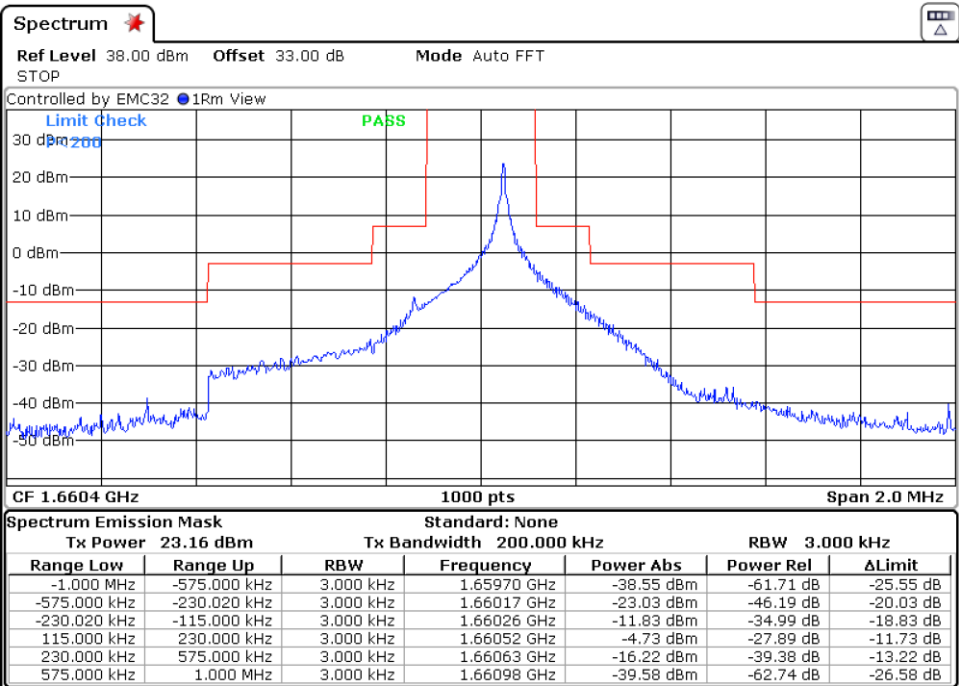


Middle Channel

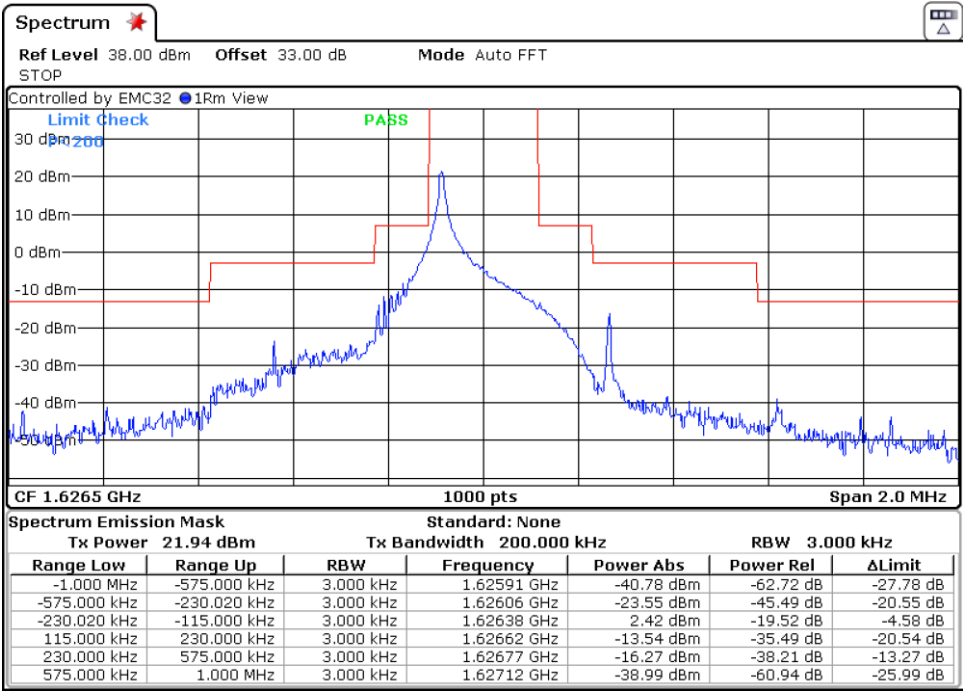


High Channel

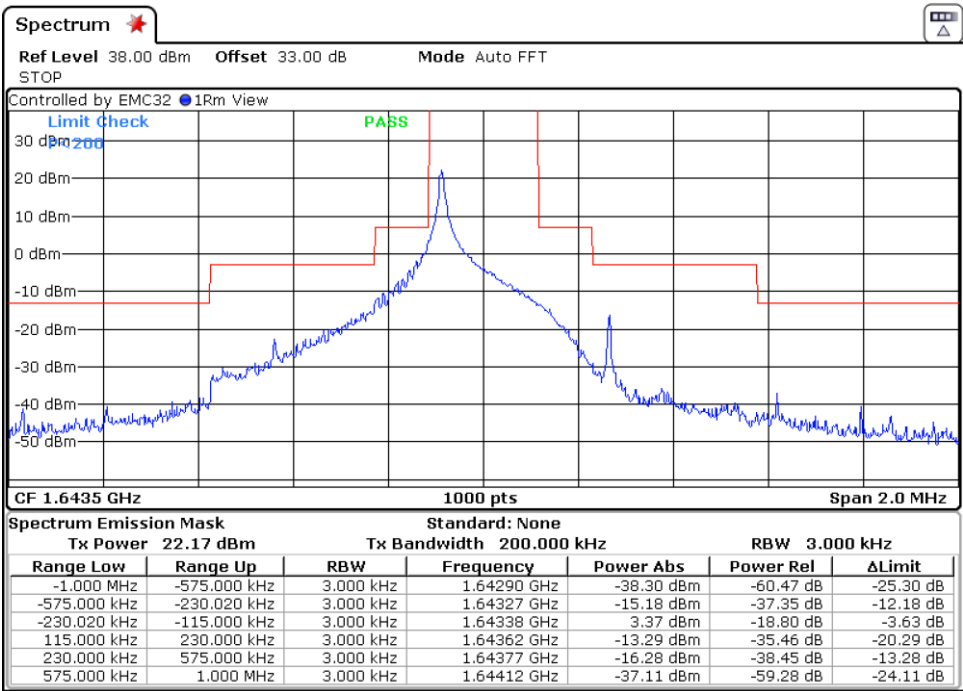


Modulation: QPSK (1SC0)
Results

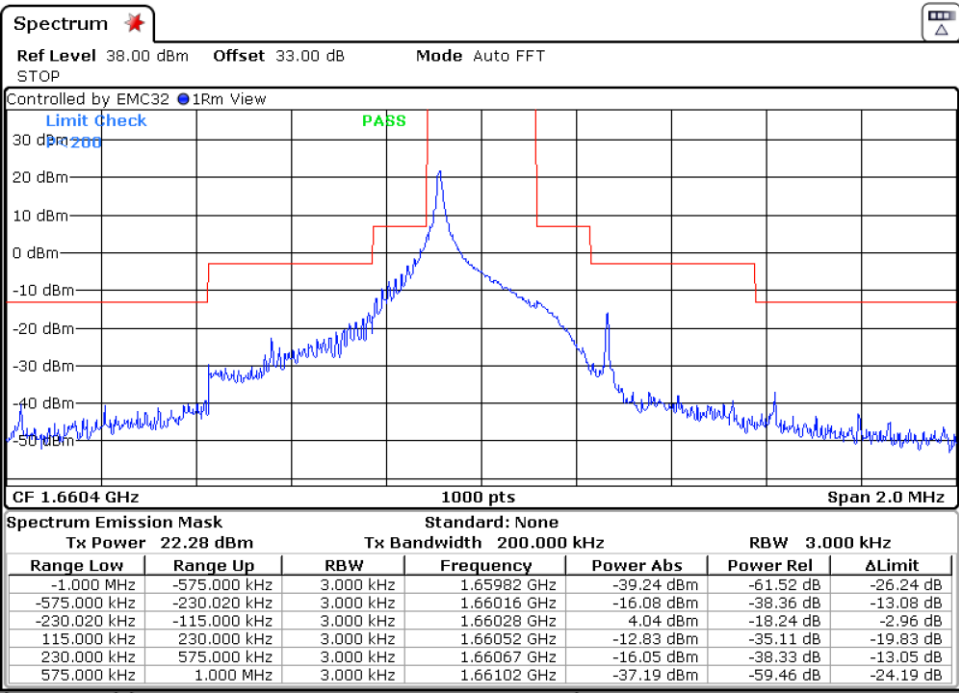
Low Channel



Middle Channel

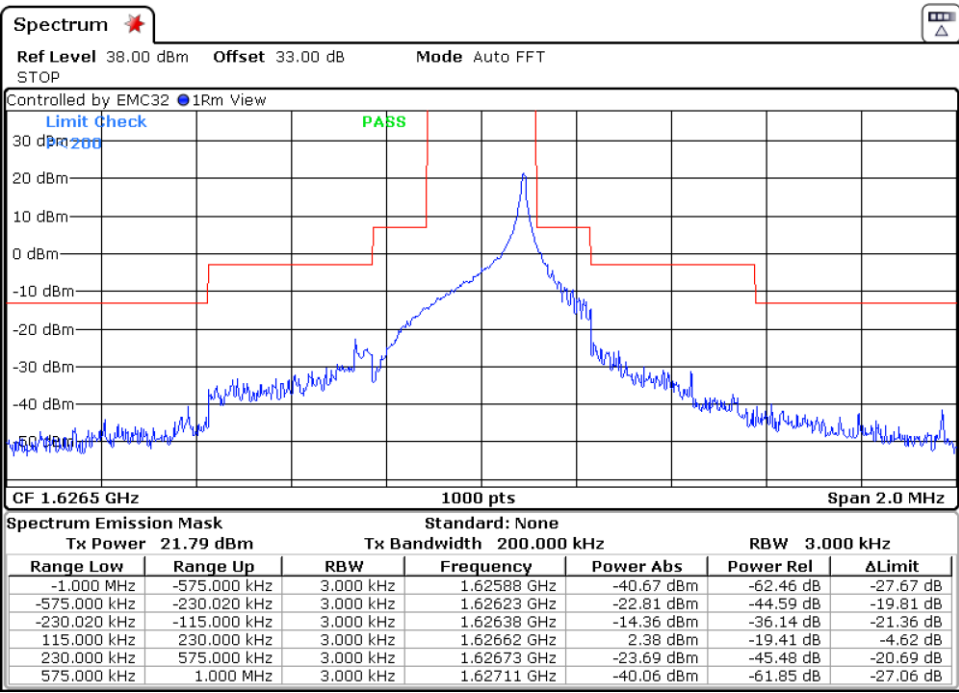


High Channel

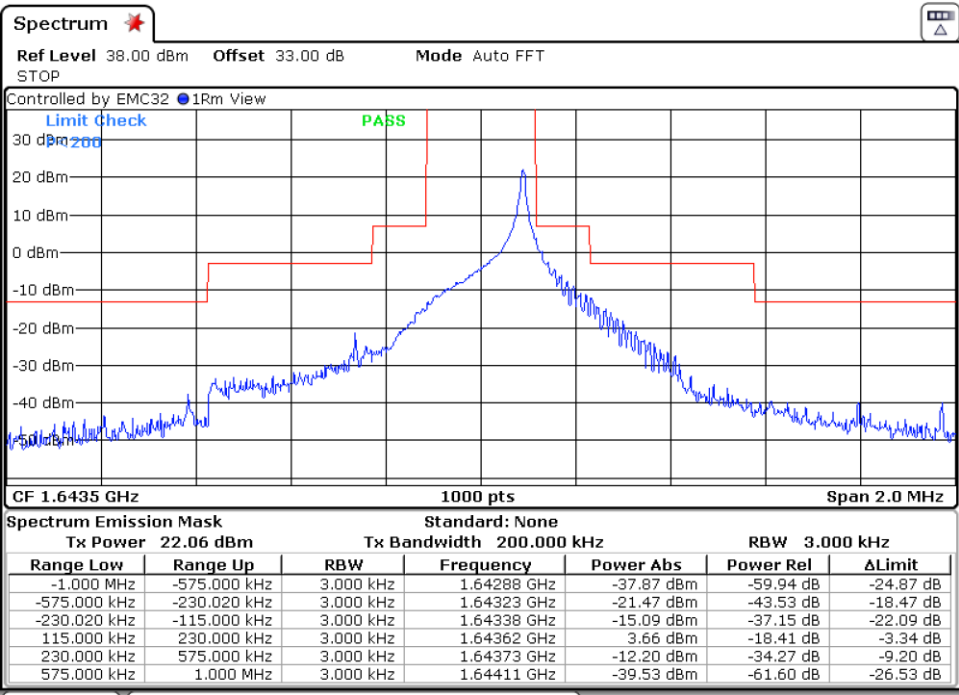


Modulation: QPSK (1SC47)
Results

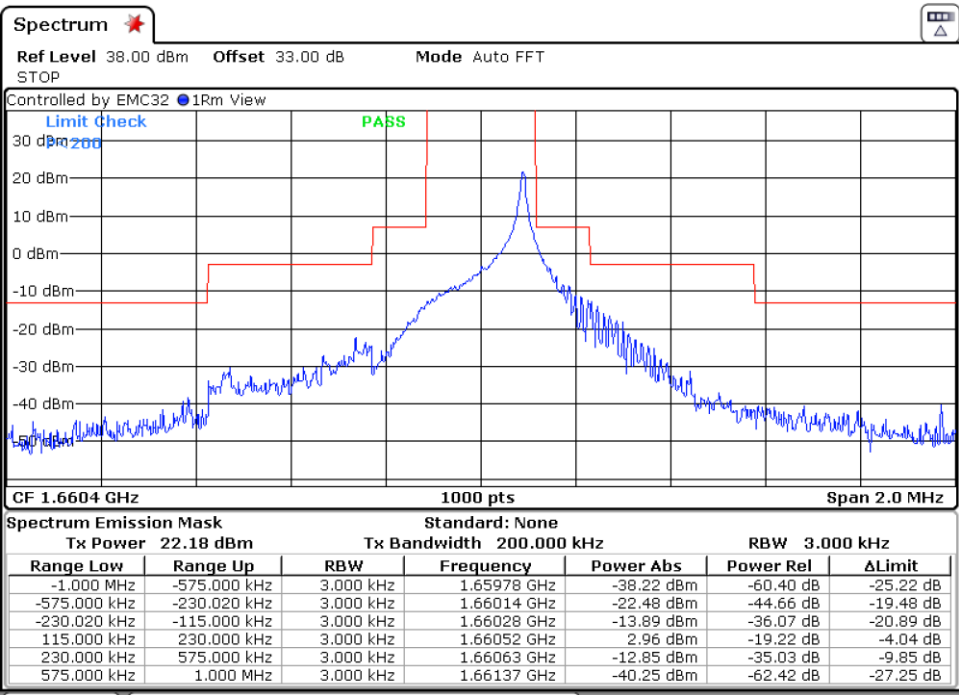
Low Channel



Middle Channel



High Channel

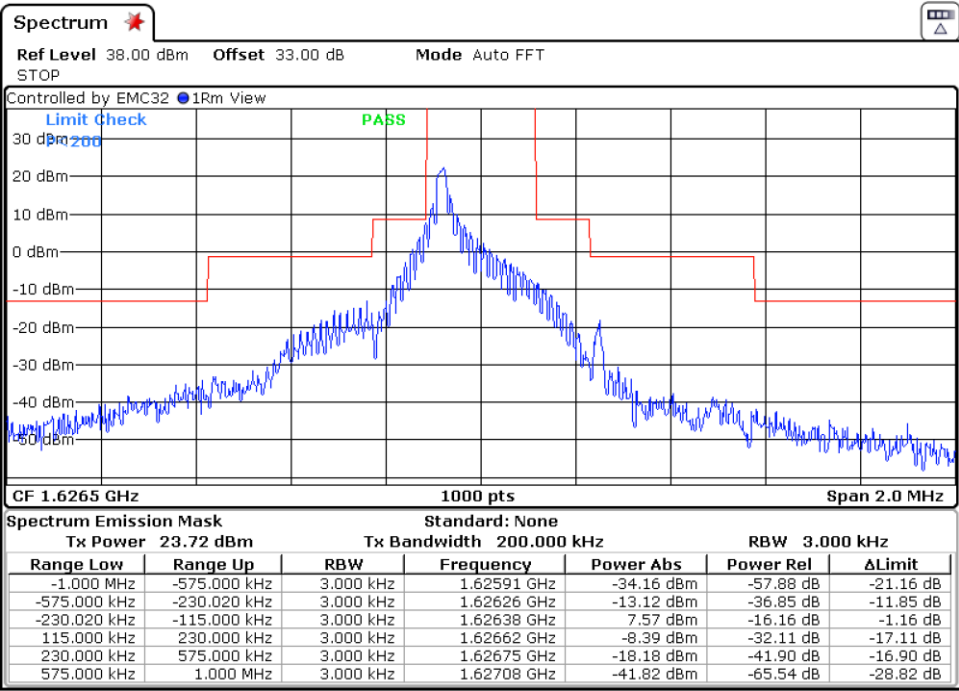


Band: 255 SCS 15 kHz

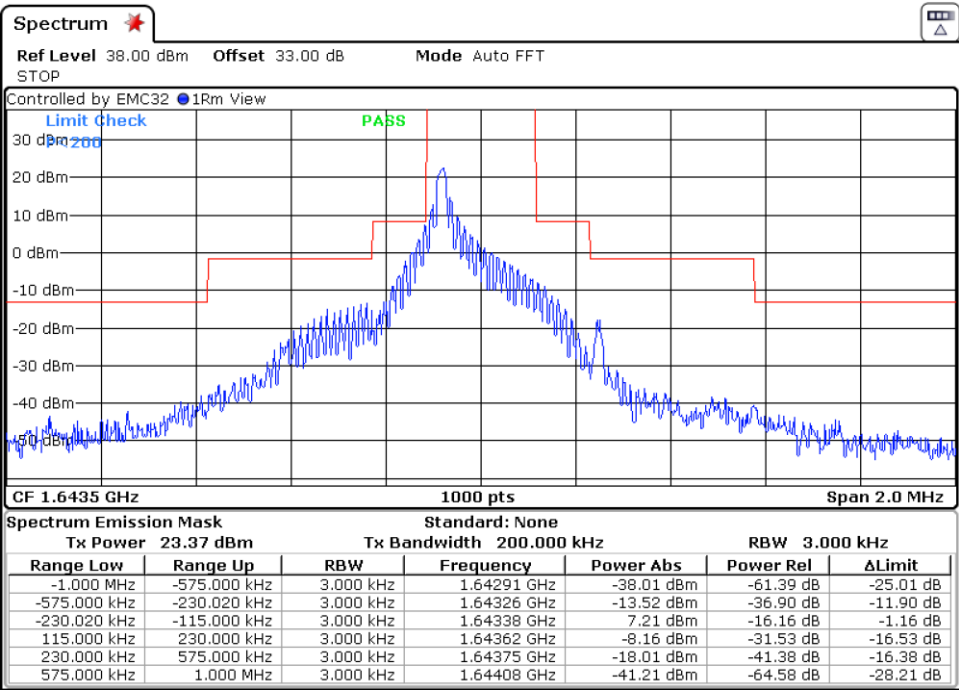
Modulation: BPSK (1SC0)

