

TA9210D

12.5 W CW 0.03 – 4.0 GHz GaN Power Transistor

Application Note: TA9210D EVB I

Application Note

3300 MHz~3800 MHz

36 V, 50 mA

Rev-2.3

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1. General Description

The TA9210D is a broadband capable 12.5 W GaN power transistor covering 30 MHz to 2.7 GHz frequency band with a single match. TA9210D is usable up to 4 GHz. The input and output can be matched for best power and efficiency for the desired band.

The TA9210D is packaged in a compact, low-cost Quad Flat No lead (QFN) 3 x 6 x 0.75 mm, 32 leads plastic package. TA9210D-EVB-I is tuned from 3300 MHz to 3800 MHz.

2. TA9210D-EVB-I Board Details

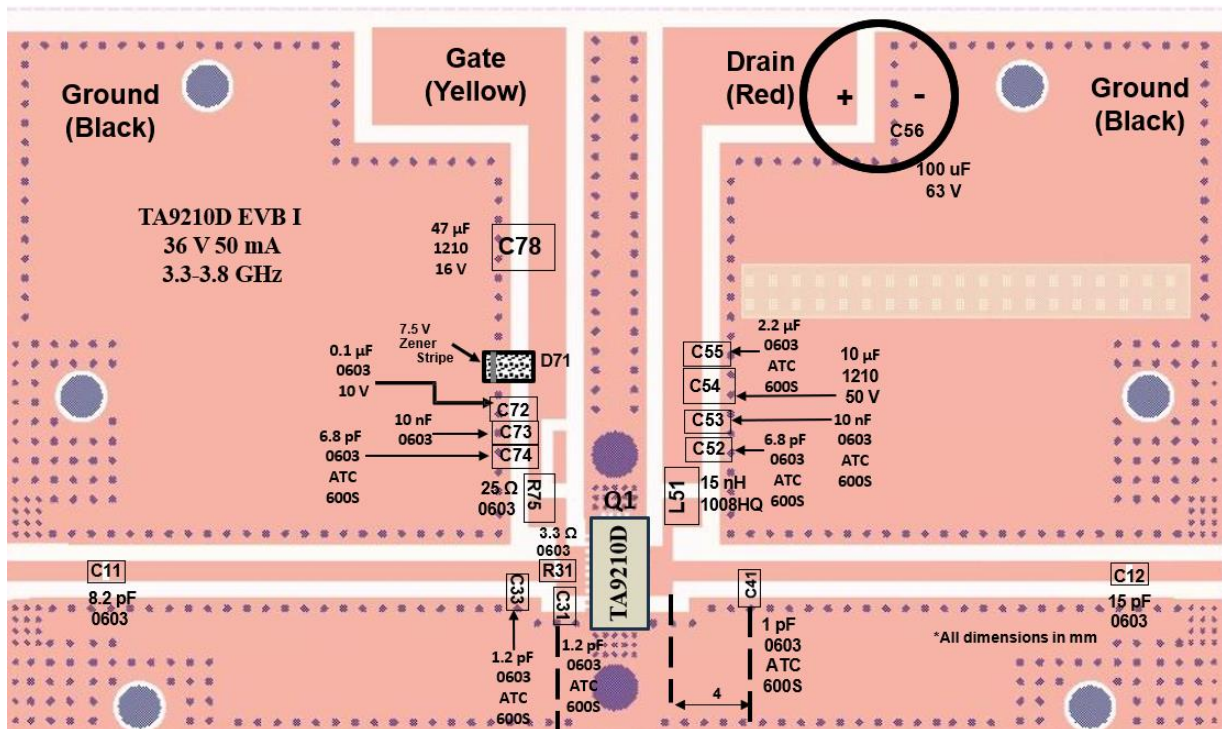
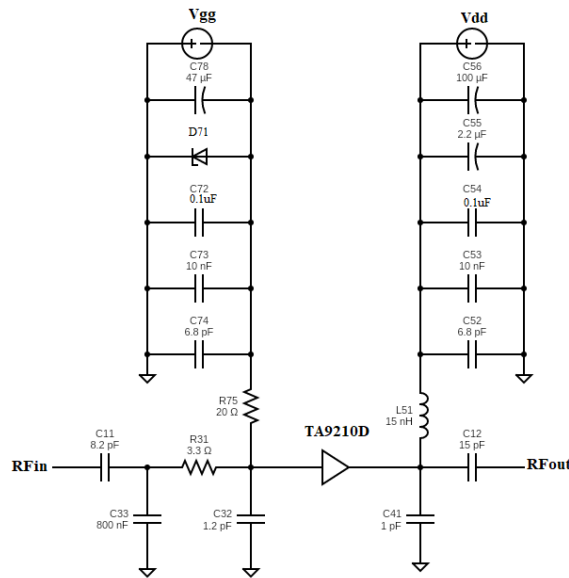


