



## GRF5504 370-470 MHz Linear Match

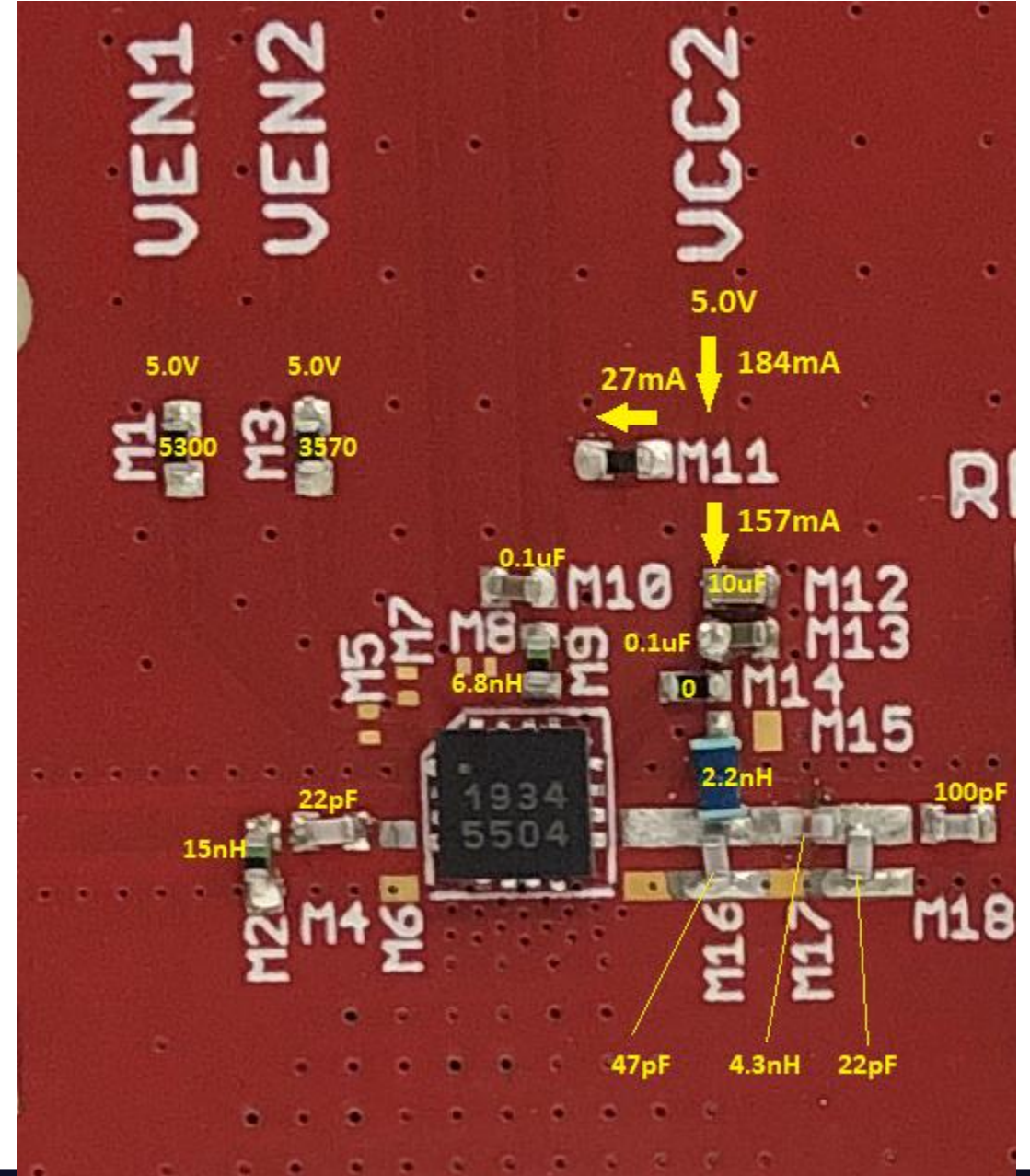
9/16/21



Schematic:

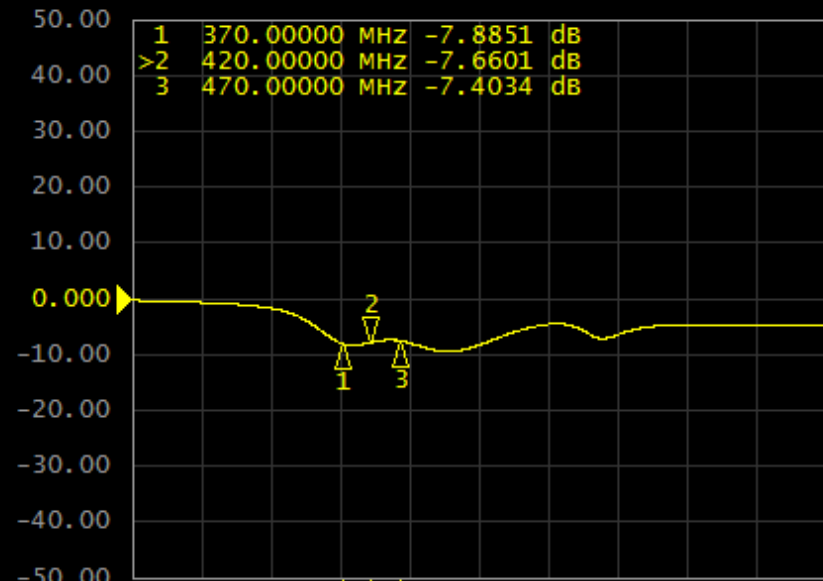
GRF5504 matched 370-470 MHz for best ACLR linearity under high peak to average LTE signal.

Data will be shown over temperature: -40C → 85C.

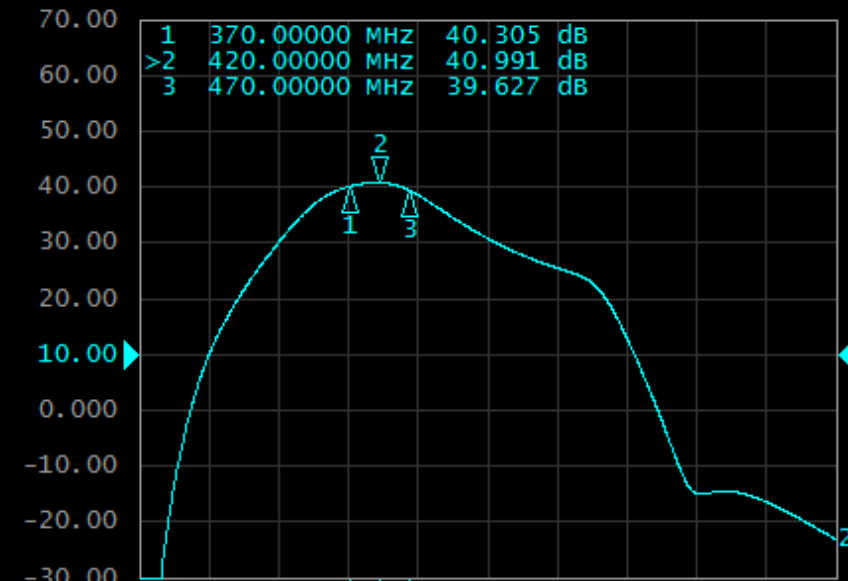


Response:

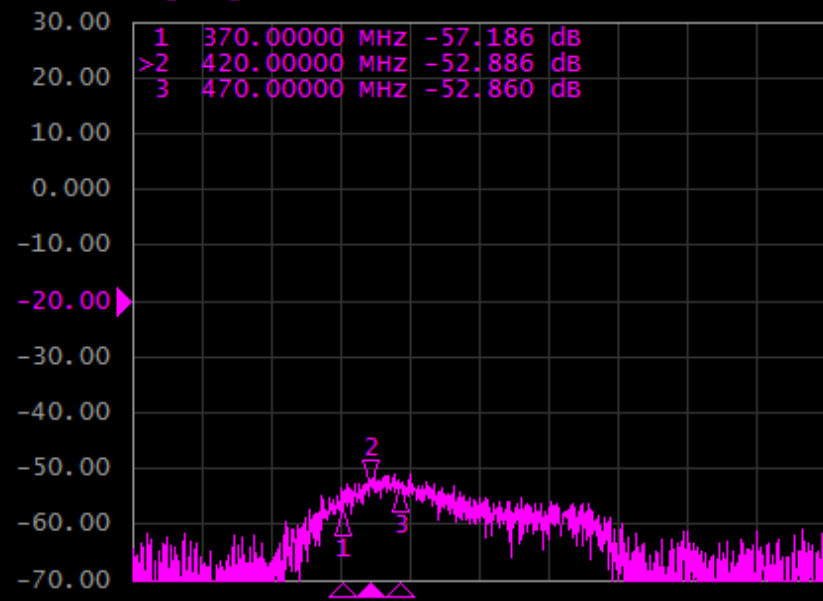
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F2]