Results

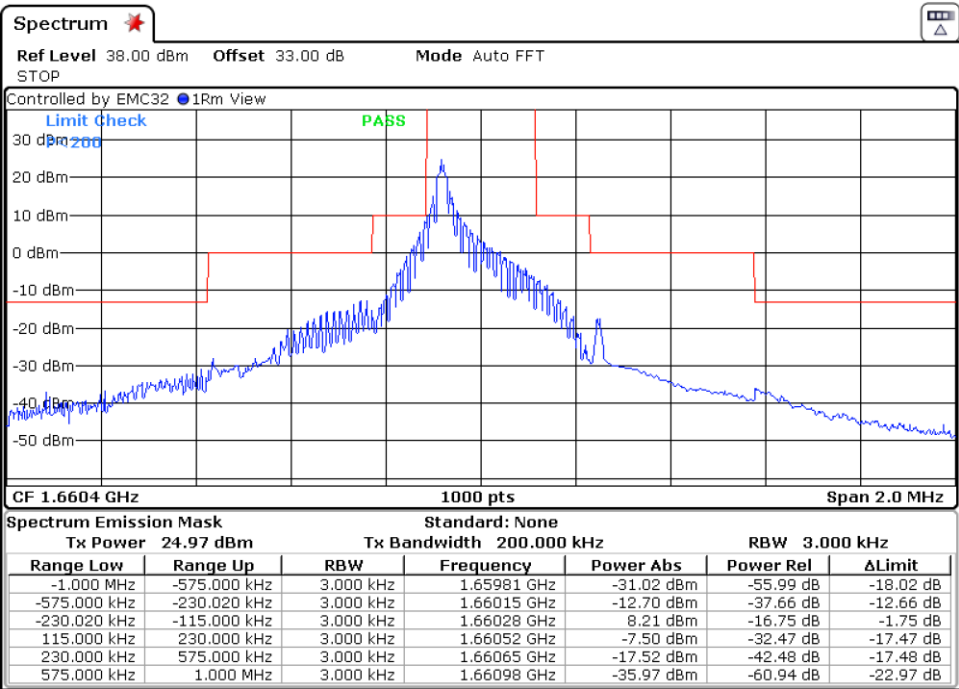
Low Channel



Middle Channel

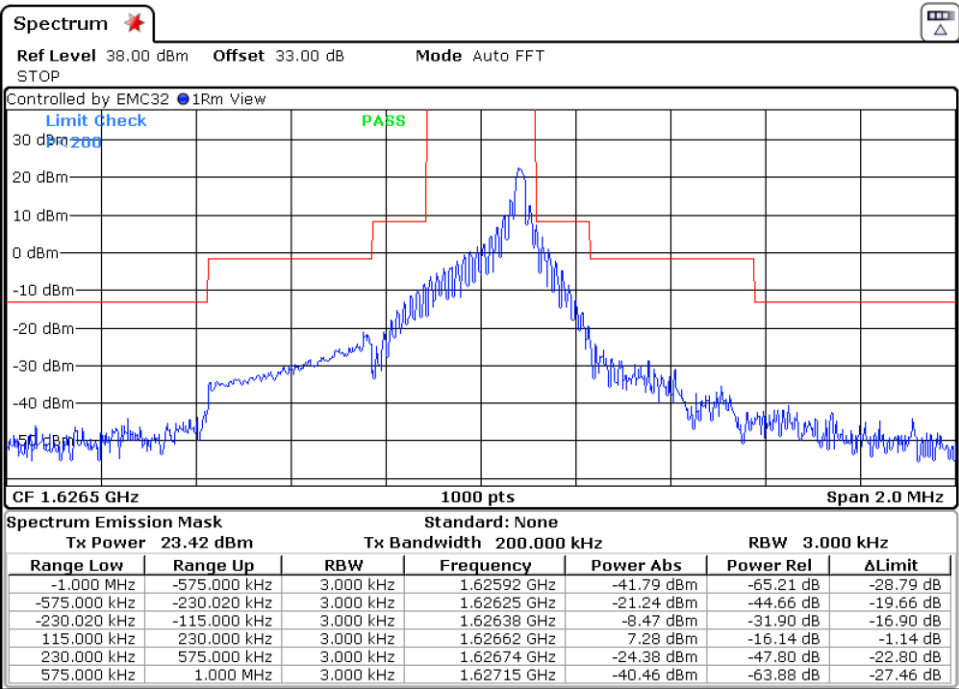


High Channel

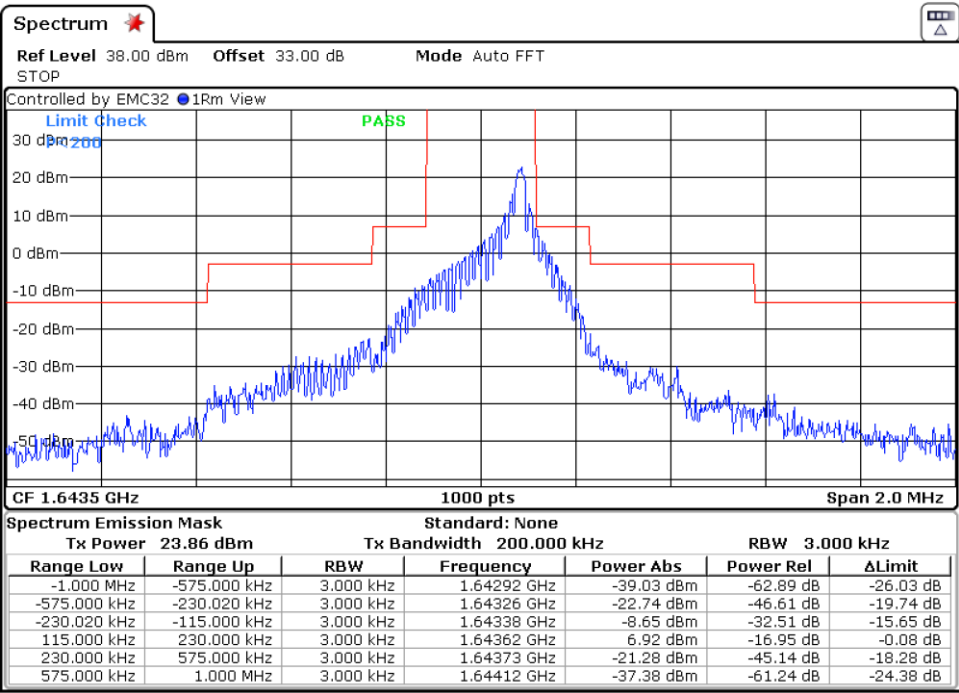


Modulation: BPSK (1SC11)
Results

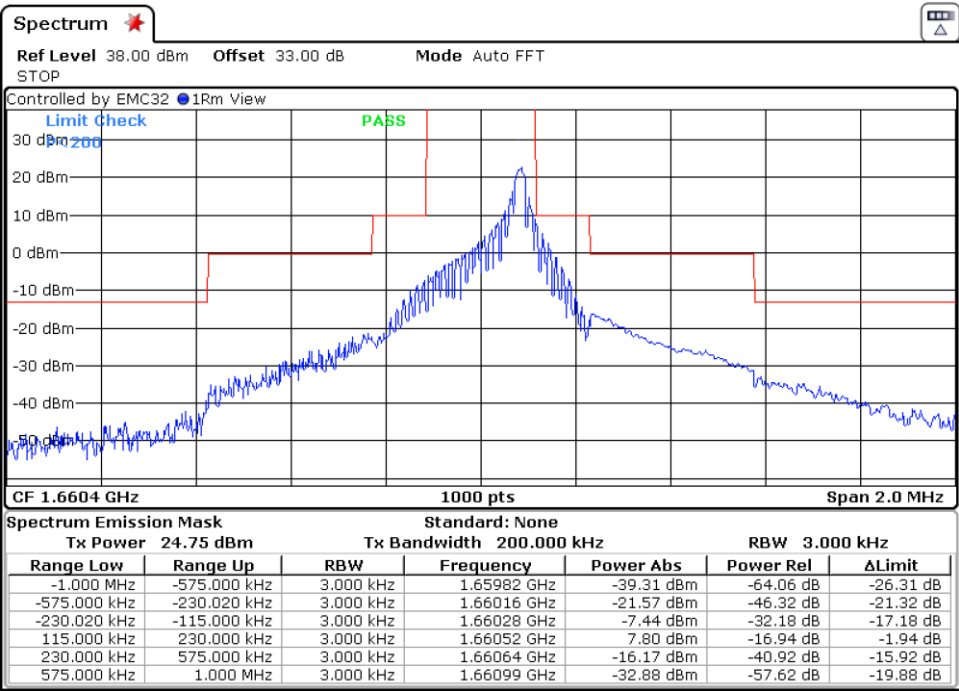
Low Channel



Middle Channel



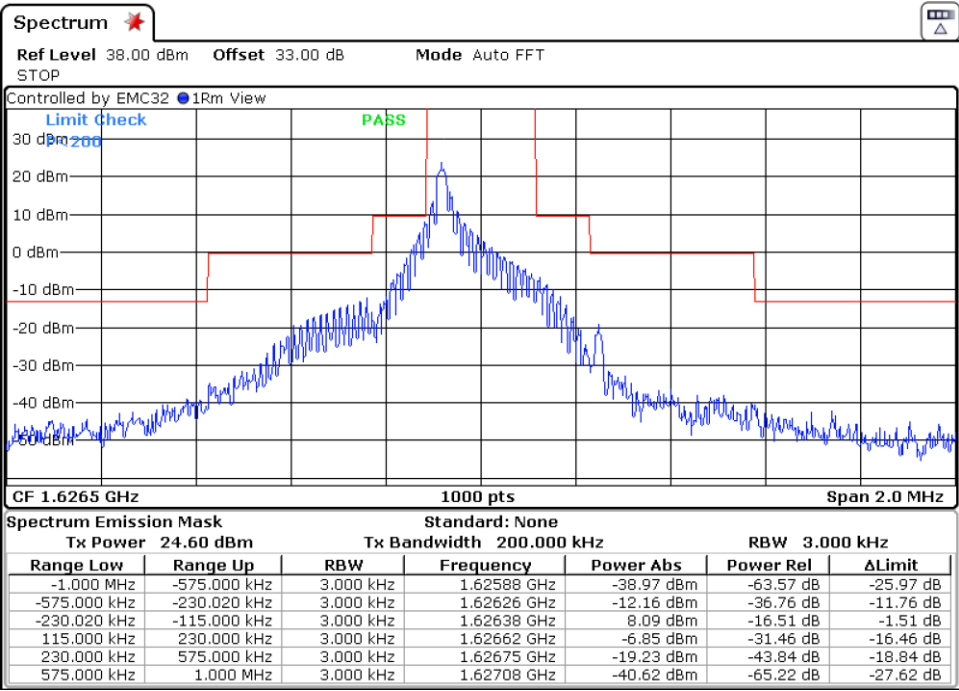
High Channel



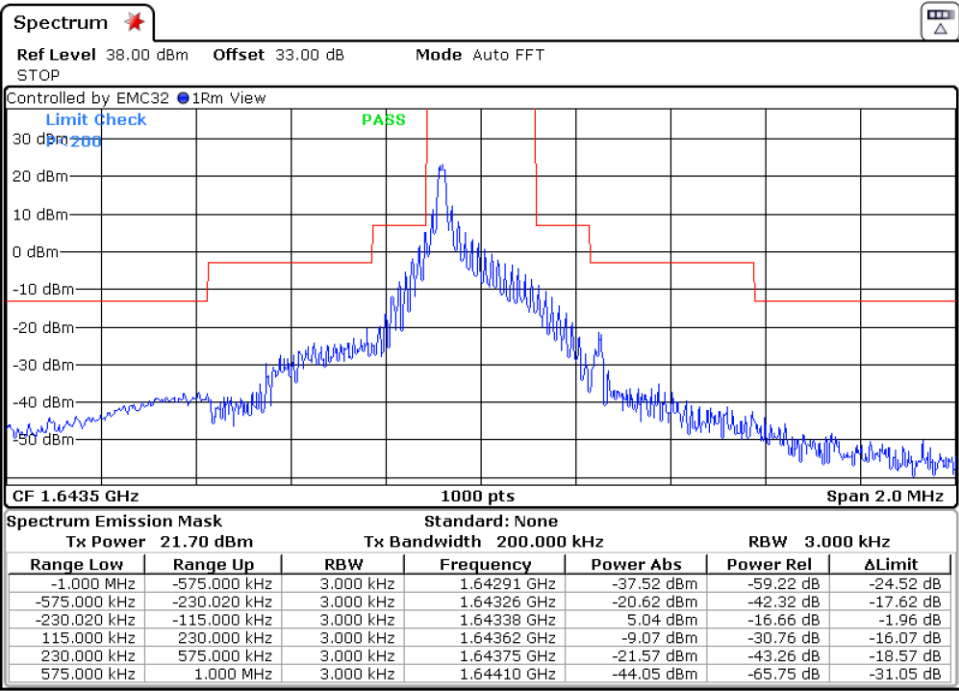
Modulation: QPSK (1SC0)