Figure 2.1 TA9210D-EVB-I 3300 MHz ~ 3800 MHz Schematic and EVB Layout

3. [TA9210D-EVB-I Bill of Material](#)

Component ID	Value	Manufacturer	Recommended Part Number
C11	8.2 pF	AVX	600S8R2CT250XT
C12	15 pF	AVX	600S150JT250XT
C31	1.2 pF	AVX	600S1R2BT250XT
R32	3.3Ω	Vishay	CRCW06033R30FKEAHP
C33	0.8 pF	AVX	600S0R8AT250XT
C41	1 pF	AVX	600S1R0BT250XT
L51	15 nH	Coil craft	0603HC-15NXGRW
C52, C74	6.8 pF	AVX	600S6R8CT250XT
C53, C72	10 nF, 50 V	Murata	GCM1887U1H103JA16J
C54	0.1 μF, 50 V	Murata	GRM31C5C1H104JA01L
C55	2.2 μF, 50 V	Murata	GRM188R61H225KE11D
C56	100 μF	Nichicon	UPW1J101MPD1TD
D71	7.5 V Zener	On Semiconductor	MMSZ5236BT 1G
C72	0.1 μF, 10 V	AVX	0603ZC104K4T2A
R75	20Ω	Vishay	CRCW060320R0FKEAHP
C78	47 μF, 16 V	Murata	GRM32ER61C476ME15L
Q1	12.5 W GaN Transistor	Tagore Tech	TA9210D
PCB	Rogers RO4350B, 20 mils, 2 oz copper		

Table 3.1 TA9210D-EVB-I BOM

4. [TA9210D-EVB-I Biasing Sequence](#)

Turn ON Device	Turn OFF Device
1. Set V_G to -5 V 2. Set V_D to +36 V 3. Adjust V_G to reach required I_{DQ} current 4. Apply RF power	1. Turn RF power off 2. Turn off V_D 3. Turn off V_G

Table 4.1 TA9210D-EVB-I Bias and Sequencing

5. [TA9210D-EVB-I Board Measurement Summary](#)

Frequency (GHz)	S21 Gain(dB)	S11 (dB)	S22 (dB)
3.3	13	-6.6	-5.8
3.5	13.8	-8.8	-7.6
3.7	14.3	-8.9	-11.5
3.8	14.3	-7.8	-14.4
4.2	12.4	-4.6	-9.0

Table 5.1 TA9210D-EVB-I 36 V, 50 mA Electrical Characteristics Summary

6. TA9210D-EVB-I Test Results

All the tests are carried out at room temperature.