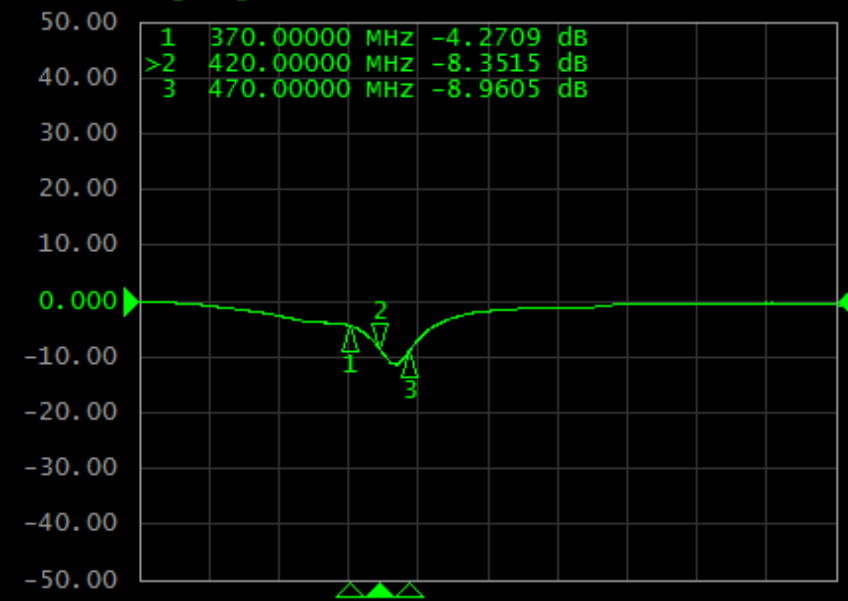
Tr2 S21 Log Mag 10.00dB/ Ref 10.00dB [F2]



Tr3 S12 Log Mag 10.00dB/ Ref -20.00dB [F2]



Tr4 S22 Log Mag 10.00dB/ Ref 0.000dB [F2]



Tabular Data:

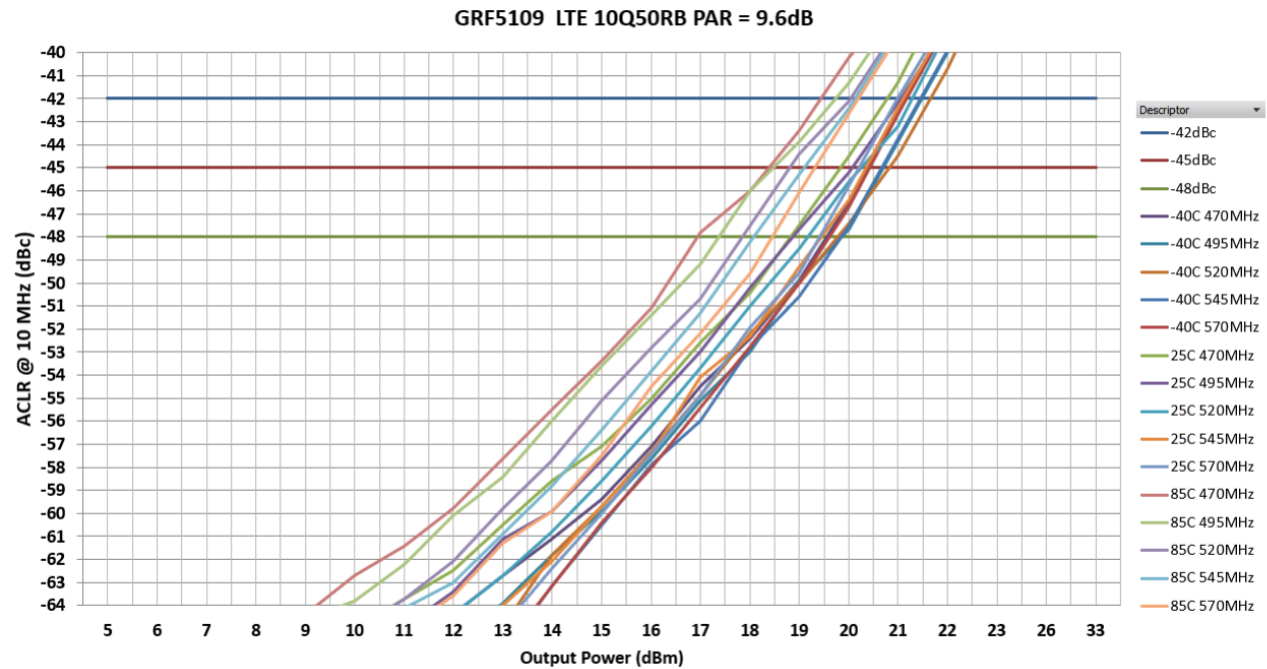
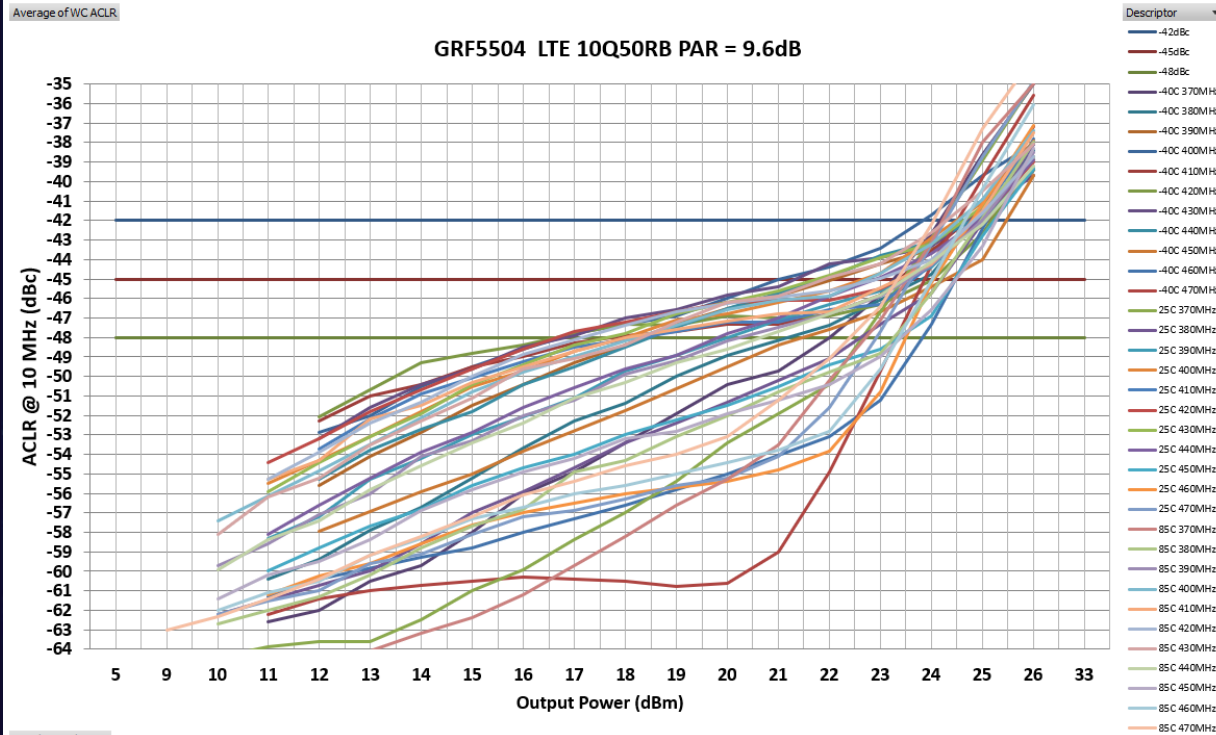
Temp deg C	Freq MHz	VccV	Ven1V	Ven2V	Iddq mA	Pout/Ptone dBm	gain dB	tone spacing MHz	OIP3 dBm	IMD3 dBm	OP1dB dBm	EVB NF dB
-40	370	5	5	5	160.6	22	41.1	0.6	43.1	-20.2	32.2	x
-40	380	5	5	5	160.6	22	41.4	0.6	43.3	-20	33	x
-40	390	5	5	5	160.6	22	41.8	0.6	42.3	-18.1	33.4	x
-40	400	5	5	5	160.6	22	42	0.6	42	-17.6	33.2	x
-40	410	5	5	5	160.6	22	42.2	0.6	42.6	-19.3	32.7	x
-40	420	5	5	5	160.6	22	42.2	0.6	43	-20	32.9	x
-40	430	5	5	5	160.6	22	41.9	0.6	42.2	-18.2	33.4	x
-40	440	5	5	5	160.6	22	41.6	0.6	42.5	-18.6	33.5	x
-40	450	5	5	5	160.6	22	41.6	0.6	44.1	-21.8	33.2	x
-40	460	5	5	5	160.6	22	41.6	0.6	48	-29.7	32.5	x
-40	470	5	5	5	160.6	22	41.1	0.6	49.6	-33.2	32	x
25	370	5	5	5	184.3	22	40.5	0.6	44.5	-22.9	32.1	4.9
25	380	5	5	5	184.3	22	40.7	0.6	44.3	-22.3	32.8	4.8
25	390	5	5	5	184.3	22	41.1	0.6	43.1	-19.8	33.1	4.7