Results

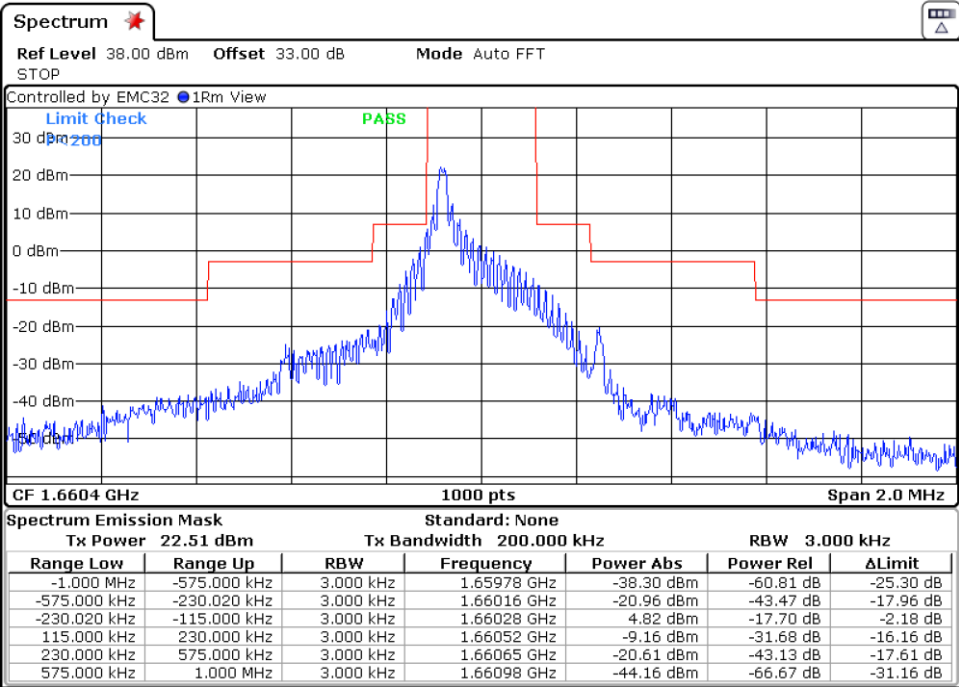
Low Channel



Middle Channel

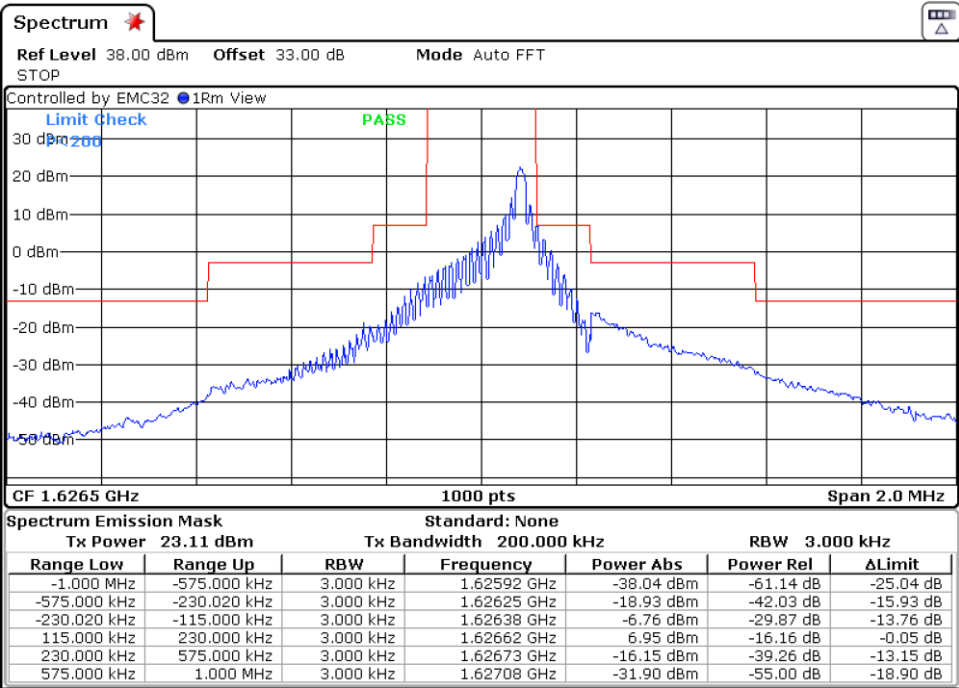


High Channel

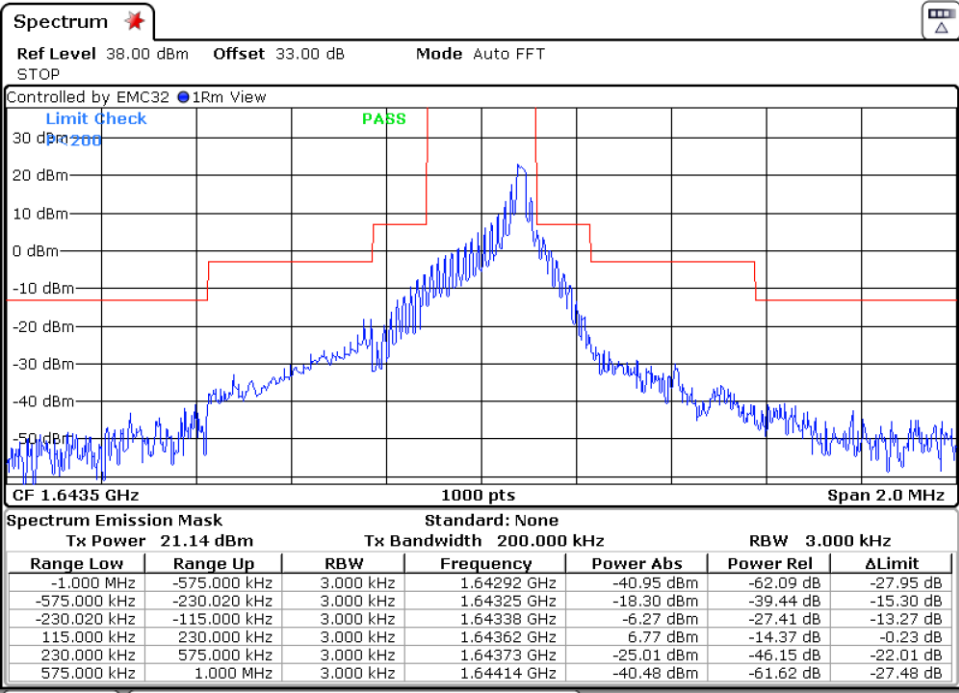


Modulation: QPSK (1SC11)
Results

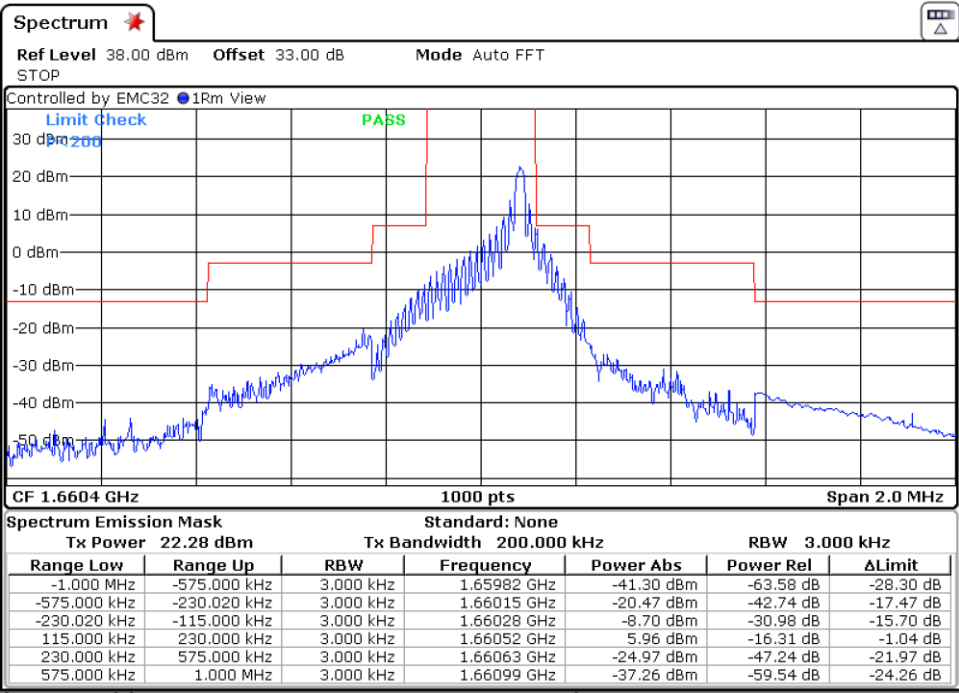
Low Channel



Middle Channel



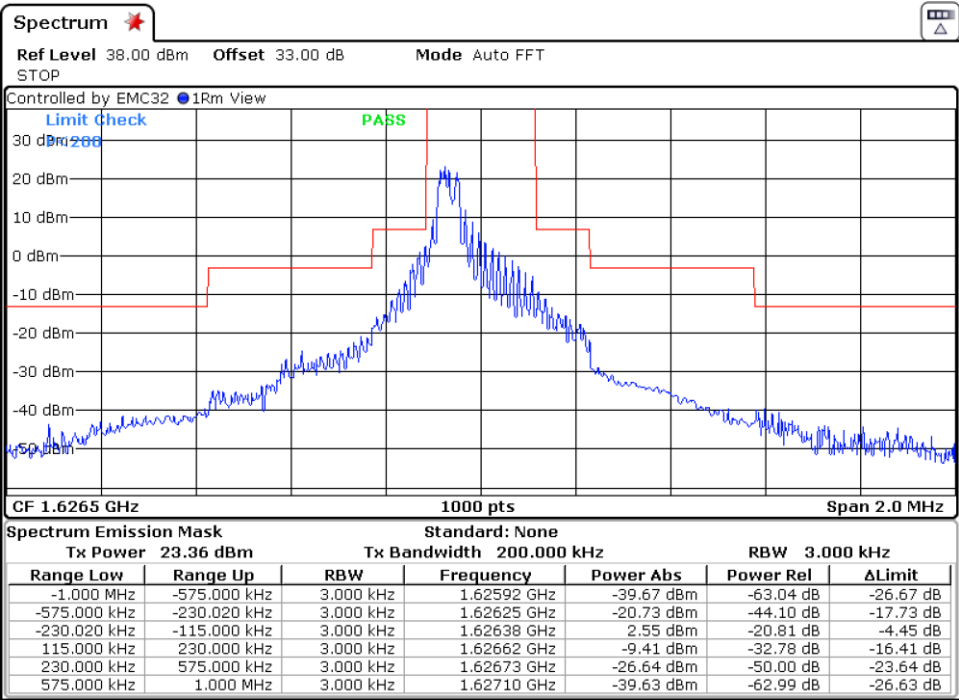
High Channel



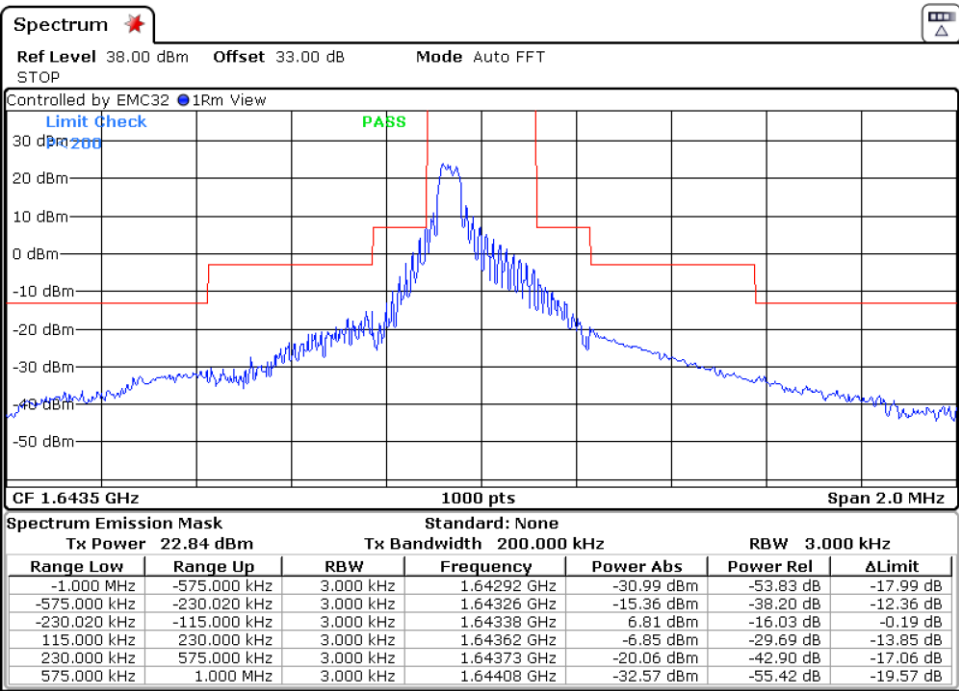
Modulation: QPSK (3SC0)