6.1. S parameters

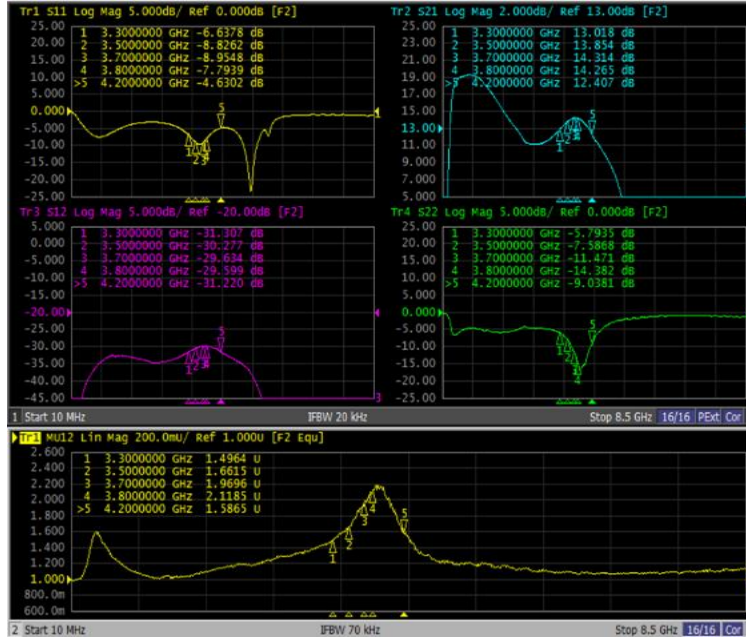


Figure 6.1.1. S parameters of TA9210D-EVB-I 36 V, 50 mA

6.2. Spectrum Mask Plot at 3.8 GHz

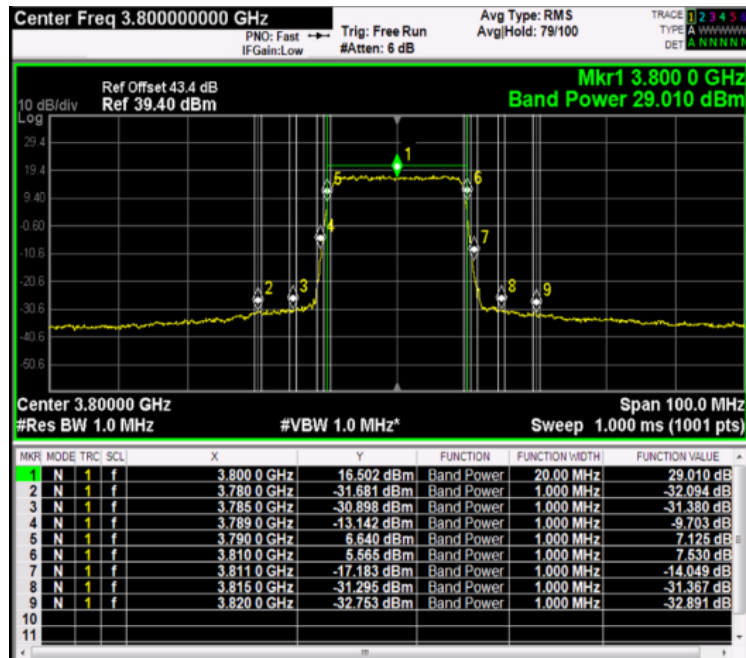


Figure 6.2.1. Spectrum Mask Plot at 3.8 GHz @ Pout = 29 dBm, 36 V, 50 mA Idq
DC Power dissipation <7 W at Pout = 29 dBm

6.3. Spectrum Mask Plot at 3300-3800 MHz @ Pout = 21 dBm

Center 3.30000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.300 0 GHz	8.443 dBm	Band Power	20.00 MHz	-21.083 dB
2	N	1	f	3.280 0 GHz	-32.863 dBm	Band Power	1.000 MHz	-32.860 dB
3	N	1	f	3.285 0 GHz	-30.747 dBm	Band Power	1.000 MHz	-30.758 dB
4	N	1	f	3.289 0 GHz	-20.778 dBm	Band Power	1.000 MHz	-17.106 dB
5	N	1	f	3.290 0 GHz	-1.158 dBm	Band Power	1.000 MHz	-0.455 dB
6	N	1	f	3.310 0 GHz	-2.806 dBm	Band Power	1.000 MHz	-1.125 dB
7	N	1	f	3.311 0 GHz	-24.268 dBm	Band Power	1.000 MHz	-21.993 dB
8	N	1	f	3.315 0 GHz	-31.344 dBm	Band Power	1.000 MHz	-31.304 dB
9	N	1	f	3.320 0 GHz	-32.966 dBm	Band Power	1.000 MHz	-33.286 dB

Center 3.40000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.400 0 GHz	8.634 dBm	Band Power	20.00 MHz	-21.091 dB
2	N	1	f	3.380 0 GHz	-32.825 dBm	Band Power	1.000 MHz	-33.059 dB
3	N	1	f	3.385 0 GHz	-31.190 dBm	Band Power	1.000 MHz	-31.132 dB
4	N	1	f	3.389 0 GHz	-21.563 dBm	Band Power	1.000 MHz	-17.443 dB
5	N	1	f	3.390 0 GHz	-1.011 dBm	Band Power	1.000 MHz	-0.601 dB
6	N	1	f	3.410 0 GHz	-2.840 dBm	Band Power	1.000 MHz	-0.655 dB
7	N	1	f	3.411 0 GHz	-24.276 dBm	Band Power	1.000 MHz	-21.767 dB
8	N	1	f	3.415 0 GHz	-31.217 dBm	Band Power	1.000 MHz	-31.364 dB
9	N	1	f	3.420 0 GHz	-32.877 dBm	Band Power	1.000 MHz	-33.239 dB

