MC gains vs frequency (from RF input to channel # output)

Original measurements with **Anritsu VNA** from Dick prior to hot ports mod

	MC -A					MC -B					MC -C			
Freq	**G1**	**G2**	**G3**	**G4**		**G1**	**G2**	**G3**	**G4**		**G1**	**G2**	**G3**	**G4**
15	3.9	3.9	3.9	3.9		3.7	3.7	3.7	3.7		3.9	3.9	3.8	3.8
18	4.9	4.9	4.9	4.9		4.9	4.9	4.9	4.9		5.0	5.0	5.0	5.0
25	4.7	4.7	4.7	4.7		4.7	4.7	4.7	4.7		4.8	4.8	4.8	4.8
30	4.6	4.6	4.6	4.6		4.6	4.6	4.6	4.6		4.7	4.7	4.7	4.7
35	4.7	4.7	4.7	4.7		4.8	4.8	4.7	4.7		4.9	4.9	4.8	4.8
40	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.2	4.2	4.2	4.2
45	-1.2	-1.2	-1.2	-1.2		-1.3	-1.3	-1.3	-1.3		-1	-1.0	-1.0	-1.0

Numbers in **RED** measured with **Rigol SA** after hot ports mod **Green after TWB Mod**

	MC -A					MC -B					MC -C			
Freq	**G1**	**G2**	**G3**	**G4**		**G1**	**G2**	**G3**	**G4**		**G1**	**G2**	**G3**	**G4**
15	9.1	5.1	5.1	12.6		9.1	5.1	5.1	12.6		9.2	5.1	5.1	12.7
17	9.2	5.2	5.2	12.7		9.2	5.2	5.2	12.8		9.4	5.3	5.3	12.9
18	9.2	5.2	5.2	12.8		9.1	5.3	5.3	12.8		9.4	5.4	5.4	13.0
20	9.2	5.2	5.2	12.8		9.3	5.3	5.3	12.8		9.4	5.4	5.4	13.0
25	9.1	5.1	5.1	12.7		9.2	5.2	5.2	12.8		9.3	5.2	5.3	12.9
30	9.1	5.1	5.1	12.7		9.1	5.1	5.1	12.7		9.2	5.2	5.2	12.9
33	9.1	5.1	5.1	12.7		9.1	5.1	5.1	12.8		9.2	5.2	5.2	12.9
35	9.1	5.1	5.1	12.7		9.1	5.1	5.1	12.8		9.3	5.2	5.2	12.9
40	8.7	4.7	4.7	12.4		8.8	4.8	4.8	12.5		8.9	4.9	4.9	12.7
45	2.3	-1.7	-1.7	6.3		2.2	-1.8	-1.9	6.1		2.5	-1.6	-1.6	6.5

Numbers in **BLUE** measured with **VNA-2180** after hot ports mod

	MC -A					MC -B					MC -C			
Freq	**G1**	**G2**	**G3**	**G4**		**G1**	**G2**	**G3**	**G4**		**G1**	**G2**	**G3**	**G4**
15	9.0	5.0	5.0	9.0		8.9	5.0	5.0	8.9		9.0	5.1	5.1	9.0
17	9.0	5.0	5.0	9.0		9.0	5.1	5.1	9.1		9.2	5.2	5.2	9.2
18	9.0	5.1	5.1	9.0		9.1	5.1	5.1	9.1		9.2	5.3	5.3	9.2
20	9.1	5.2	5.1	9.1		9.1	5.1	5.1	9.1		9.2	5.2	5.3	9.2
25	9.0	5.0	5.0	9.0		9.0	5.0	5.0	9.0		9.1	5.1	5.1	9.1
30	9.0	5.0	5.0	9.0		9.0	5.0	5.0	9.0		9.1	5.1	5.1	9.1
33	9.0	5.0	5.0	9.0		9.0	5.0	5.0	9.0		9.1	5.1	5.1	9.1
35	9.0	5.0	5.0	9.0		9.0	5.0	5.0	9.0		9.1	5.1	5.1	9.1
40	8.5	4.5	4.4	8.5		8.5	4.5	4.5	8.5		8.7	4.7	4.7	8.7
45	2.7	-1.3	-1.3	2.7		2.6	-1.4	-1.4	2.6		2.9	-1.1	-1.1	2.9

Port to port isolation in dB @ 25 MHz

Original measurements with **Anritsu VNA** from Dick prior to hot ports mod

	MC-A					MC-B					MC-C			
	#1	#2	#3	#4		#1	#2	#3	#4		#1	#2	#3	#4
1					1					1				
2	-44				2	-44				2	-43			
3	-46	-45			3	-46	-44			3	-45	-44		
4	-47	-48	-45		4	-47	-47	-45		4	-46	-46	-45	

Numbers in **RED** measured with **Rigol SA** after hot ports mod
S21 fluctuation was +/- 1 dB, eyeball average reported below.