Results

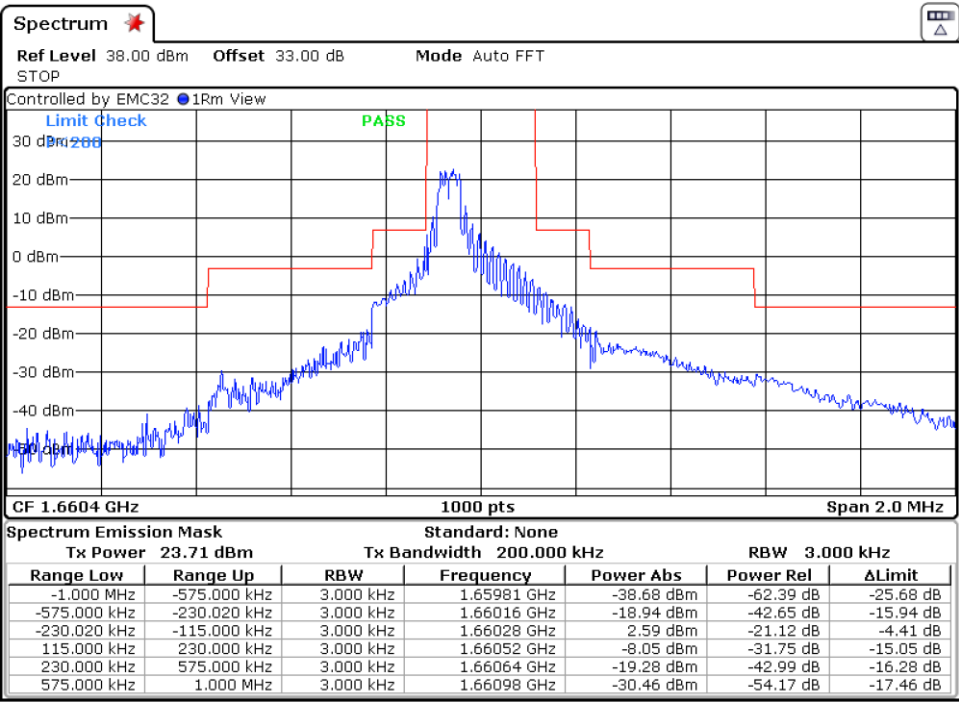
Low Channel



Middle Channel

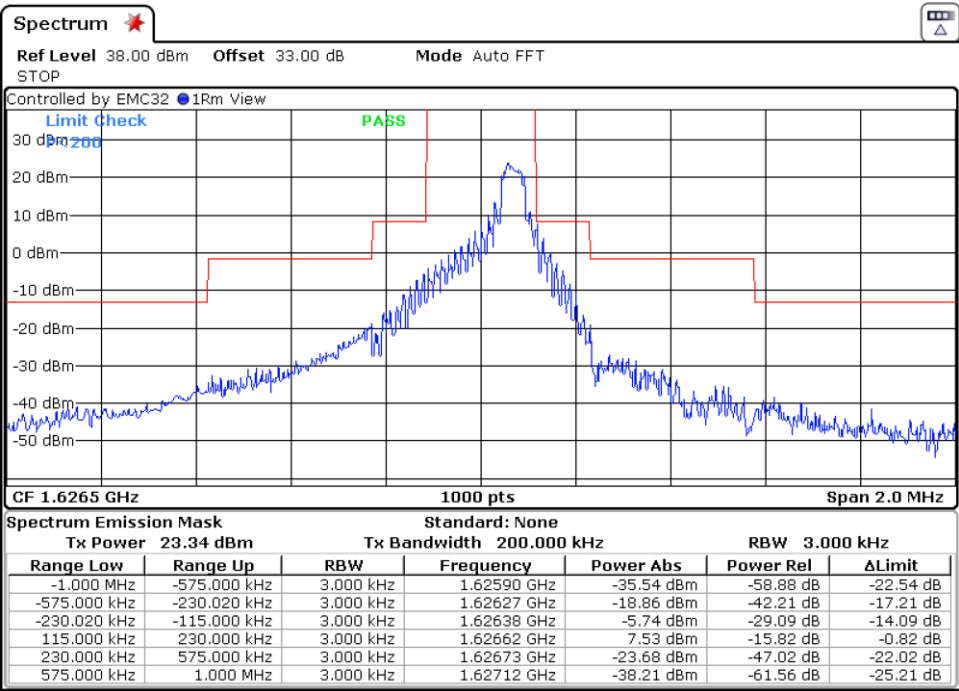


High Channel

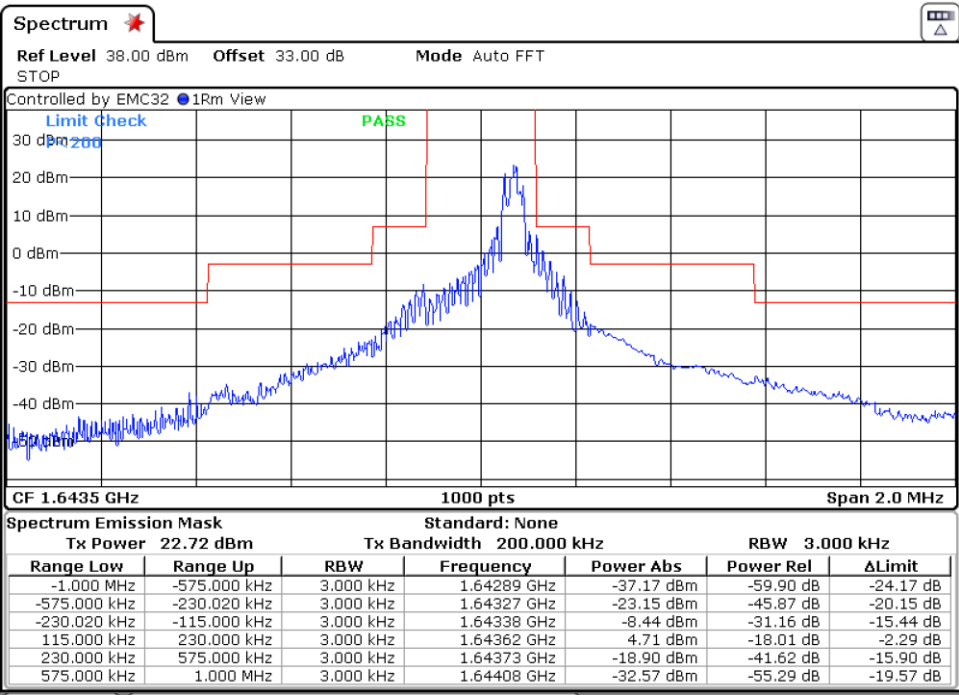


Modulation: QPSK (3SC9)
Results

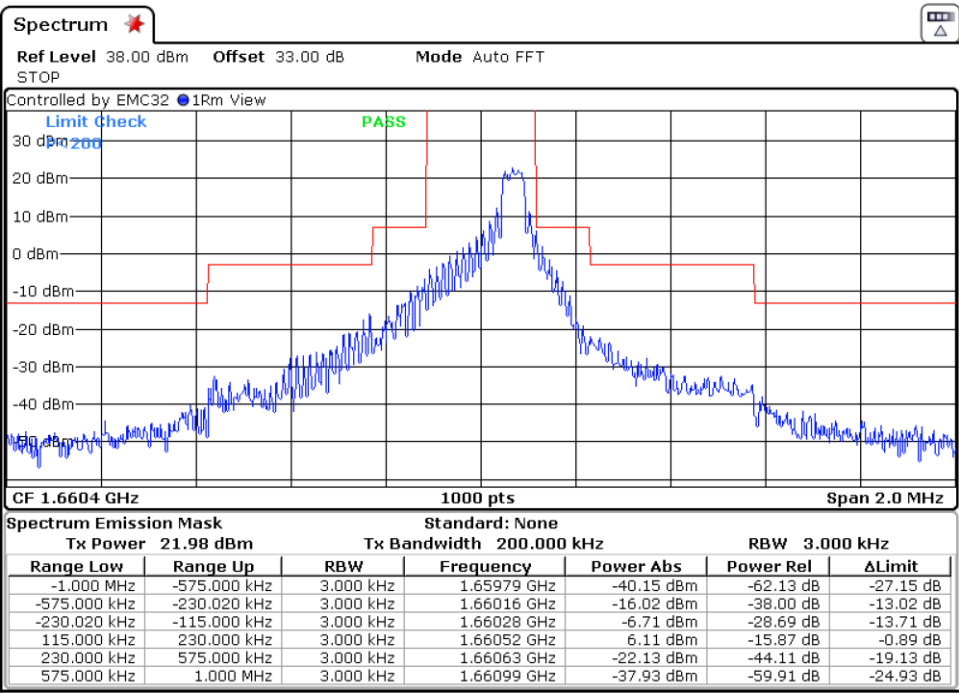
Low Channel



Middle Channel

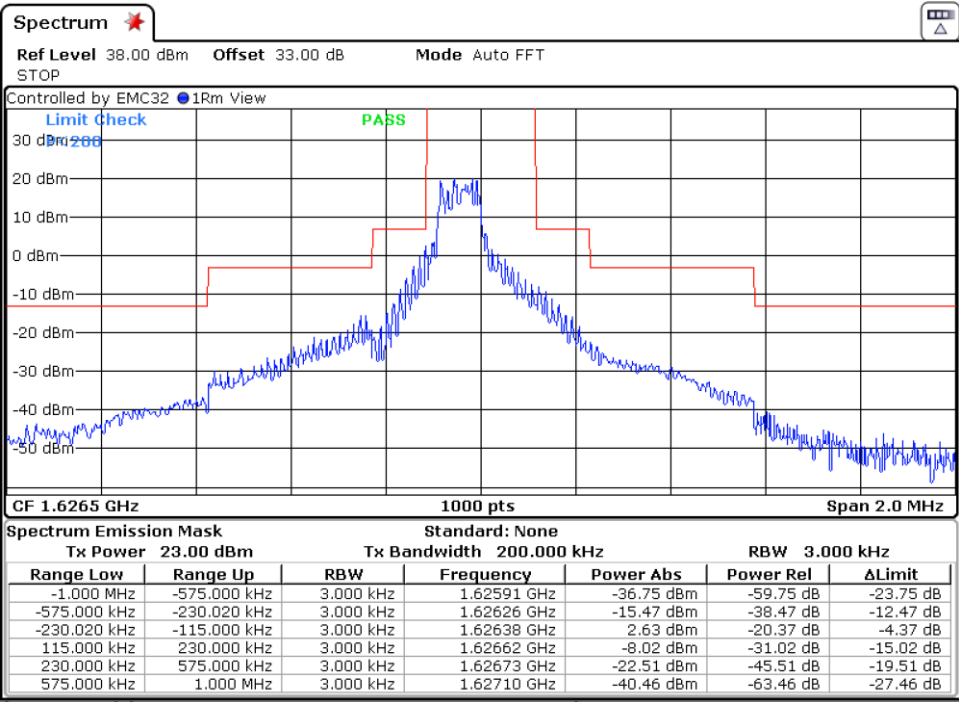


High Channel

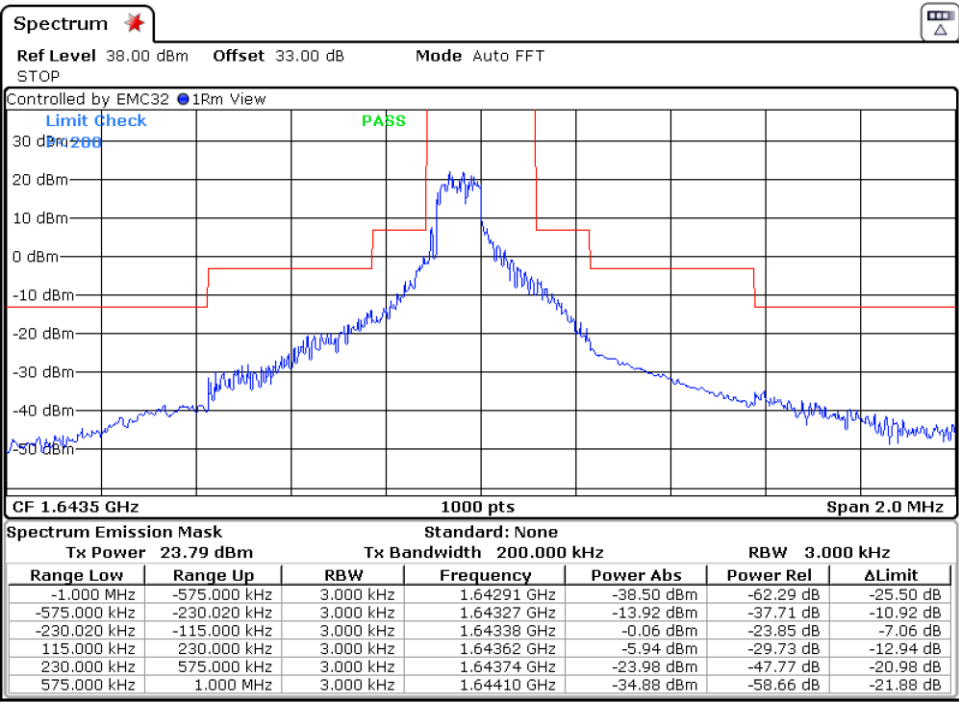


Modulation: QPSK (6SC0)
Results

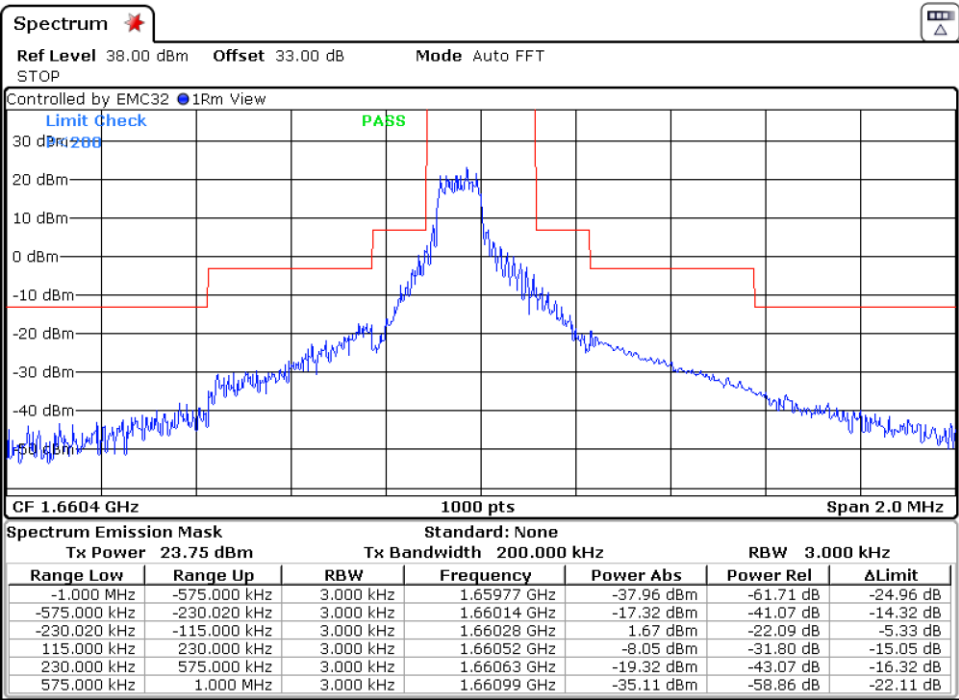
Low Channel



Middle Channel

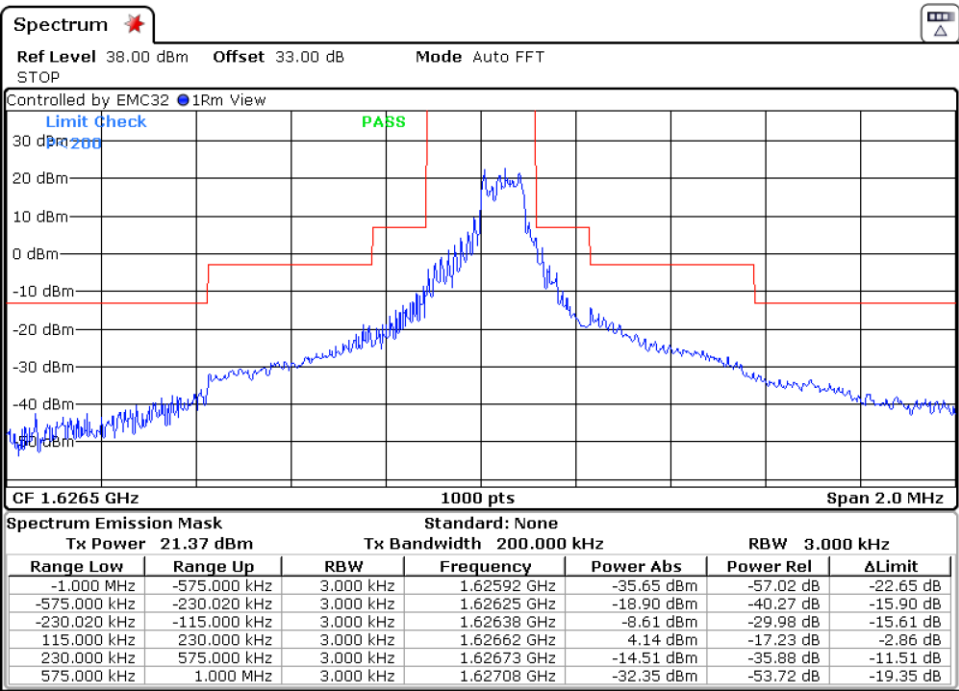


High Channel

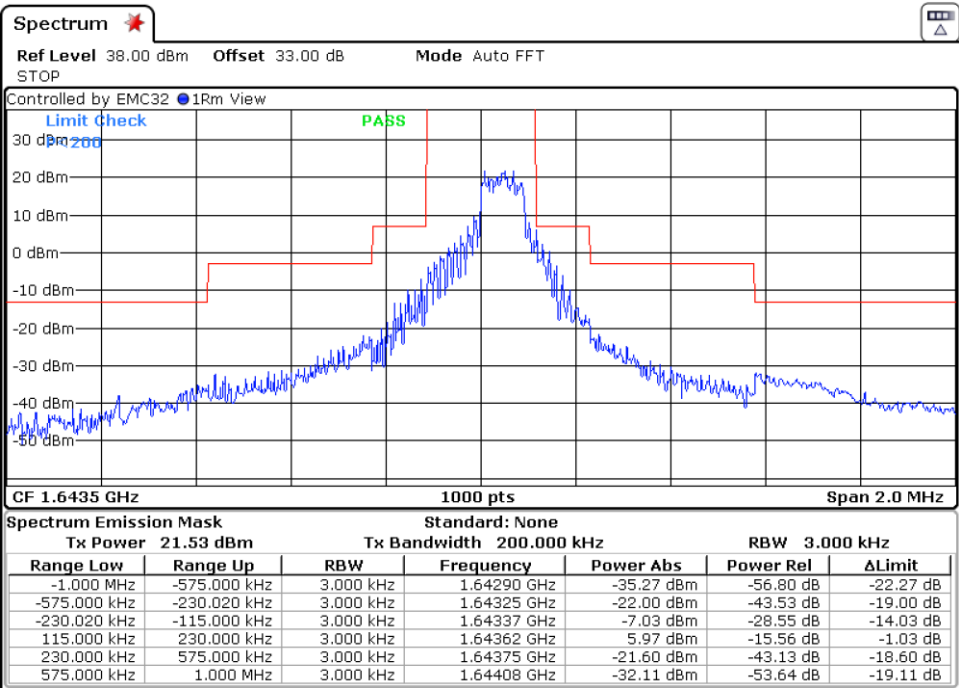


Modulation: QPSK (6SC6)
Results

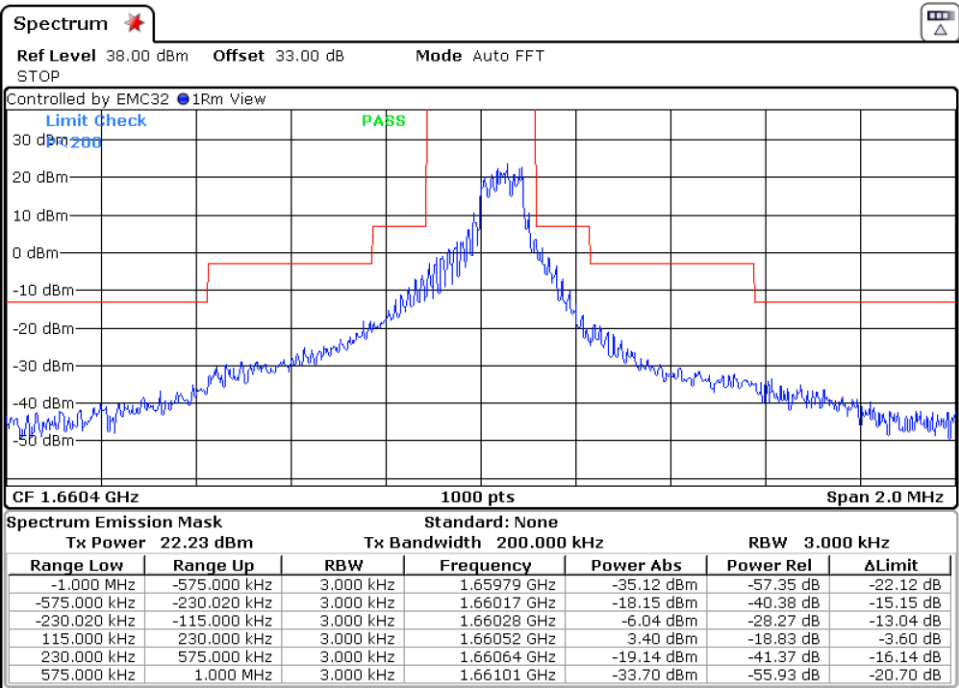
Low Channel



Middle Channel



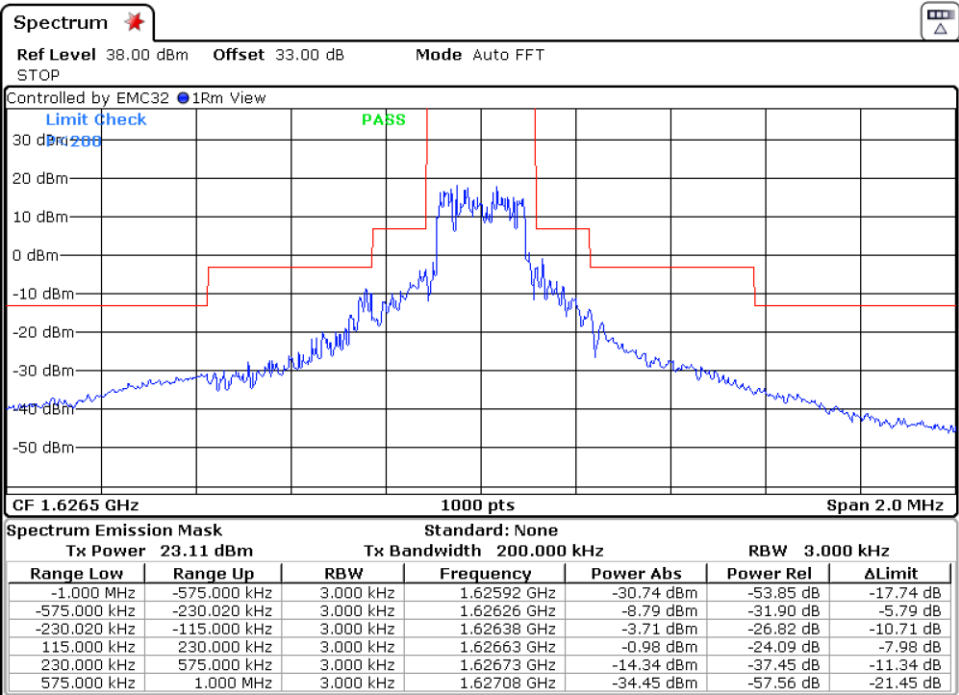
High Channel



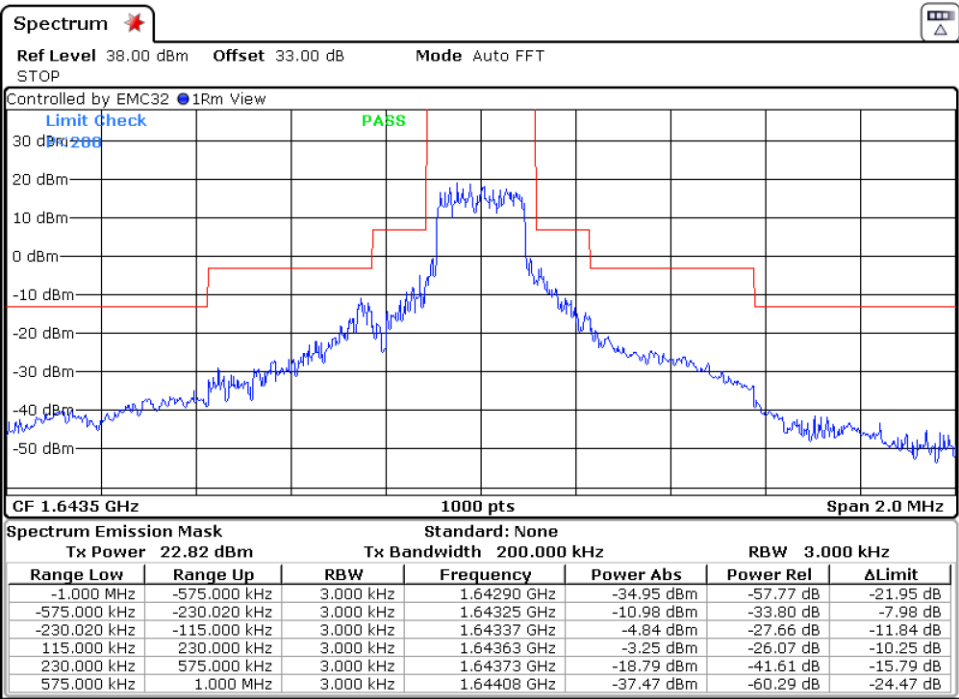
Modulation: QPSK (12SC0)

Results

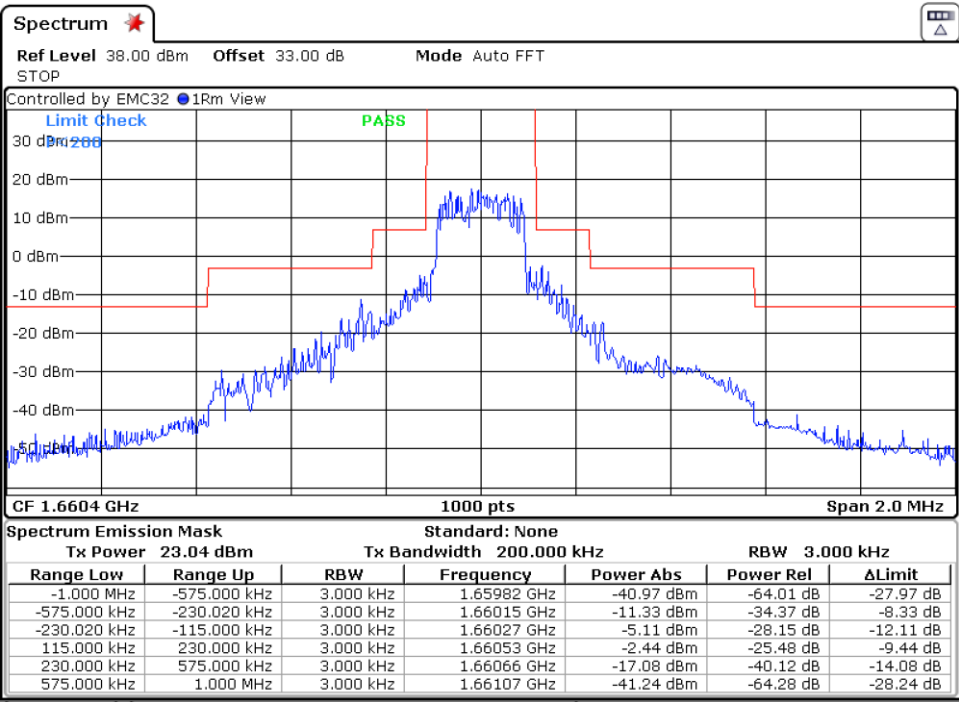
Low Channel



Middle Channel



High Channel



FCC 25.202 (f) RSS-170 / RSS-170 (5.8) Emission Limitations

Limits

The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule:

FCC 25.202 (f)