Center 3.50000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.500 0 GHz	8.451 dBm	Band Power	20.00 MHz	-21.028 dB
2	N	1	f	3.480 0 GHz	-33.639 dBm	Band Power	1.000 MHz	-33.786 dB
3	N	1	f	3.485 0 GHz	-32.109 dBm	Band Power	1.000 MHz	-32.318 dB
4	N	1	f	3.489 0 GHz	-21.776 dBm	Band Power	1.000 MHz	-17.250 dB
5	N	1	f	3.490 0 GHz	-1.157 dBm	Band Power	1.000 MHz	-0.919 dB
6	N	1	f	3.510 0 GHz	-2.787 dBm	Band Power	1.000 MHz	-1.234 dB
7	N	1	f	3.511 0 GHz	-25.686 dBm	Band Power	1.000 MHz	-22.197 dB
8	N	1	f	3.515 0 GHz	-32.559 dBm	Band Power	1.000 MHz	-32.814 dB
9	N	1	f	3.520 0 GHz	-34.372 dBm	Band Power	1.000 MHz	-34.655 dB

Center 3.60000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.600 0 GHz	9.611 dBm	Band Power	20.00 MHz	-21.012 dB
2	N	1	f	3.580 0 GHz	-34.219 dBm	Band Power	1.000 MHz	-34.757 dB
3	N	1	f	3.585 0 GHz	-32.531 dBm	Band Power	1.000 MHz	-32.718 dB
4	N	1	f	3.589 0 GHz	-22.715 dBm	Band Power	1.000 MHz	-18.859 dB
5	N	1	f	3.590 0 GHz	-1.702 dBm	Band Power	1.000 MHz	-1.321 dB
6	N	1	f	3.610 0 GHz	-2.389 dBm	Band Power	1.000 MHz	-0.246 dB
7	N	1	f	3.611 0 GHz	-27.124 dBm	Band Power	1.000 MHz	-22.023 dB
8	N	1	f	3.615 0 GHz	-32.258 dBm	Band Power	1.000 MHz	-32.342 dB
9	N	1	f	3.620 0 GHz	-34.343 dBm	Band Power	1.000 MHz	-34.616 dB

Center 3.70000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.700 0 GHz	8.312 dBm	Band Power	20.00 MHz	-21.031 dB
2	N	1	f	3.680 0 GHz	-33.753 dBm	Band Power	1.000 MHz	-34.052 dB
3	N	1	f	3.685 0 GHz	-31.584 dBm	Band Power	1.000 MHz	-32.007 dB
4	N	1	f	3.689 0 GHz	-21.613 dBm	Band Power	1.000 MHz	-17.117 dB
5	N	1	f	3.690 0 GHz	-0.960 dBm	Band Power	1.000 MHz	-0.367 dB
6	N	1	f	3.710 0 GHz	-3.192 dBm	Band Power	1.000 MHz	-1.470 dB
7	N	1	f	3.711 0 GHz	-24.042 dBm	Band Power	1.000 MHz	-22.506 dB
8	N	1	f	3.715 0 GHz	-32.555 dBm	Band Power	1.000 MHz	-32.623 dB
9	N	1	f	3.720 0 GHz	-34.074 dBm	Band Power	1.000 MHz	-34.733 dB

Center 3.80000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.800 0 GHz	8.616 dBm	Band Power	20.00 MHz	-20.993 dB
2	N	1	f	3.780 0 GHz	-32.424 dBm	Band Power	1.000 MHz	-32.916 dB
3	N	1	f	3.785 0 GHz	-30.676 dBm	Band Power	1.000 MHz	-29.967 dB
4	N	1	f	3.789 0 GHz	-21.852 dBm	Band Power	1.000 MHz	-17.997 dB
5	N	1	f	3.790 0 GHz	-1.687 dBm	Band Power	1.000 MHz	-0.866 dB
6	N	1	f	3.810 0 GHz	-2.591 dBm	Band Power	1.000 MHz	-0.882 dB
7	N	1	f	3.811 0 GHz	-23.538 dBm	Band Power	1.000 MHz	-21.378 dB
8	N	1	f	3.815 0 GHz	-29.853 dBm	Band Power	1.000 MHz	-29.781 dB
9	N	1	f	3.820 0 GHz	-32.486 dBm	Band Power	1.000 MHz	-32.553 dB