25	400	5	5	5	184.3	22	41.3	0.6	42.5	-19.1	32.9	4.7
25	410	5	5	5	184.3	22	41.5	0.6	42.8	-19.8	32.5	4.6
25	420	5	5	5	184.3	22	41.4	0.6	42.7	-19.4	32.8	4.6
25	430	5	5	5	184.3	22	41.1	0.6	42.4	-18.8	33.2	4.5
25	440	5	5	5	184.3	22	40.8	0.6	43.2	-20.4	33.4	4.6
25	450	5	5	5	184.3	22	40.8	0.6	45.3	-24.6	32.8	4.6
25	460	5	5	5	184.3	22	40.7	0.6	48.7	-31.4	32.2	4.6
25	470	5	5	5	184.3	22	40.2	0.6	46.4	-26.7	31.5	4.6
85	370	5	5	5	198.4	22	39.9	0.6	45.2	-24.7	32	x
85	380	5	5	5	198.4	22	40.1	0.6	45	-23.9	32.8	x
85	390	5	5	5	198.4	22	40.4	0.6	43.4	-20.8	33.1	x
85	400	5	5	5	198.4	22	40.6	0.6	42.5	-19.4	32.6	x
85	410	5	5	5	198.4	22	40.7	0.6	42.5	-19.6	32.3	x
85	420	5	5	5	198.4	22	40.7	0.6	42.4	-19.1	32.6	x
85	430	5	5	5	198.4	22	40.4	0.6	42.5	-19.3	33.1	x
85	440	5	5	5	198.4	22	40.1	0.6	43.6	-21.6	33	x
85	450	5	5	5	198.4	22	39.9	0.6	46	-26.4	32.7	x
85	460	5	5	5	198.4	22	39.8	0.6	47	-27.9	31.9	x
85	470	5	5	5	198.4	22	39.3	0.6	44.6	-23.5	31.2	x