Except for SDARS terrestrial repeaters and as provided for in paragraph (i), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule set forth in paragraphs (f)(1) through (f)(4) of this section. The out-of-band emissions of SDARS terrestrial repeaters shall be attenuated in accordance with the schedule set forth in paragraph (h) of this section.

- (3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts.

RSS 170 (5.8)

Unwanted emission limits for MESSs in all frequency bands

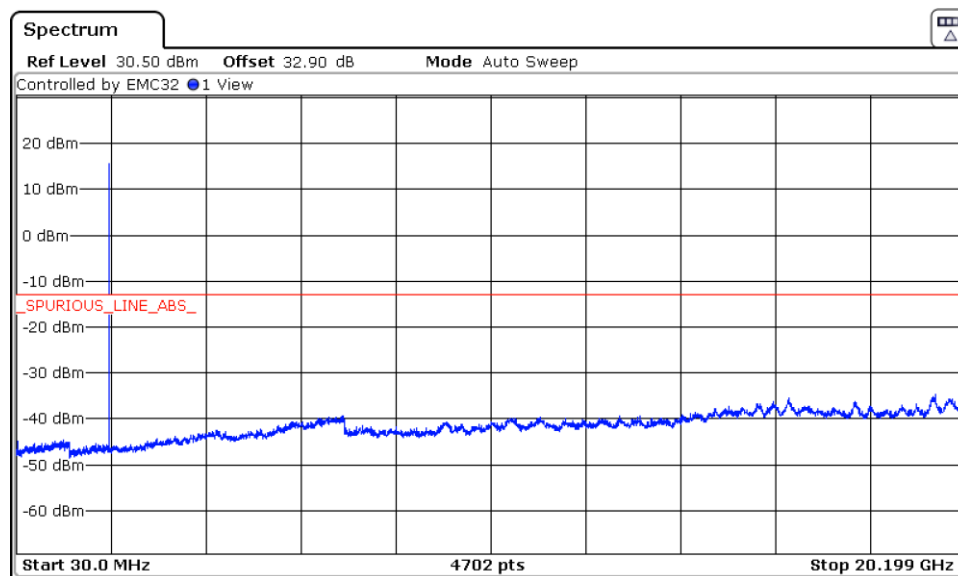
- (c) $43 + 10 \log p$ (watts) in any 4 kHz, the frequency of which is offset from the channel centre frequency by more than 250% of the occupied bandwidth or necessary bandwidth, whichever is greater

Test Results

Band: 23 SCS 3.75 kHz

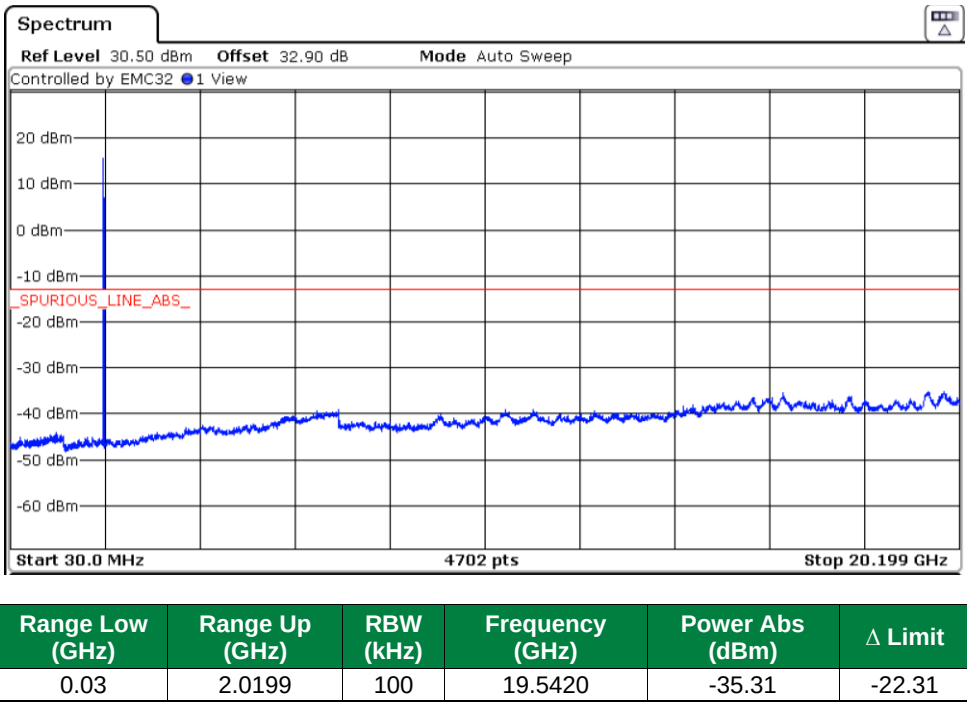
Modulation: BPSK (1SC0)

Low Channel

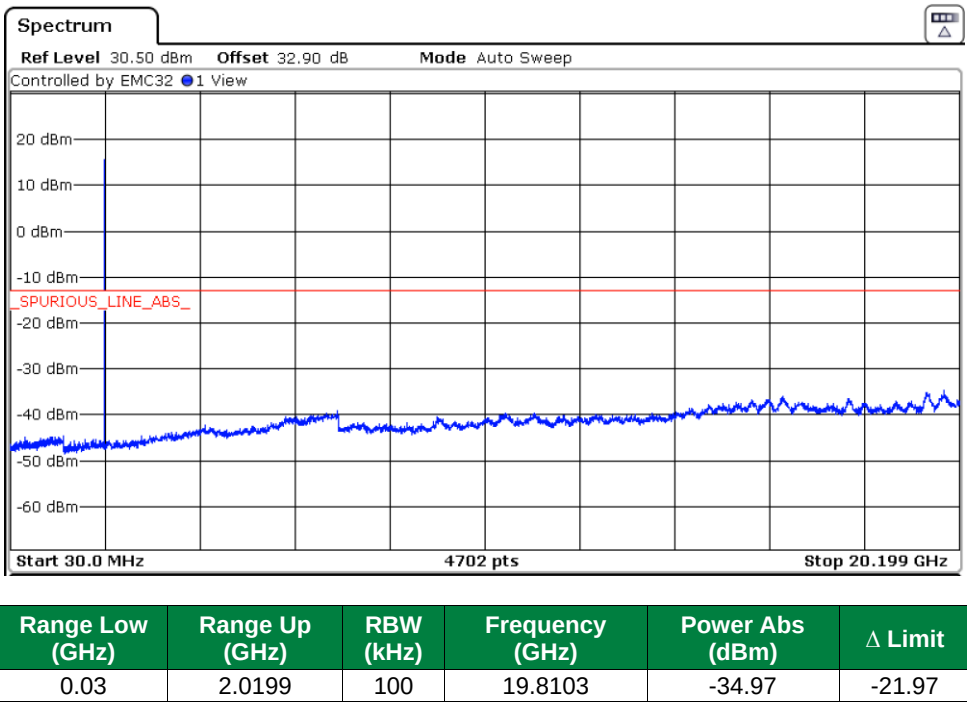


Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	19.4801	-34.72	-21.72

Middle Channel



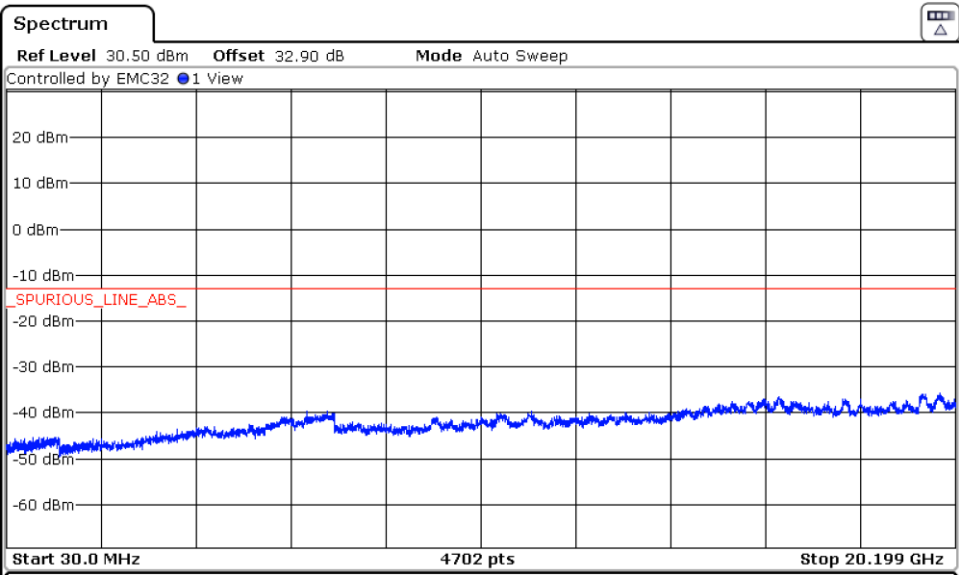
High Channel



Modulation: QPSK (1SC0)

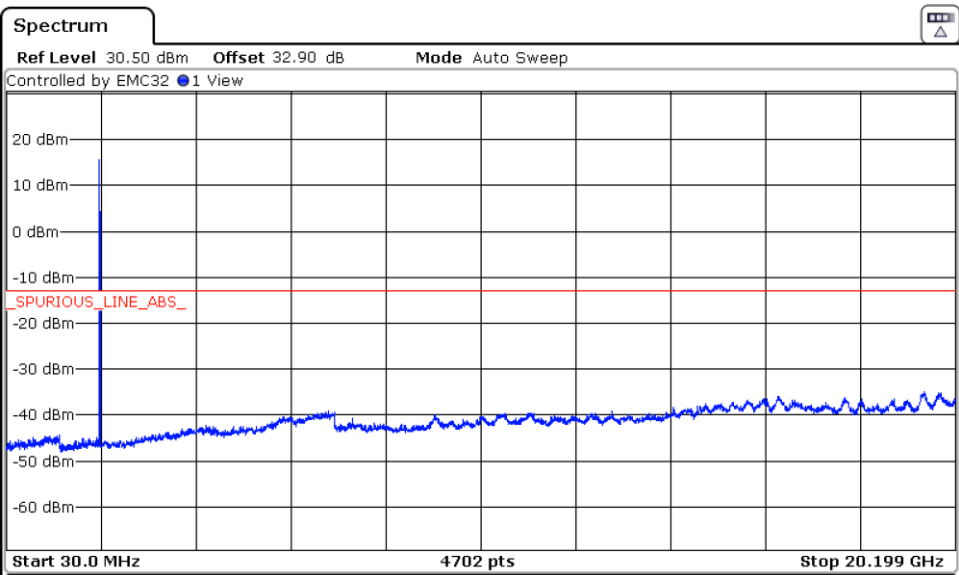
Results

Low Channel



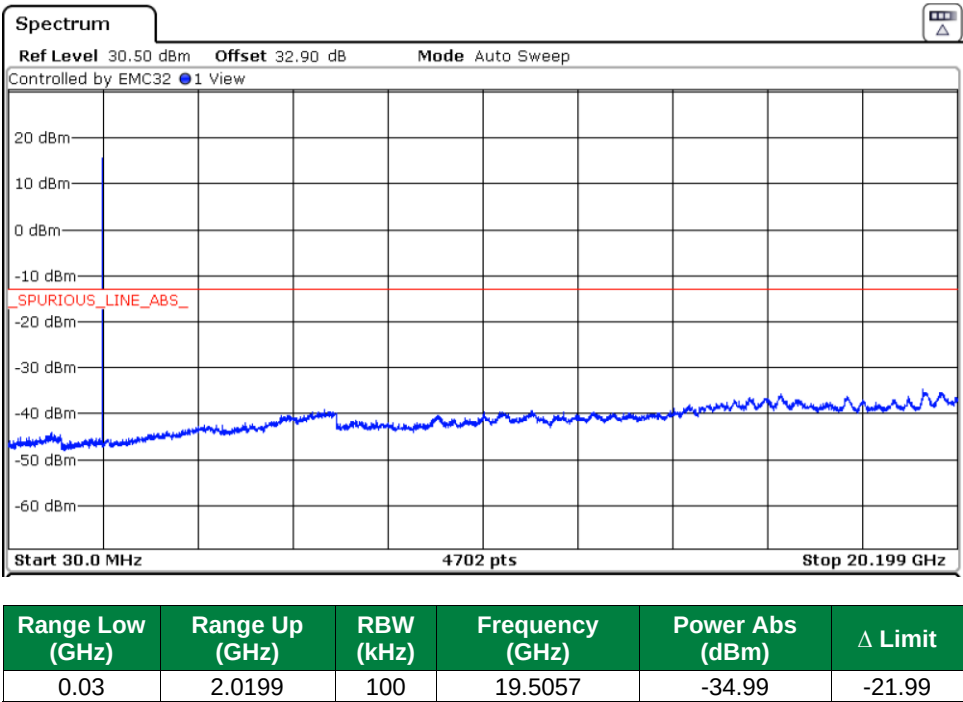
Range Low (GHz)	Range Up (MHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	19.86923	-35.66	-22.66