Figure 6.3.1. Spectrum Mask Plot @ Pout = 21 dBm, 36 V, 50 mA Idq

6.4. Spectrum Mask Plot at 3300-3800 MHz @ Pout = 23 dBm

Center 3.30000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.300 0 GHz	10.432 dBm	Band Power	20.00 MHz	-23.062 dB
2	N	1	f	3.280 0 GHz	-31.291 dBm	Band Power	1.000 MHz	-31.655 dB
3	N	1	f	3.285 0 GHz	-29.900 dBm	Band Power	1.000 MHz	-29.799 dB
4	N	1	f	3.289 0 GHz	-18.860 dBm	Band Power	1.000 MHz	-15.295 dB
5	N	1	f	3.290 0 GHz	1.044 dBm	Band Power	1.000 MHz	1.497 dB
6	N	1	f	3.310 0 GHz	-1.002 dBm	Band Power	1.000 MHz	0.748 dB
7	N	1	f	3.311 0 GHz	-21.650 dBm	Band Power	1.000 MHz	-19.979 dB
8	N	1	f	3.315 0 GHz	-30.149 dBm	Band Power	1.000 MHz	-30.402 dB
9	N	1	f	3.320 0 GHz	-32.159 dBm	Band Power	1.000 MHz	-32.307 dB

Center 3.40000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.400 0 GHz	10.305 dBm	Band Power	20.00 MHz	-23.064 dB
2	N	1	f	3.380 0 GHz	-32.395 dBm	Band Power	1.000 MHz	-32.163 dB
3	N	1	f	3.385 0 GHz	-30.508 dBm	Band Power	1.000 MHz	-30.676 dB
4	N	1	f	3.389 0 GHz	-19.572 dBm	Band Power	1.000 MHz	-15.437 dB
5	N	1	f	3.390 0 GHz	0.311 dBm	Band Power	1.000 MHz	1.518 dB
6	N	1	f	3.410 0 GHz	-0.490 dBm	Band Power	1.000 MHz	1.186 dB
7	N	1	f	3.411 0 GHz	-23.387 dBm	Band Power	1.000 MHz	-20.201 dB
8	N	1	f	3.415 0 GHz	-29.977 dBm	Band Power	1.000 MHz	-30.843 dB
9	N	1	f	3.420 0 GHz	-32.336 dBm	Band Power	1.000 MHz	-32.469 dB

Center 3.50000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.500 0 GHz	10.809 dBm	Band Power	20.00 MHz	-23.077 dB
2	N	1	f	3.480 0 GHz	-32.792 dBm	Band Power	1.000 MHz	-33.041 dB
3	N	1	f	3.485 0 GHz	-31.809 dBm	Band Power	1.000 MHz	-31.833 dB
4	N	1	f	3.489 0 GHz	-20.626 dBm	Band Power	1.000 MHz	-15.194 dB
5	N	1	f	3.490 0 GHz	0.990 dBm	Band Power	1.000 MHz	1.876 dB
6	N	1	f	3.510 0 GHz	-0.764 dBm	Band Power	1.000 MHz	1.012 dB
7	N	1	f	3.511 0 GHz	-23.551 dBm	Band Power	1.000 MHz	-20.407 dB
8	N	1	f	3.515 0 GHz	-31.928 dBm	Band Power	1.000 MHz	-32.099 dB
9	N	1	f	3.520 0 GHz	-34.155 dBm	Band Power	1.000 MHz	-33.891 dB

Center 3.60000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.600 0 GHz	10.616 dBm	Band Power	20.00 MHz	-23.050 dB
2	N	1	f	3.580 0 GHz	-33.900 dBm	Band Power	1.000 MHz	-34.251 dB
3	N	1	f	3.585 0 GHz	-31.941 dBm	Band Power	1.000 MHz	-32.123 dB
4	N	1	f	3.589 0 GHz	-18.381 dBm	Band Power	1.000 MHz	-15.950 dB
5	N	1	f	3.590 0 GHz	-0.454 dBm	Band Power	1.000 MHz	0.755 dB
6	N	1	f	3.610 0 GHz	-0.013 dBm	Band Power	1.000 MHz	1.145 dB
7	N	1	f	3.611 0 GHz	-21.192 dBm	Band Power	1.000 MHz	-19.810 dB
8	N	1	f	3.615 0 GHz	-31.762 dBm	Band Power	1.000 MHz	-31.596 dB
9	N	1	f	3.620 0 GHz	-33.103 dBm	Band Power	1.000 MHz	-33.625 dB