	MC-A					MC-B					MC-C			
	#1	#2	#3	#4		#1	#2	#3	#4		#1	#2	#3	#4
1					1					1				
2	-40				2	-41				2	-40			
3	-43	-42			3	-43	-43			3	-42	-42		
4	-41	-42	-40		4	-41	-42	-40		4	-40	-42	-40	

Numbers in **BLUE** measured with **VNA-2180** after hot ports mod

	MC-A					MC-B					MC-C			
	#1	#2	#3	#4		#1	#2	#3	#4		#1	#2	#3	#4
1					1					1				
2	-43				2	-43				2	-42			
3	-46	-45			3	-46	-45			3	-44	-44		
4	-43	-44	-42		4	-43	-44	-43		4	-42	-43	-43	

Numbers in **GREEN** measured with **Rigol SA** after hot ports mod + **TWB mod**
S21 fluctuation was +/- 1 dB, eyeball average reported below.

	MC-A					MC-B					MC-C			
	#1	#2	#3	#4		#1	#2	#3	#4		#1	#2	#3	#4
1					1					1				
2	-40				2	-41				2	-40			
3	-43	-42			3	-43	-43			3	-42	-42		
4	-38	-39	-37		4	-38	-39	-38		4	-37	-38	-37	

Port to port isolation in dB @ 35 MHz

Original measurements with **Anritsu VNA** from Dick prior to hot ports mod

	MC-A					MC-B					MC-C0			
	#1	#2	#3	#4		#1	#2	#3	#4		#1	#2	#3	#4
1					1					1				
2	-51				2	-49				2	-49			
3	-56	-47			3	-55	-48			3	-54	-48		
4	-55	-51	-47		4	-57	-54	-46		4	-54	-54	-48	

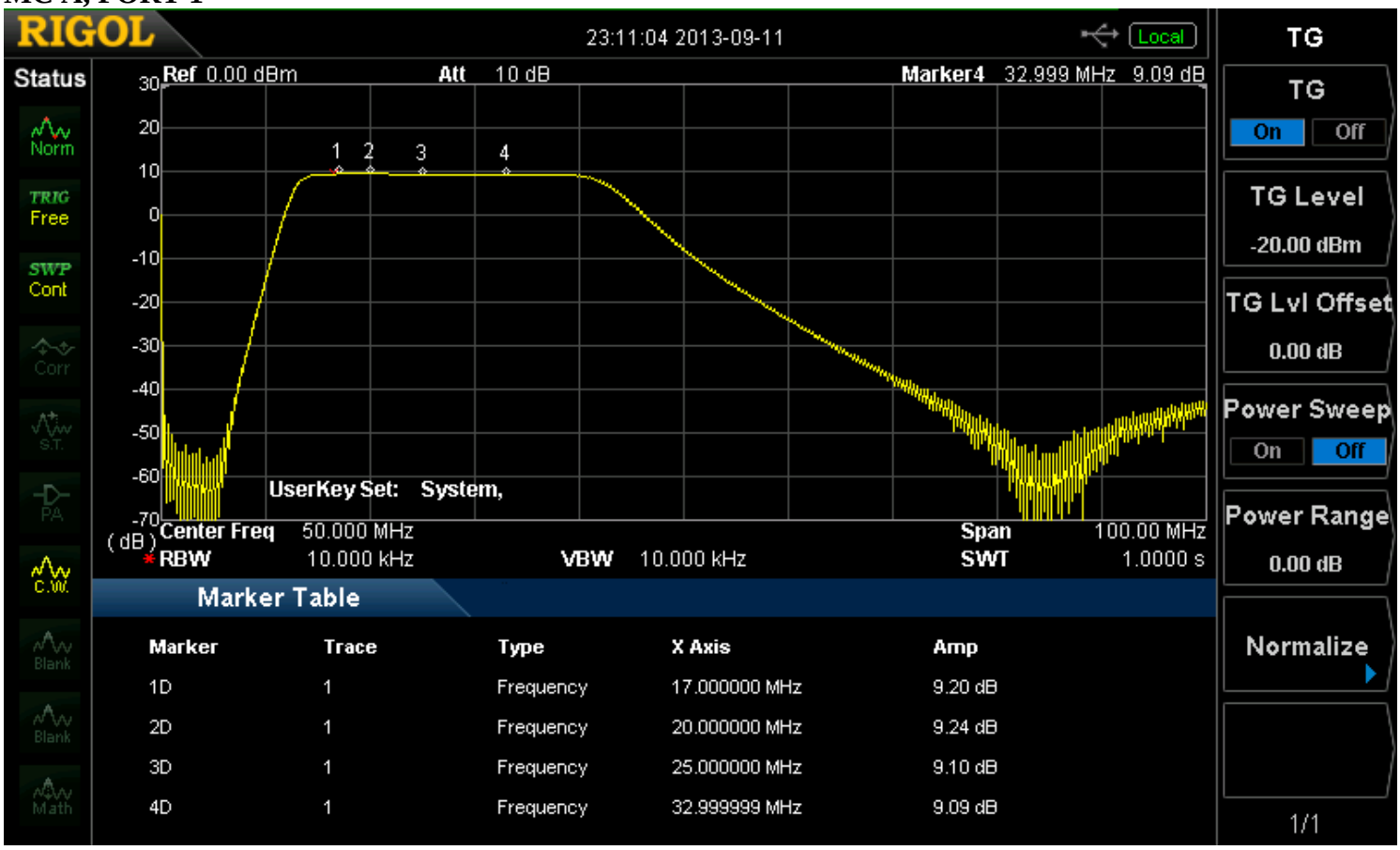
Numbers in **RED** measured with **Rigol SA** after hot ports mod
S21 fluctuation was +/- 3 dB (6 dB total), no usable readings