Middle Channel



Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	19.5239	-35.01	-22.01

High Channel

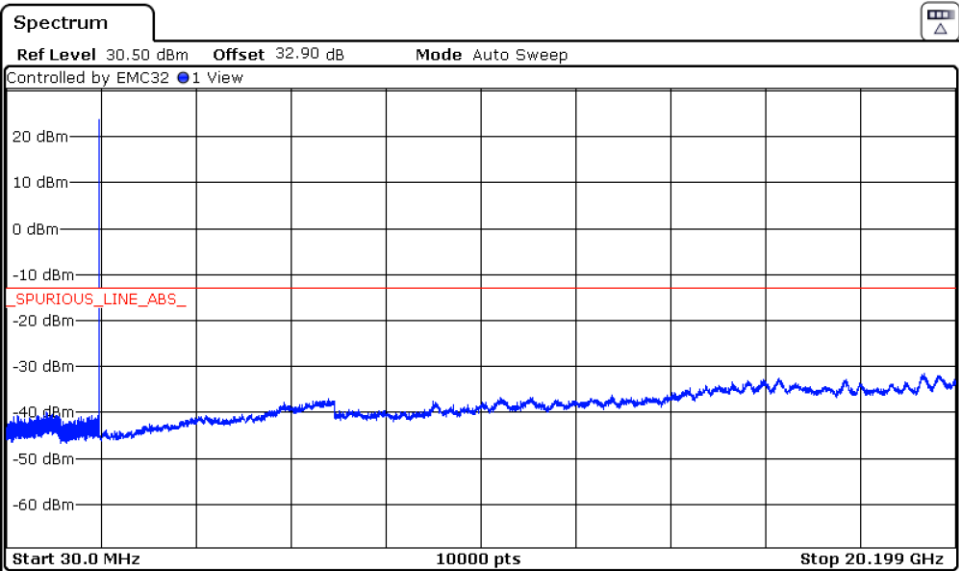


Band: 23 SCS 15 kHz

Modulation: BPSK (1SC0)

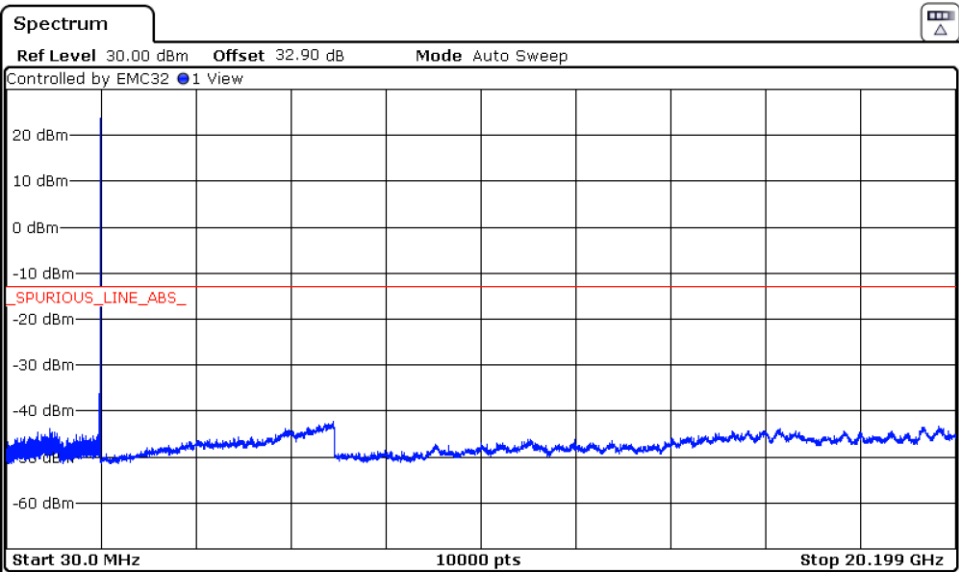
Results

Low Channel



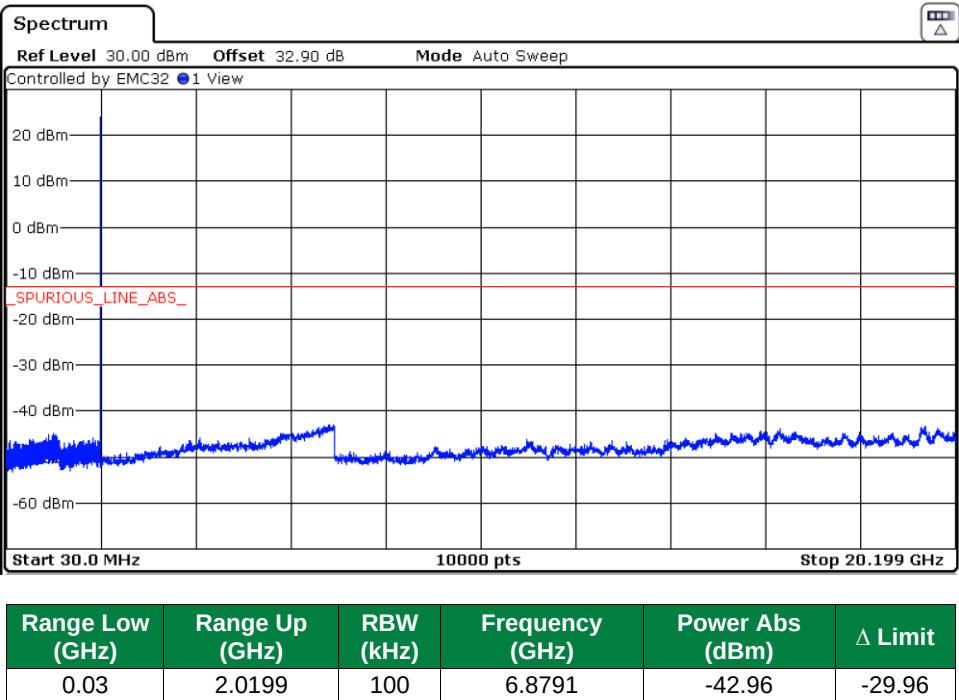
Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	19.5420	-31.51	-18.51

Middle Channel



Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	6.9738	-42.37	-29.37

High Channel

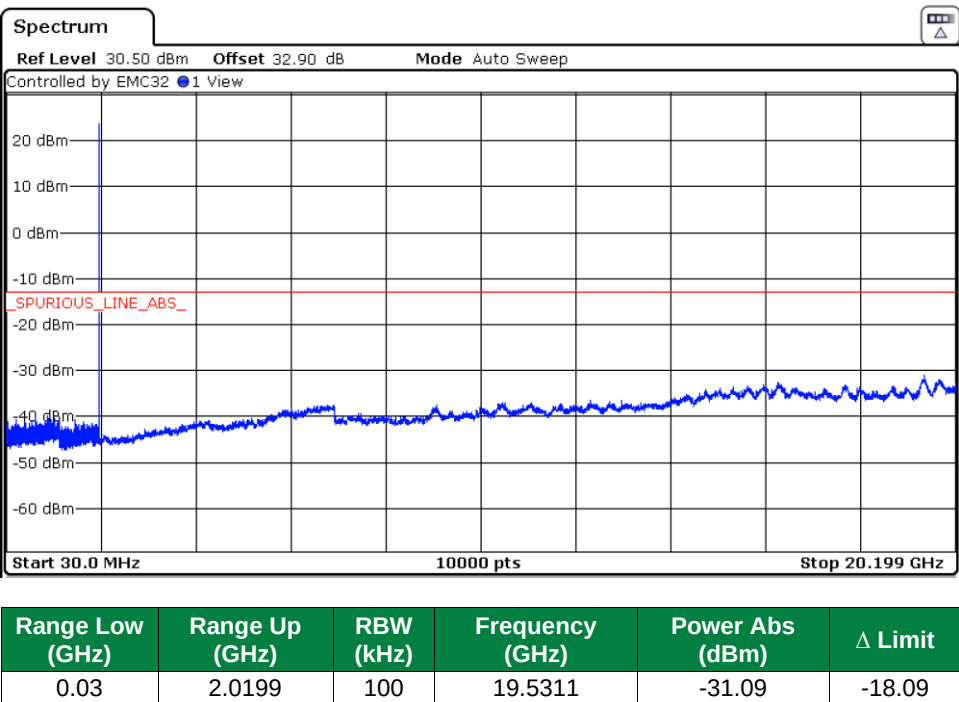


Band: 23 SCS 15 kHz

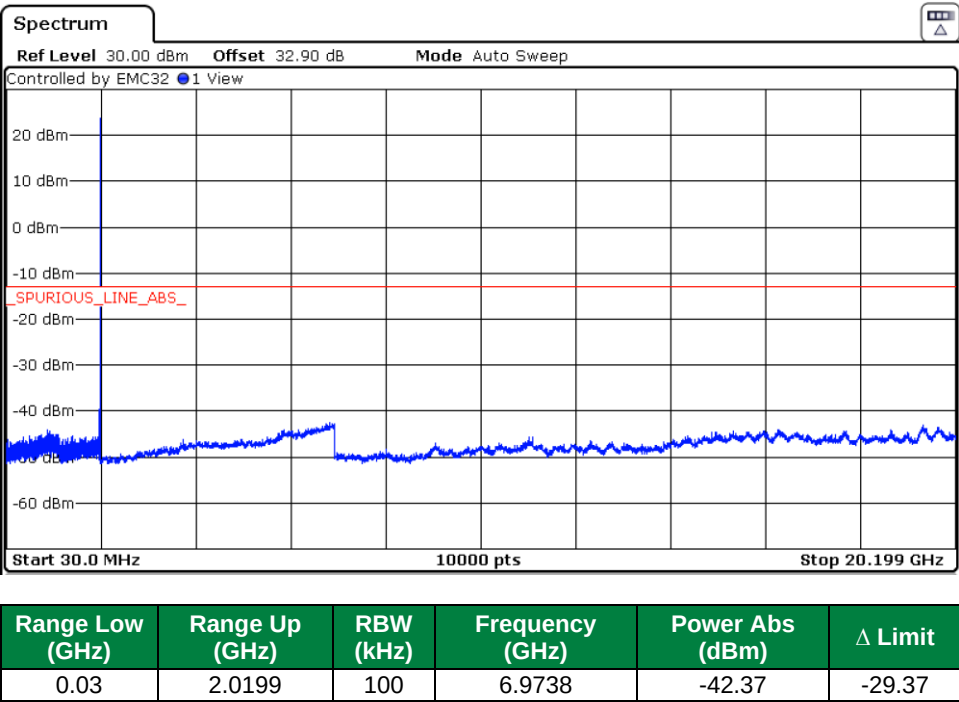
Modulation: QPSK (1SC0)

Results

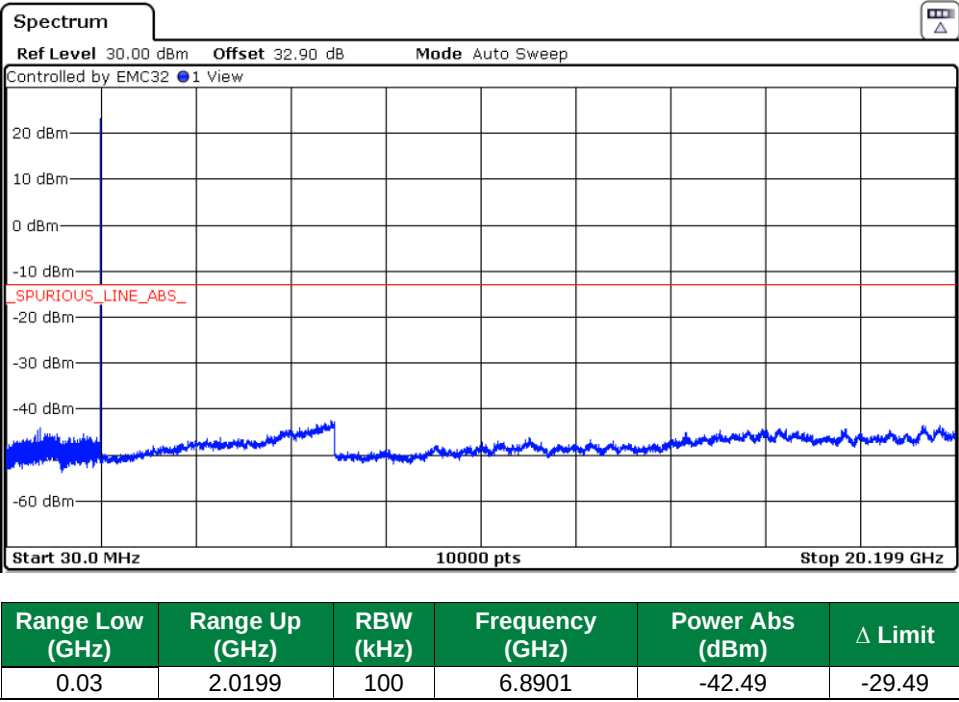
Low Channel



Middle Channel



High Channel

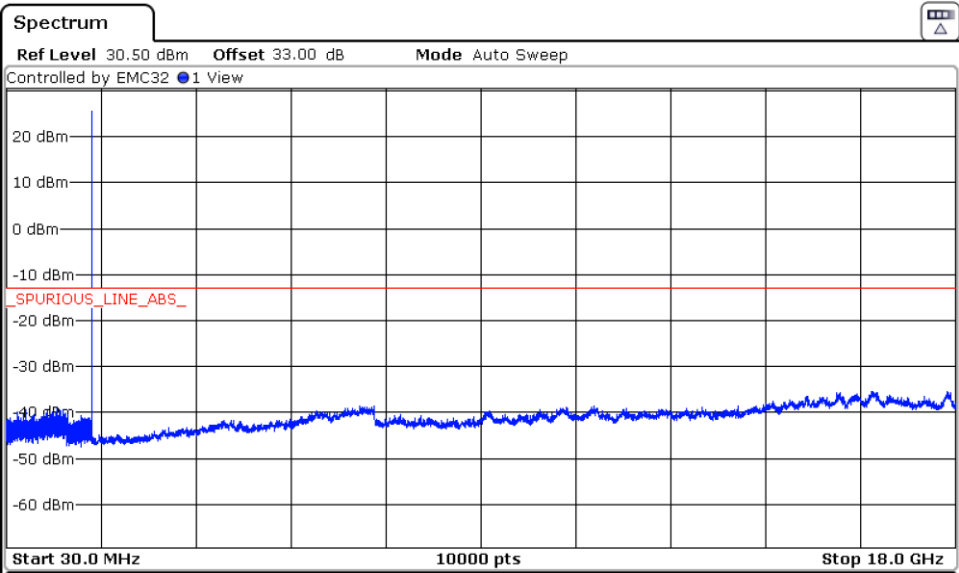


Band: 255 SCS 3.75 kHz

Modulation: BPSK (1SC0)