Center 3.70000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.700 0 GHz	11.111 dBm	Band Power	20.00 MHz	-23.019 dB
2	N	1	f	3.680 0 GHz	-32.975 dBm	Band Power	1.000 MHz	-33.450 dB
3	N	1	f	3.685 0 GHz	-30.604 dBm	Band Power	1.000 MHz	-31.462 dB
4	N	1	f	3.689 0 GHz	-19.783 dBm	Band Power	1.000 MHz	-15.285 dB
5	N	1	f	3.690 0 GHz	1.029 dBm	Band Power	1.000 MHz	1.828 dB
6	N	1	f	3.710 0 GHz	-0.692 dBm	Band Power	1.000 MHz	0.796 dB
7	N	1	f	3.711 0 GHz	-26.852 dBm	Band Power	1.000 MHz	-20.500 dB
8	N	1	f	3.715 0 GHz	-32.394 dBm	Band Power	1.000 MHz	-32.092 dB
9	N	1	f	3.720 0 GHz	-33.860 dBm	Band Power	1.000 MHz	-33.895 dB

Center 3.80000 GHz							Span 100.0 MHz	
#Res BW 1.0 MHz							#VBW 1.0 MHz*	Sweep 1.000 ms (1001 pts)
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.800 0 GHz	10.212 dBm	Band Power	20.00 MHz	-22.981 dB
2	N	1	f	3.780 0 GHz	-31.995 dBm	Band Power	1.000 MHz	-32.270 dB
3	N	1	f	3.785 0 GHz	-29.742 dBm	Band Power	1.000 MHz	-29.801 dB
4	N	1	f	3.789 0 GHz	-20.845 dBm	Band Power	1.000 MHz	-15.650 dB
5	N	1	f	3.790 0 GHz	0.496 dBm	Band Power	1.000 MHz	1.220 dB
6	N	1	f	3.810 0 GHz	-0.825 dBm	Band Power	1.000 MHz	1.200 dB
7	N	1	f	3.811 0 GHz	-22.505 dBm	Band Power	1.000 MHz	-20.018 dB
8	N	1	f	3.815 0 GHz	-28.994 dBm	Band Power	1.000 MHz	-29.150 dB
9	N	1	f	3.820 0 GHz	-31.211 dBm	Band Power	1.000 MHz	-31.701 dB