	MC-A					MC-B					MC-C			
	#1	#2	#3	#4		#1	#2	#3	#4		#1	#2	#3	#4
1					1					1				
2					2					2				
3					3					3				
4					4					4				

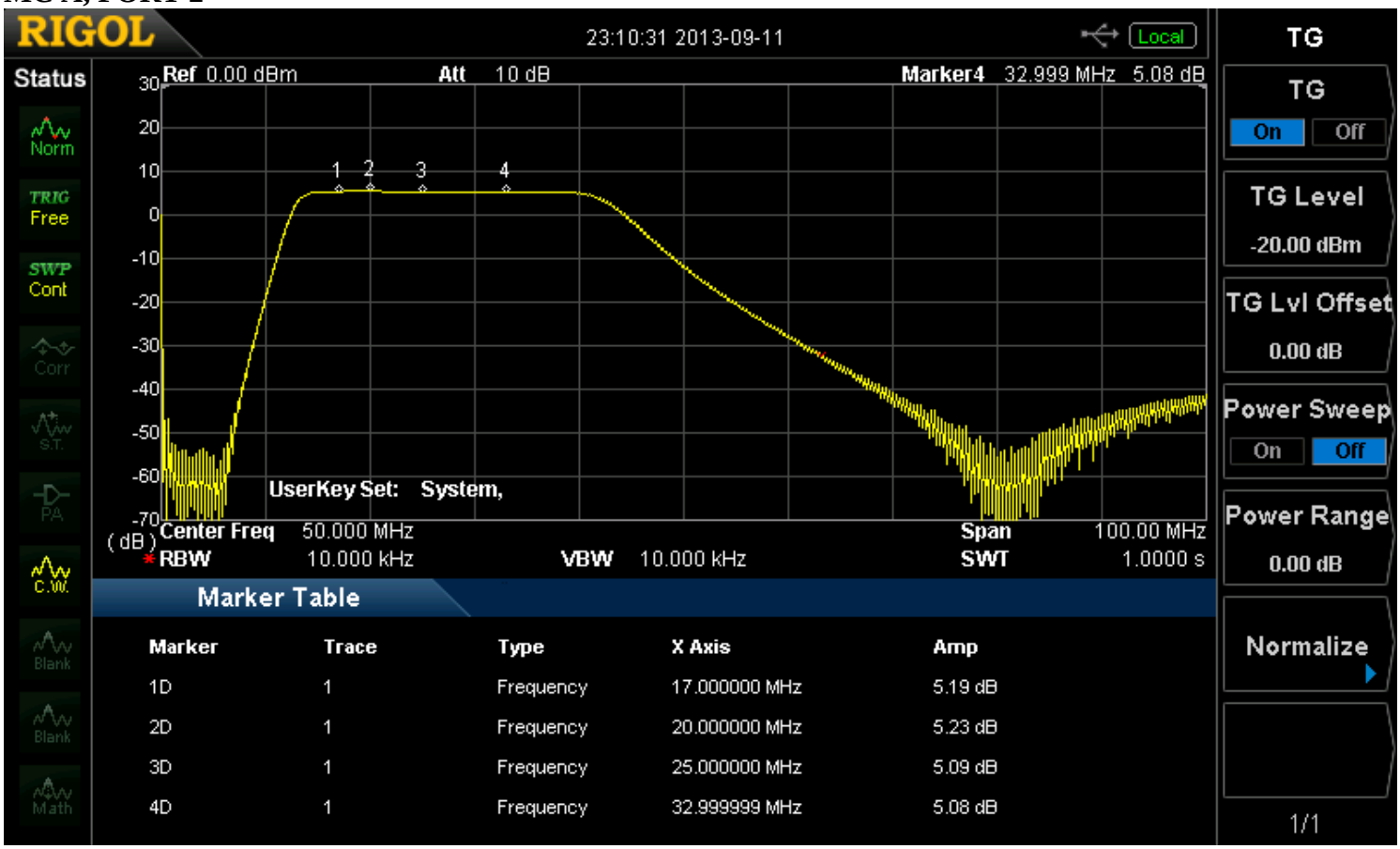
Numbers in **BLUE** measured with **VNA-2180** after hot ports mod