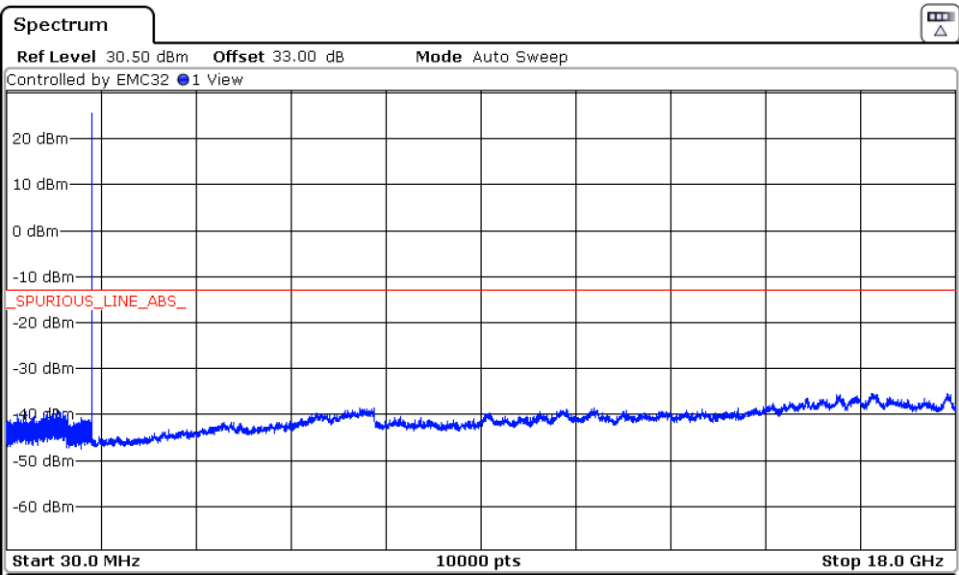
Results

Low Channel



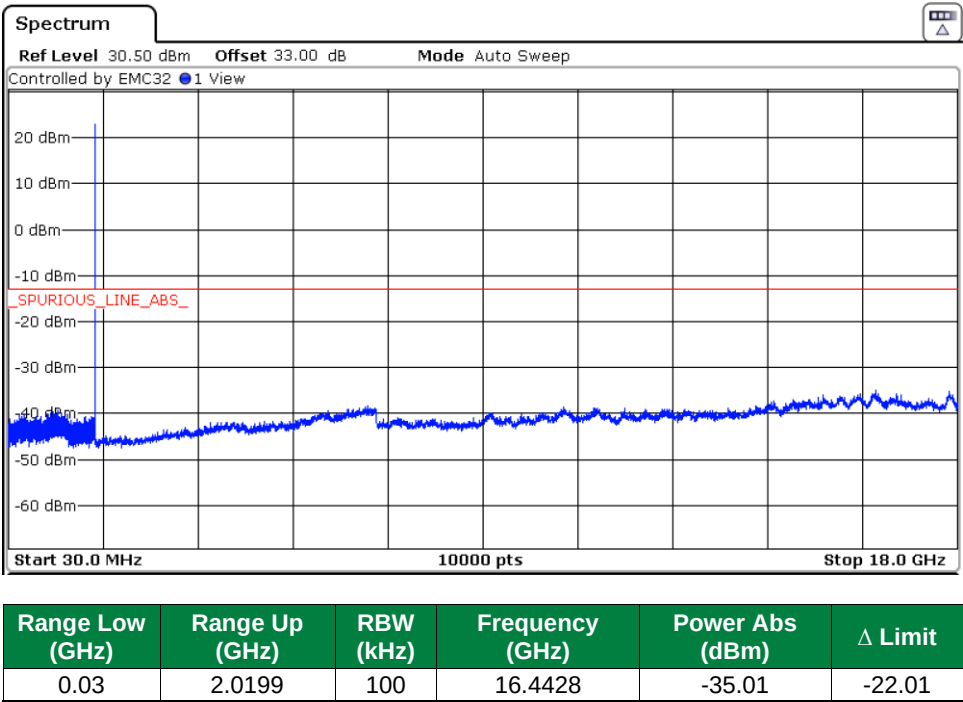
Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	6.9757	-42.13	-29.13

Middle Channel



Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	17.8122	-35.03	-22.03

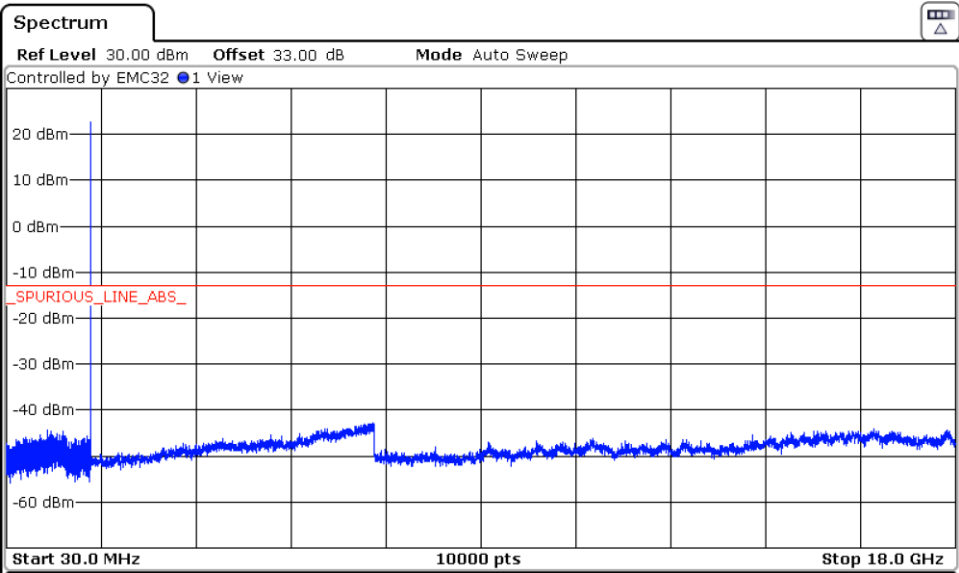
High Channel



Modulation: QPSK (1SC0)

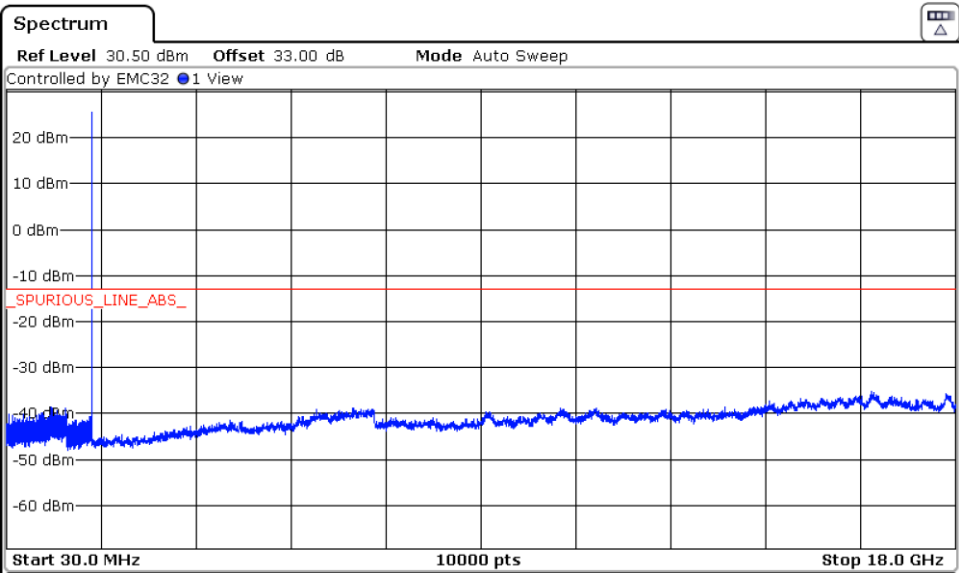
Results

Low Channel



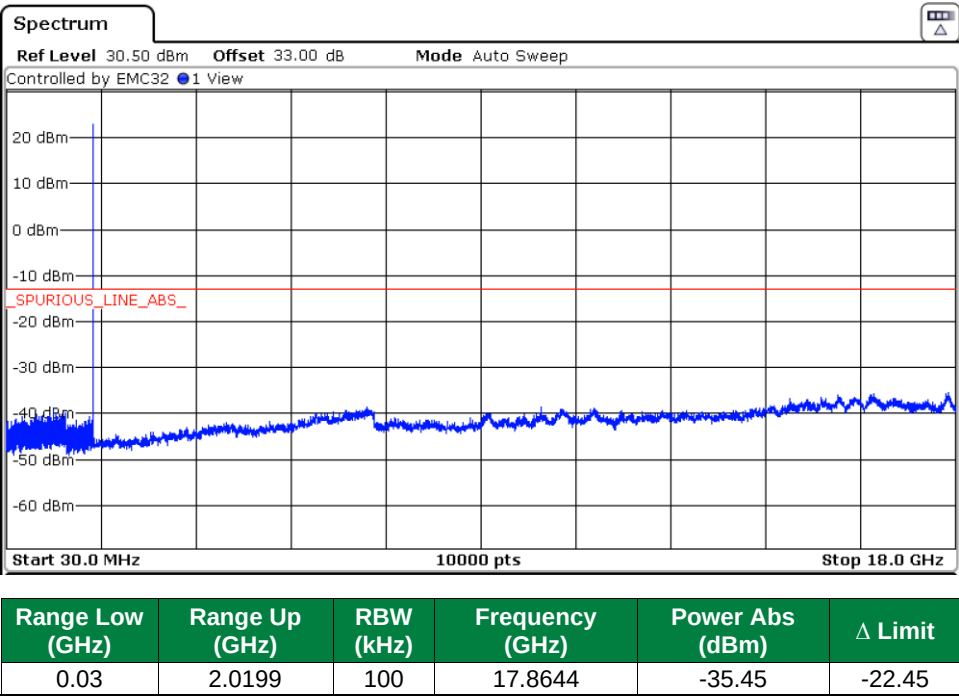
Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	6.9724	-42.87	-29.87

Middle Channel



Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	16.4079	-36.31	-23.31

High Channel

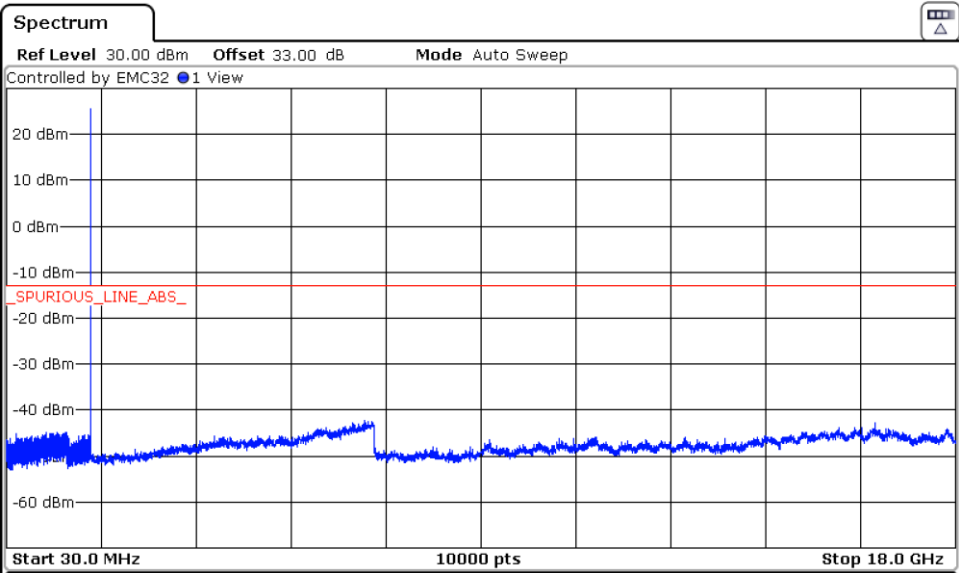


Band: 255 SCS 15 kHz

Modulation: BPSK (1SC0)

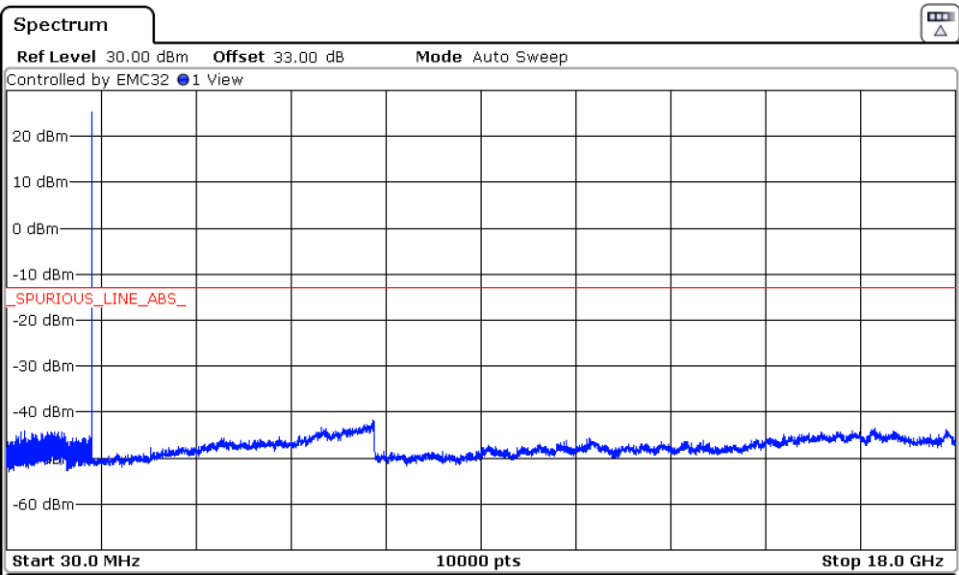
Results

Low Channel



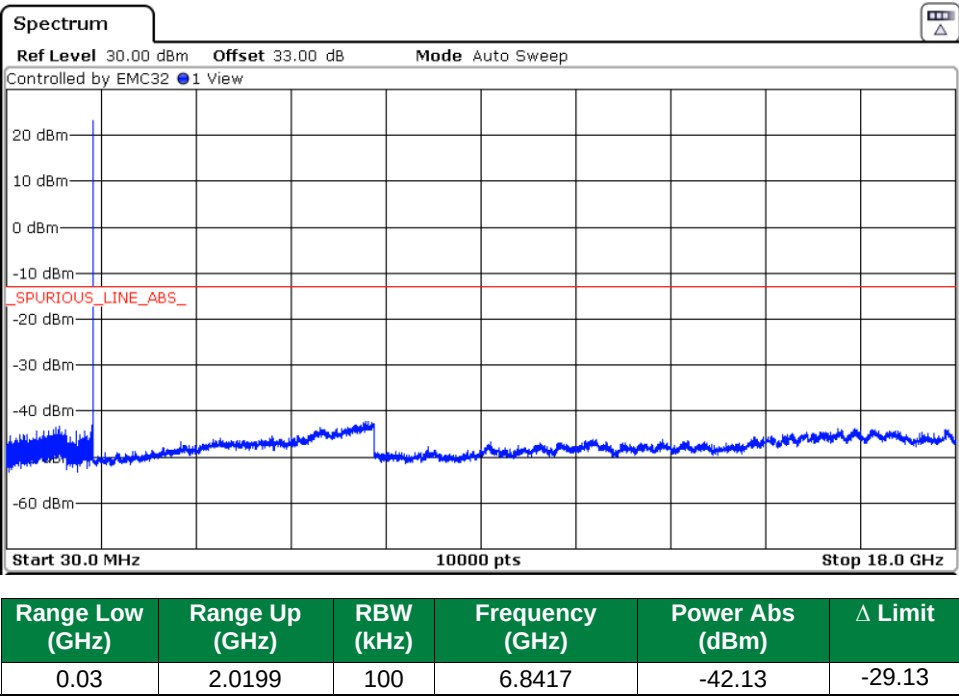
Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	6.7989	-42.19	-2.19

Middle Channel



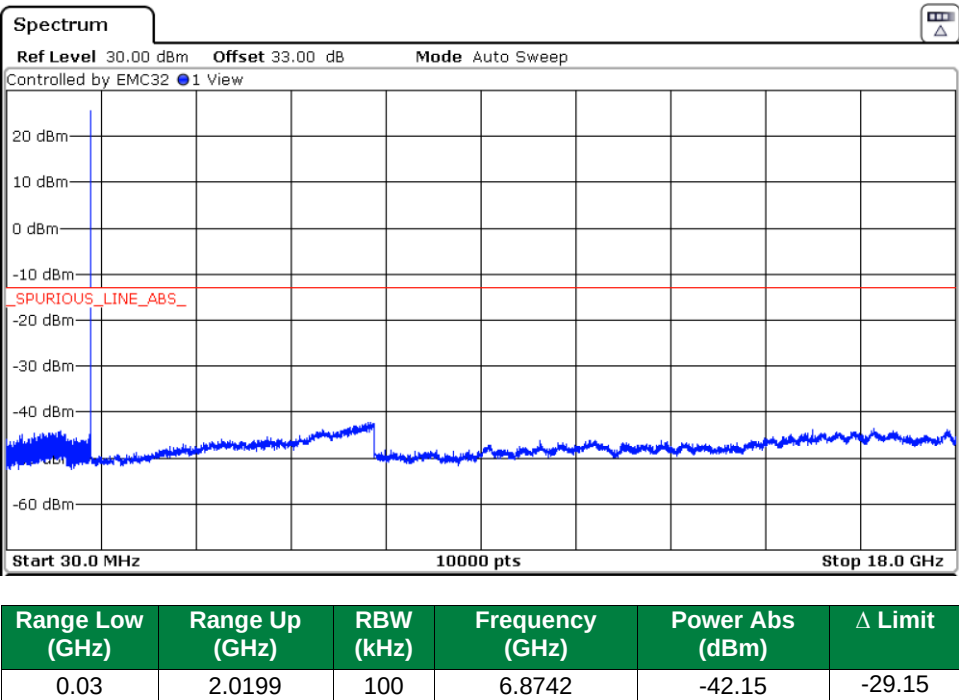
Range Low (GHz)	Range Up (GHz)	RBW (kHz)	Frequency (GHz)	Power Abs (dBm)	Δ Limit
0.03	2.0199	100	6.7989	-42.19	-29.19