Figure 6.4.1. Spectrum Mask Plot @ Pout = 23 dBm, 36 V, 50 mA Idq

6.5. Spectrum Mask Plot at 3300-3800 MHz @Pout = 25 dBm

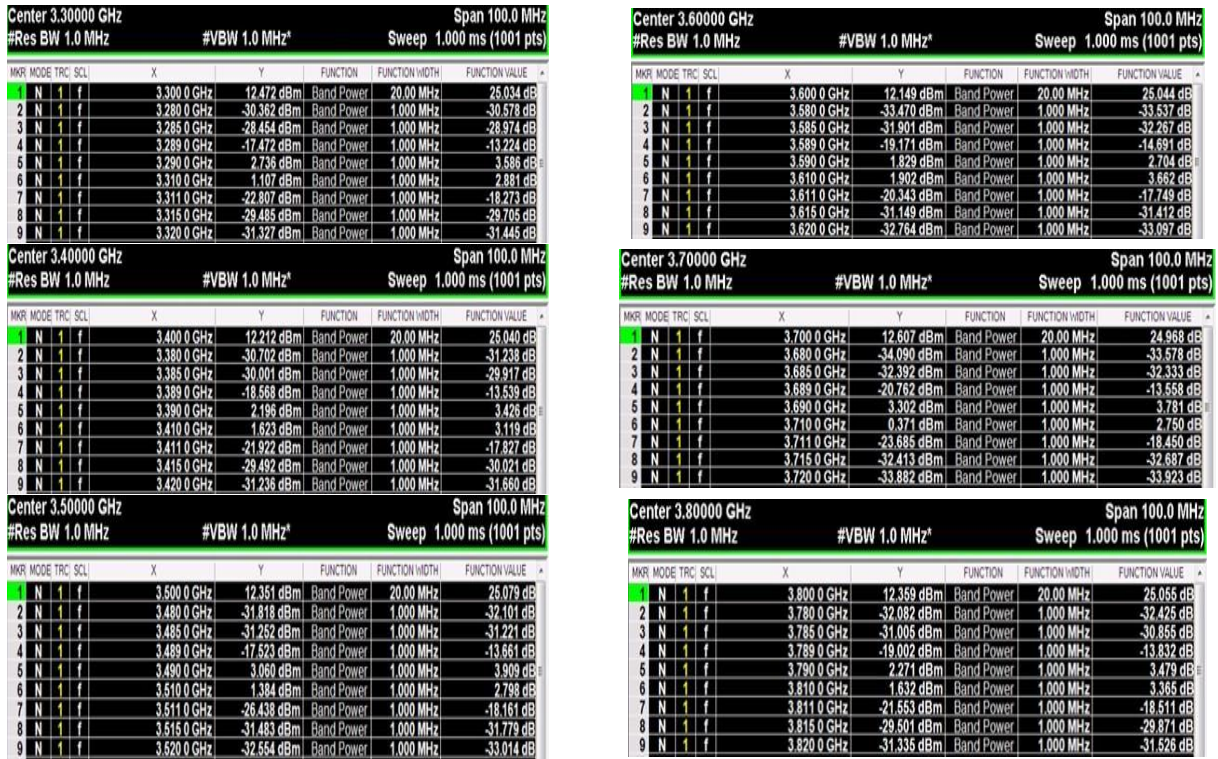


Figure 6.5.1. Spectrum Mask Plot @ Pout = 25 dBm, 36 V, 50 mA Idq

6.6. Spectrum Mask Plot at 3300-3800 MHz @ Pout = 27 dBm



Figure 6.6.1. Spectrum Mask Plot @ Pout = 27 dBm, 36 V, 50 mA Idq

6.7. Spectrum Mask Plot at 3300-3800 MHz @ Pout = 29 dBm

Center 3.30000 GHz						Span 100.0 MHz		
#Res BW 1.0 MHz		#VBW 1.0 MHz*		Sweep 1.000 ms (1001 pts)				
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.300 0 GHz	16.639 dBm	Band Power	20.00 MHz	28.979 dB
2	N	1	f	3.280 0 GHz	-28.893 dBm	Band Power	1.000 MHz	-28.708 dB
3	N	1	f	3.285 0 GHz	-27.273 dBm	Band Power	1.000 MHz	-27.465 dB
4	N	1	f	3.289 0 GHz	-12.576 dBm	Band Power	1.000 MHz	-9.387 dB
5	N	1	f	3.290 0 GHz	7.053 dBm	Band Power	1.000 MHz	7.446 dB
6	N	1	f	3.310 0 GHz	5.006 dBm	Band Power	1.000 MHz	6.800 dB
7	N	1	f	3.311 0 GHz	-16.595 dBm	Band Power	1.000 MHz	-13.891 dB
8	N	1	f	3.315 0 GHz	-28.863 dBm	Band Power	1.000 MHz	-28.956 dB
9	N	1	f	3.320 0 GHz	-30.140 dBm	Band Power	1.000 MHz	-30.497 dB

Center 3.40000 GHz						Span 100.0 MHz		
#Res BW 1.0 MHz		#VBW 1.0 MHz*		Sweep 1.000 ms (1001 pts)				
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.400 0 GHz	16.267 dBm	Band Power	20.00 MHz	29.039 dB
2	N	1	f	3.380 0 GHz	-29.244 dBm	Band Power	1.000 MHz	-29.479 dB
3	N	1	f	3.385 0 GHz	-28.714 dBm	Band Power	1.000 MHz	-28.609 dB
4	N	1	f	3.389 0 GHz	-14.092 dBm	Band Power	1.000 MHz	-9.684 dB
5	N	1	f	3.390 0 GHz	6.403 dBm	Band Power	1.000 MHz	7.405 dB
6	N	1	f	3.410 0 GHz	5.835 dBm	Band Power	1.000 MHz	7.312 dB
7	N	1	f	3.411 0 GHz	-16.166 dBm	Band Power	1.000 MHz	-14.206 dB
8	N	1	f	3.415 0 GHz	-29.265 dBm	Band Power	1.000 MHz	-29.319 dB
9	N	1	f	3.420 0 GHz	-30.851 dBm	Band Power	1.000 MHz	-30.974 dB