LTE 10Q50RB PAR = 9.6dB ACLR vs. Frequency and Temperature. Compare to GRF5109 at nearby frequency:

-48dBc points are similar. GRF5504 does better for -45dBc and -42dBc power.

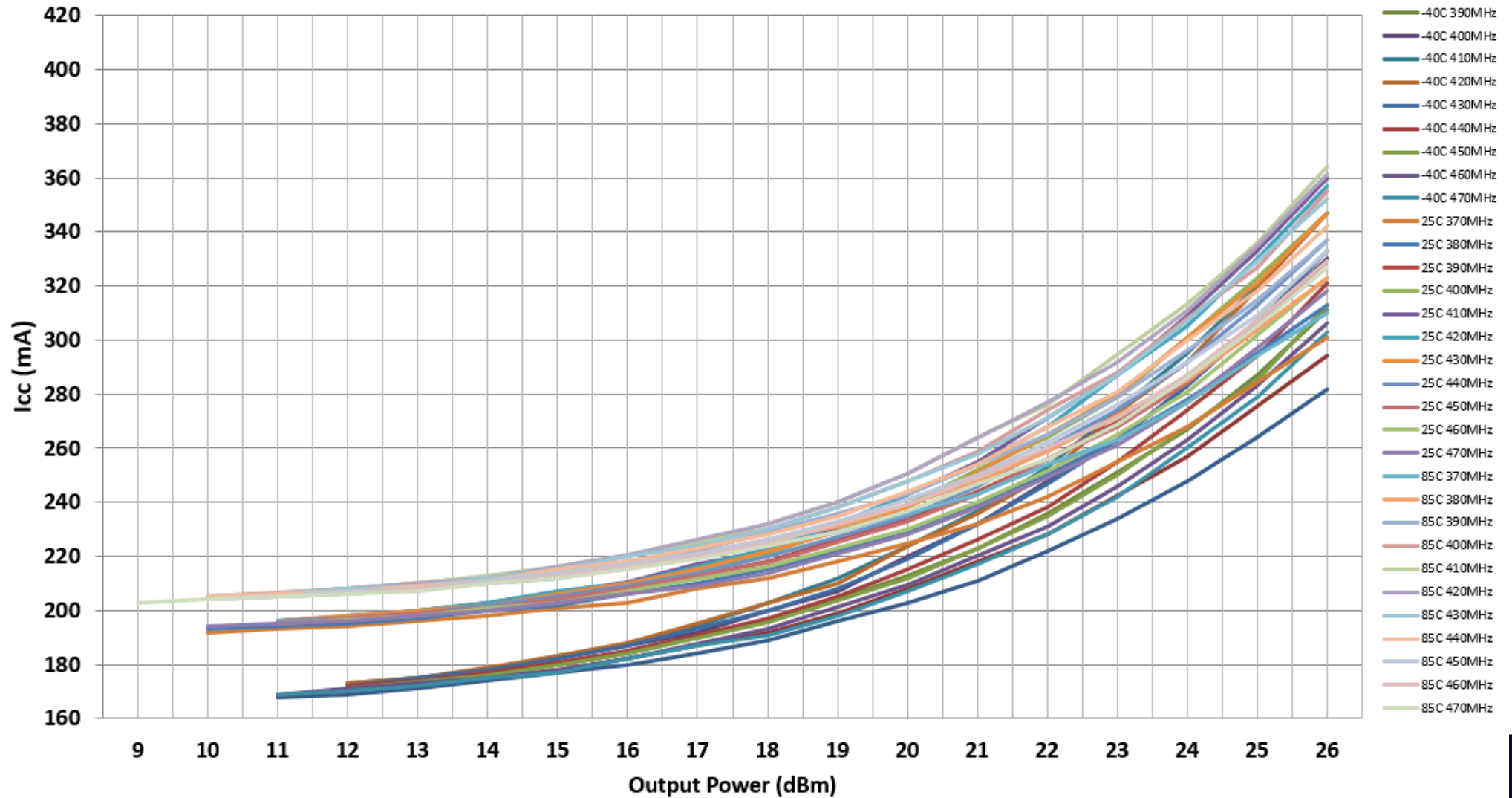
Device	-42dBc Power (dBm)	-45dBc Power (dBm)	-48dBc Power (dBm)
GRF5504	23.8	21	16.5
GRF5109	19.3	18.3	17



# LTE 10Q50RB PAR = 9.6dB ACLR Current vs. Frequency and Temperature:

Average of I<sub>ddRF</sub> mA

## GRF5504 LTE 10Q50RB PAR = 9.6dB





Contact Us

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