	MC-A					MC-B					MC-C			
	#1	#2	#3	#4		#1	#2	#3	#4		#1	#2	#3	#4
1					1					1				
2	-51				2	-49				2	-50			
3	-57	-51			3	-54	-50			3	-55	-51		
4	-54	-53	-51		4	-52	-53	-50		4	-51	-52	-52	

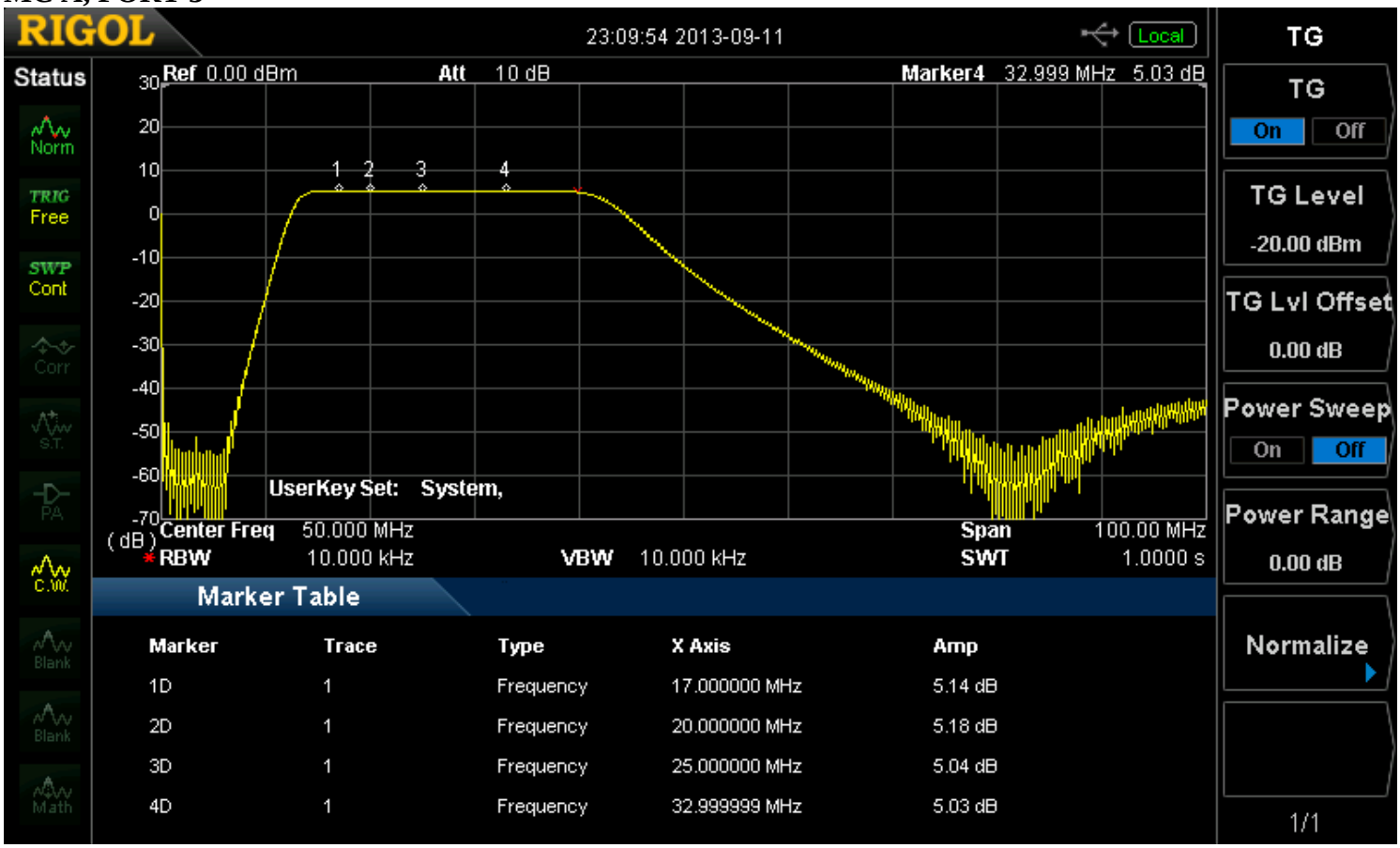
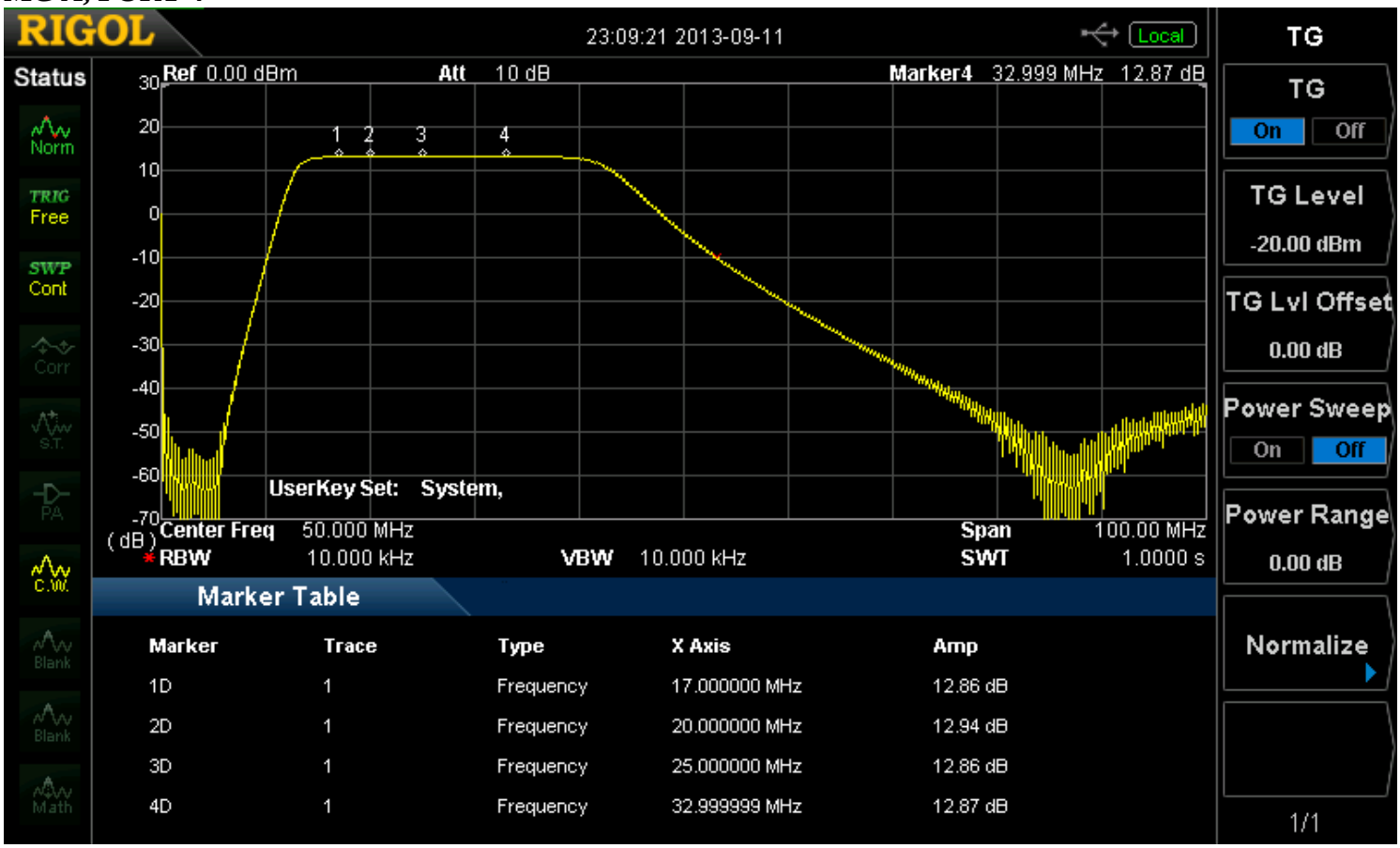
MC A, PORT 1



MC A, PORT 2



MC A, PORT 3



MC A, PORT 4