Center 3.50000 GHz						Span 100.0 MHz		
#Res BW 1.0 MHz		#VBW 1.0 MHz*		Sweep 1.000 ms (1001 pts)				
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.500 0 GHz	16.207 dBm	Band Power	20.00 MHz	29.085 dB
2	N	1	f	3.480 0 GHz	-30.535 dBm	Band Power	1.000 MHz	-30.810 dB
3	N	1	f	3.485 0 GHz	-29.812 dBm	Band Power	1.000 MHz	-30.480 dB
4	N	1	f	3.489 0 GHz	-14.658 dBm	Band Power	1.000 MHz	-9.317 dB
5	N	1	f	3.490 0 GHz	7.029 dBm	Band Power	1.000 MHz	7.583 dB
6	N	1	f	3.510 0 GHz	5.133 dBm	Band Power	1.000 MHz	6.995 dB
7	N	1	f	3.511 0 GHz	-17.747 dBm	Band Power	1.000 MHz	-14.516 dB
8	N	1	f	3.515 0 GHz	-31.433 dBm	Band Power	1.000 MHz	-31.900 dB
9	N	1	f	3.520 0 GHz	-32.605 dBm	Band Power	1.000 MHz	-32.905 dB

Center 3.60000 GHz						Span 100.0 MHz		
#Res BW 1.0 MHz		#VBW 1.0 MHz*		Sweep 1.000 ms (1001 pts)				
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.600 0 GHz	16.397 dBm	Band Power	20.00 MHz	29.006 dB
2	N	1	f	3.680 0 GHz	-32.289 dBm	Band Power	1.000 MHz	-33.101 dB
3	N	1	f	3.685 0 GHz	-31.041 dBm	Band Power	1.000 MHz	-32.005 dB
4	N	1	f	3.689 0 GHz	-13.841 dBm	Band Power	1.000 MHz	-10.569 dB
5	N	1	f	3.690 0 GHz	5.470 dBm	Band Power	1.000 MHz	6.684 dB
6	N	1	f	3.610 0 GHz	6.266 dBm	Band Power	1.000 MHz	7.302 dB
7	N	1	f	3.611 0 GHz	-13.293 dBm	Band Power	1.000 MHz	-14.249 dB
8	N	1	f	3.615 0 GHz	-31.732 dBm	Band Power	1.000 MHz	-32.226 dB
9	N	1	f	3.620 0 GHz	-33.084 dBm	Band Power	1.000 MHz	-33.216 dB

Center 3.70000 GHz						Span 100.0 MHz		
#Res BW 1.0 MHz		#VBW 1.0 MHz*		Sweep 1.000 ms (1001 pts)				
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.700 0 GHz	16.529 dBm	Band Power	20.00 MHz	29.022 dB
2	N	1	f	3.680 0 GHz	-32.939 dBm	Band Power	1.000 MHz	-32.983 dB
3	N	1	f	3.685 0 GHz	-32.259 dBm	Band Power	1.000 MHz	-32.226 dB
4	N	1	f	3.689 0 GHz	-14.393 dBm	Band Power	1.000 MHz	-9.077 dB
5	N	1	f	3.690 0 GHz	7.089 dBm	Band Power	1.000 MHz	7.526 dB
6	N	1	f	3.710 0 GHz	4.955 dBm	Band Power	1.000 MHz	6.690 dB
7	N	1	f	3.711 0 GHz	-18.739 dBm	Band Power	1.000 MHz	-14.856 dB
8	N	1	f	3.715 0 GHz	-31.055 dBm	Band Power	1.000 MHz	-31.495 dB
9	N	1	f	3.720 0 GHz	-33.222 dBm	Band Power	1.000 MHz	-33.691 dB

Center 3.80000 GHz						Span 100.0 MHz		
#Res BW 1.0 MHz		#VBW 1.0 MHz*		Sweep 1.000 ms (1001 pts)				
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.800 0 GHz	16.502 dBm	Band Power	20.00 MHz	29.010 dB
2	N	1	f	3.780 0 GHz	-31.681 dBm	Band Power	1.000 MHz	-32.084 dB
3	N	1	f	3.785 0 GHz	-30.898 dBm	Band Power	1.000 MHz	-31.380 dB
4	N	1	f	3.789 0 GHz	-13.142 dBm	Band Power	1.000 MHz	-9.703 dB
5	N	1	f	3.790 0 GHz	6.640 dBm	Band Power	1.000 MHz	7.125 dB
6	N	1	f	3.810 0 GHz	5.565 dBm	Band Power	1.000 MHz	7.530 dB
7	N	1	f	3.811 0 GHz	-17.183 dBm	Band Power	1.000 MHz	-14.049 dB
8	N	1	f	3.815 0 GHz	-31.295 dBm	Band Power	1.000 MHz	-31.367 dB
9	N	1	f	3.820 0 GHz	-32.753 dBm	Band Power	1.000 MHz	-32.891 dB

Figure 6.7.1. Spectrum Mask Plot @ Pout = 29 dBm, 36 V, 50 mA Idq

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