High Channel

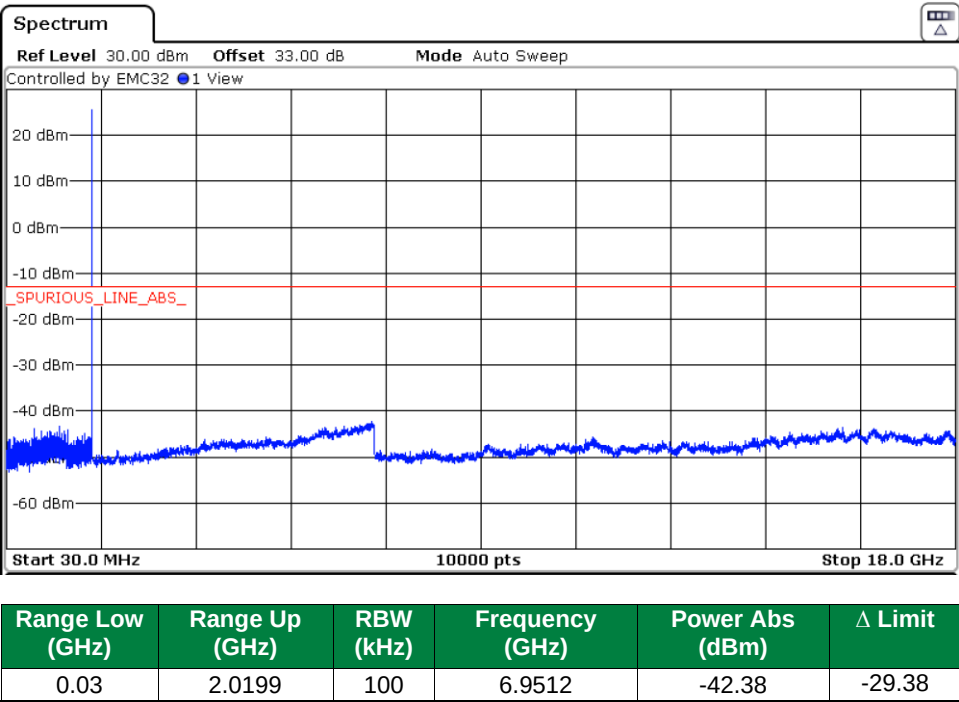


Modulation: QPSK (1SC0)
Results

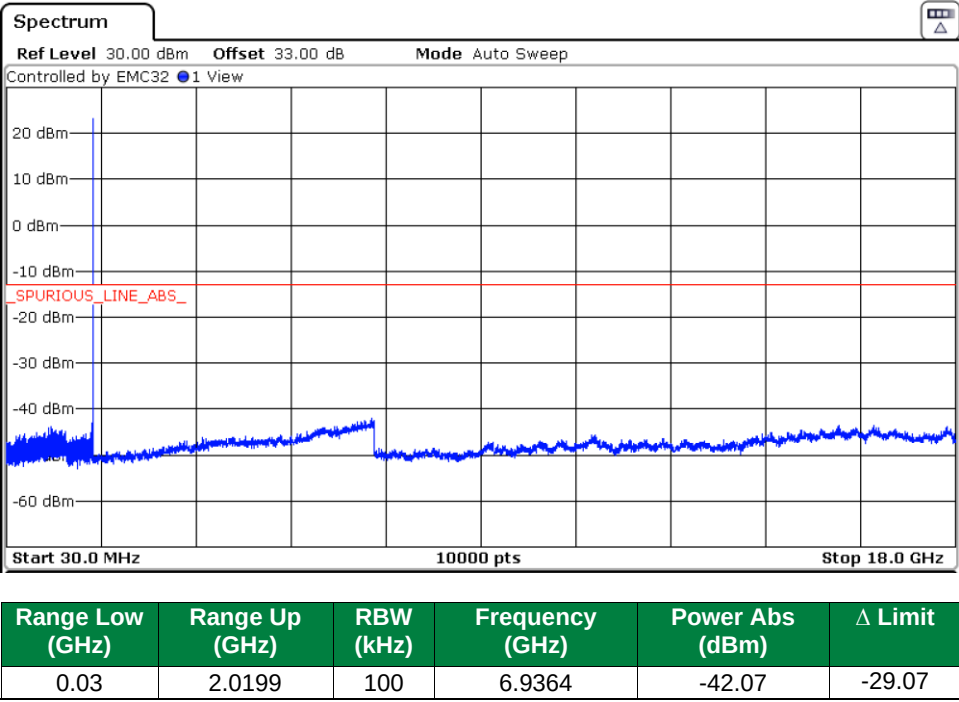
Low Channel



Middle Channel



High Channel



FCC 25.216 / RSS-170 (5.9.1) (5.10) Limits on emissions from mobile earth stations for protection of aeronautical radionavigation-satellite service

Limits:

FCC 25.216

(c) The e.i.r.p. density of emissions from mobile earth stations placed in service after July 21, 2002 with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed -70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in the band 1559-1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed -80 dBW, averaged over any 2 millisecond active transmission interval, in the 1559-1605 MHz band.

(e) The e.i.r.p density of emissions from mobile earth stations with assigned uplink frequencies between 1990 MHz and 2025 MHz shall not exceed -70 dBW/MHz, averaged over any 2 millisecond active transmission interval, in frequencies between 1559 MHz and 1610 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1559 MHz and 1605 MHz shall not exceed -80 dBW, averaged over any 2 millisecond active transmission interval. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations between 1605 MHz and 1610 MHz manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 shall not exceed -80 dBW, averaged over any 2 millisecond active transmission interval.

(g) Mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies in the 1610-1626.5 MHz band shall suppress the power density of emissions in the 1605-1610 MHz band-segment to an extent determined by linear interpolation from -70 dBW/MHz at 1605 MHz to -10 dBW/MHz at 1610 MHz averaged over any 2 millisecond active transmission interval. The e.i.r.p of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from -80 dBW at 1605 MHz to -20 dBW at 1610 MHz, averaged over any 2 millisecond active transmission interval.

(h) Mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies in the 1626.5-1660.5 MHz band shall suppress the power density of emissions in the 1605-1610 MHz band-segment to an extent determined by linear interpolation from -70 dBW/MHz at 1605 MHz to -46 dBW/MHz at 1610 MHz, averaged over any 2 millisecond active transmission interval. The e.i.r.p of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed a level determined by linear interpolation from -80 dBW at 1605 MHz to -56 dBW at 1610 MHz, averaged over any 2 millisecond active transmission interval.

(i) The e.i.r.p density of carrier-off state emissions from mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies between 1 and 3 GHz shall not exceed -80 dBW/MHz in the 1559-1610 MHz band averaged over any two millisecond interval.

(j) A Root-Mean-Square detector shall be used for all power density measurements.

RSS-170

5.9.1 Band 1610-1626.5 MHz

For MESs with transmitting frequencies between 1610 MHz and 1626.5 MHz, the e.i.r.p. density of unwanted emissions shall not exceed the limits shown below, which are the same as those for the band 1605-1610 MHz, averaged over any 2 ms active transmission interval:

- a. -70 dBW/MHz at 1605 MHz, linearly interpolated to -10 dBW/MHz at 1610 MHz, for broadband emissions
- b. -80 dBW/kHz at 1605 MHz, linearly interpolated to -20 dBW/kHz at 1610 MHz, for discrete emissions

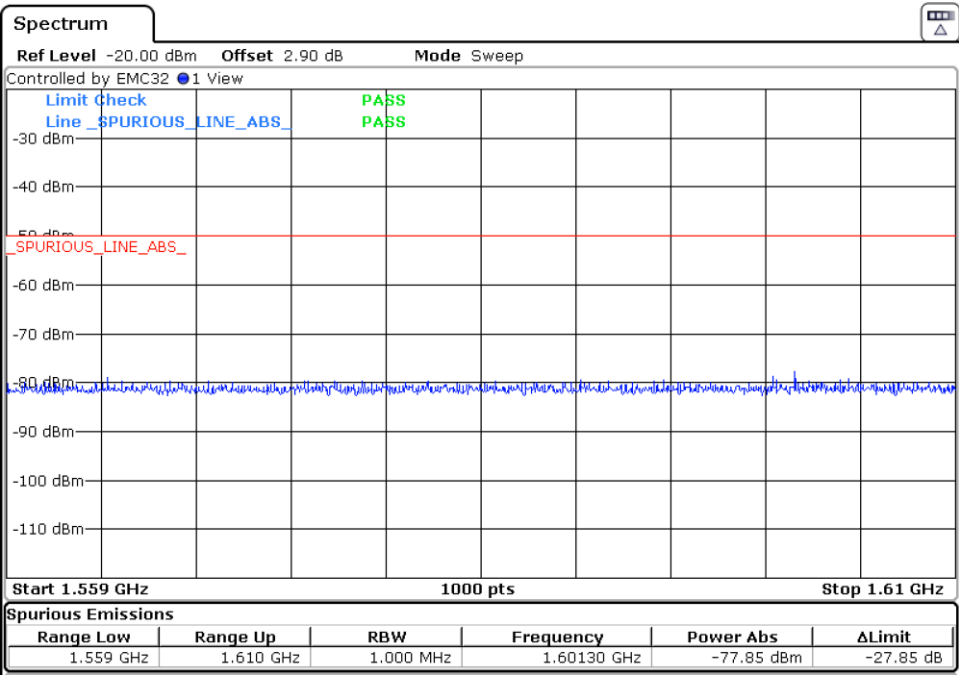
5.10 Carrier-off state emissions

MESs with transmitting frequencies between 1 GHz and 3 GHz shall not exceed -80 dBW/MHz, which is the e.i.r.p. density of carrier-off state emissions in the band 1559-1610 MHz.

Test Results:

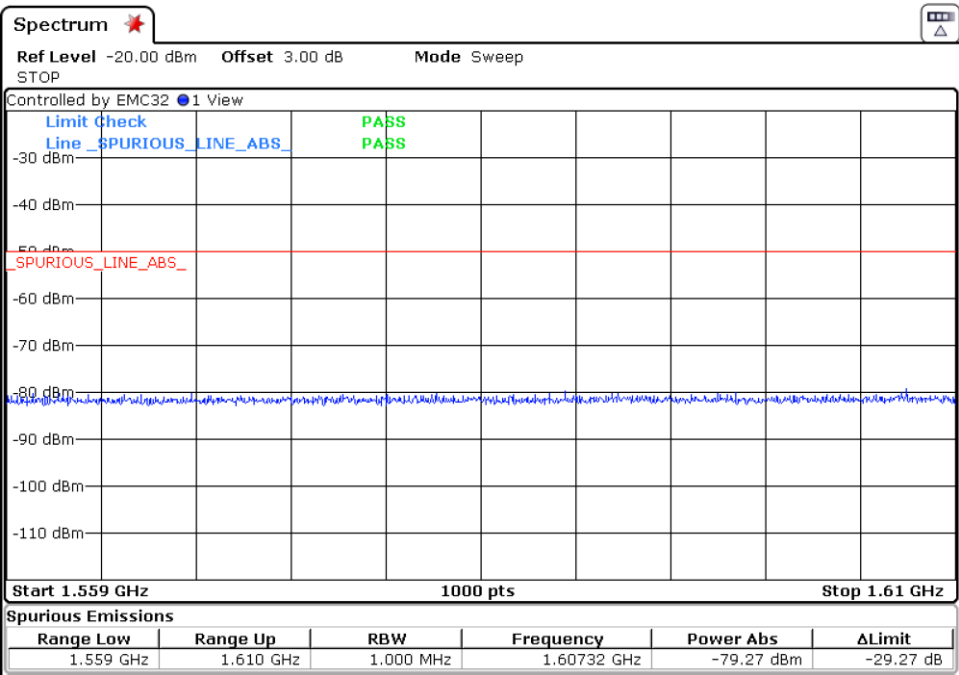
Band 23

Carrier Off



Band 255

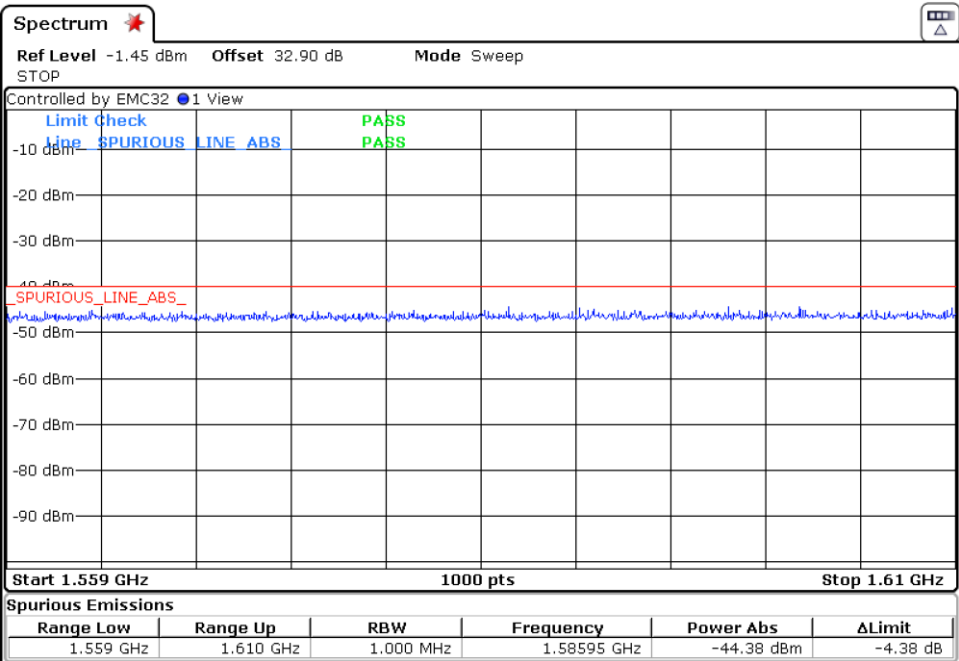
Carrier Off



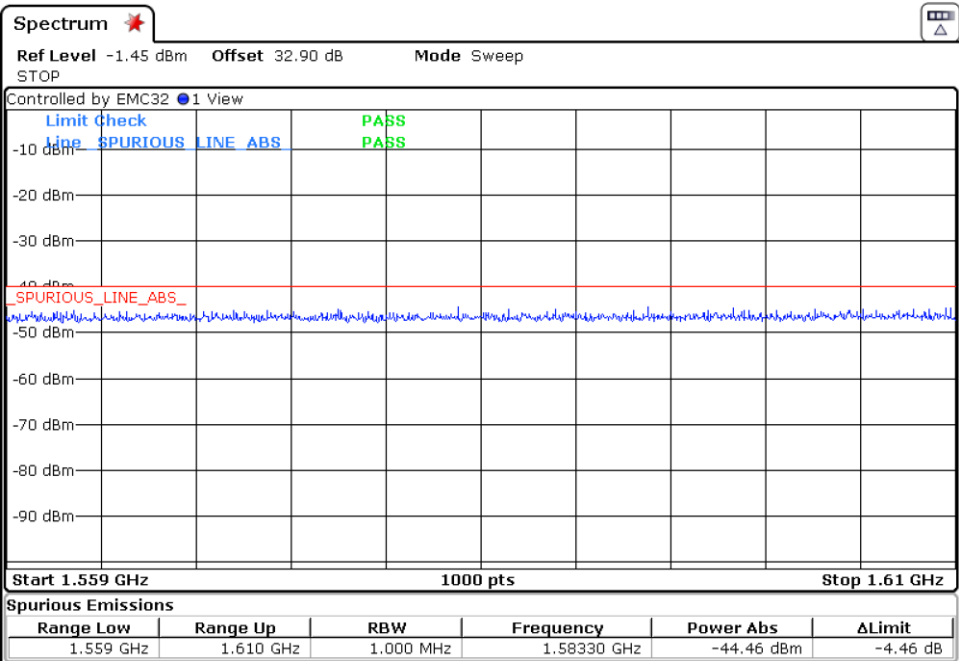
Band: 23 SCS 3.75 kHz
Modulation: BPSK (1SC0)
Carrier On

Results

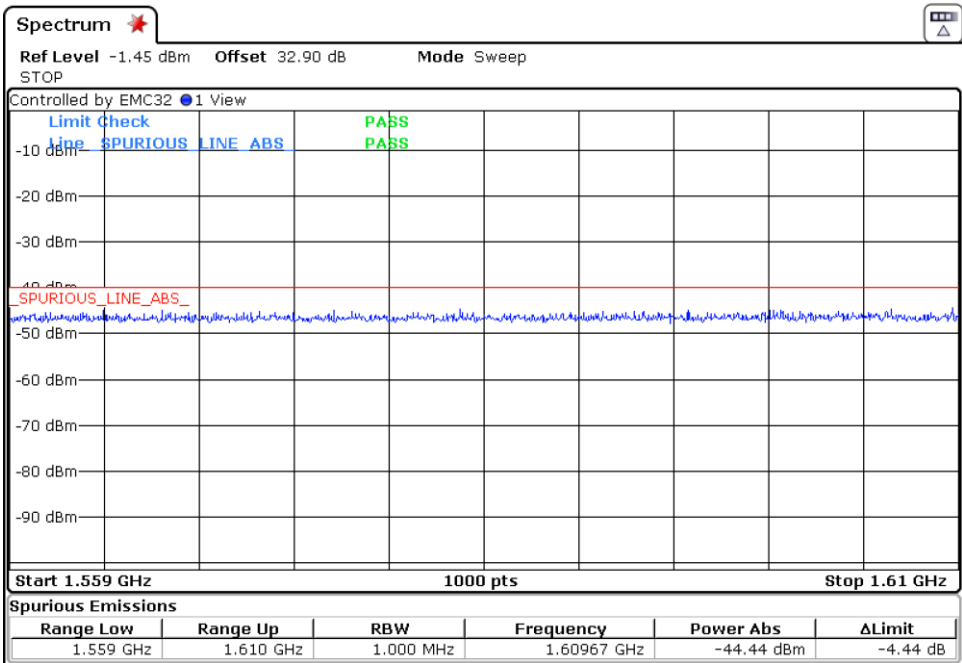
Low Channel



Middle Channel



High Channel



Modulation: BPSK (1SC0)
Discrete

Results

Low Channel

