A photograph of an HP 08754-60057 Frequency Doubler circuit board. The board is white with a black HP logo and text. The text on the board includes "FREQUENCY DOUBLER", "+10 dBm REQUIRED", "0.5-1.3 GHz", "1-2.5 GHz", "08754-60057", and "MADE IN USA". The board is placed on a map background.

HP 08754-60057 frequency Doubler

The easy way getting 2.3, 5.7 or 10.368 GHz QRP reference sigs

1- Measurement test-set

Measurement test set

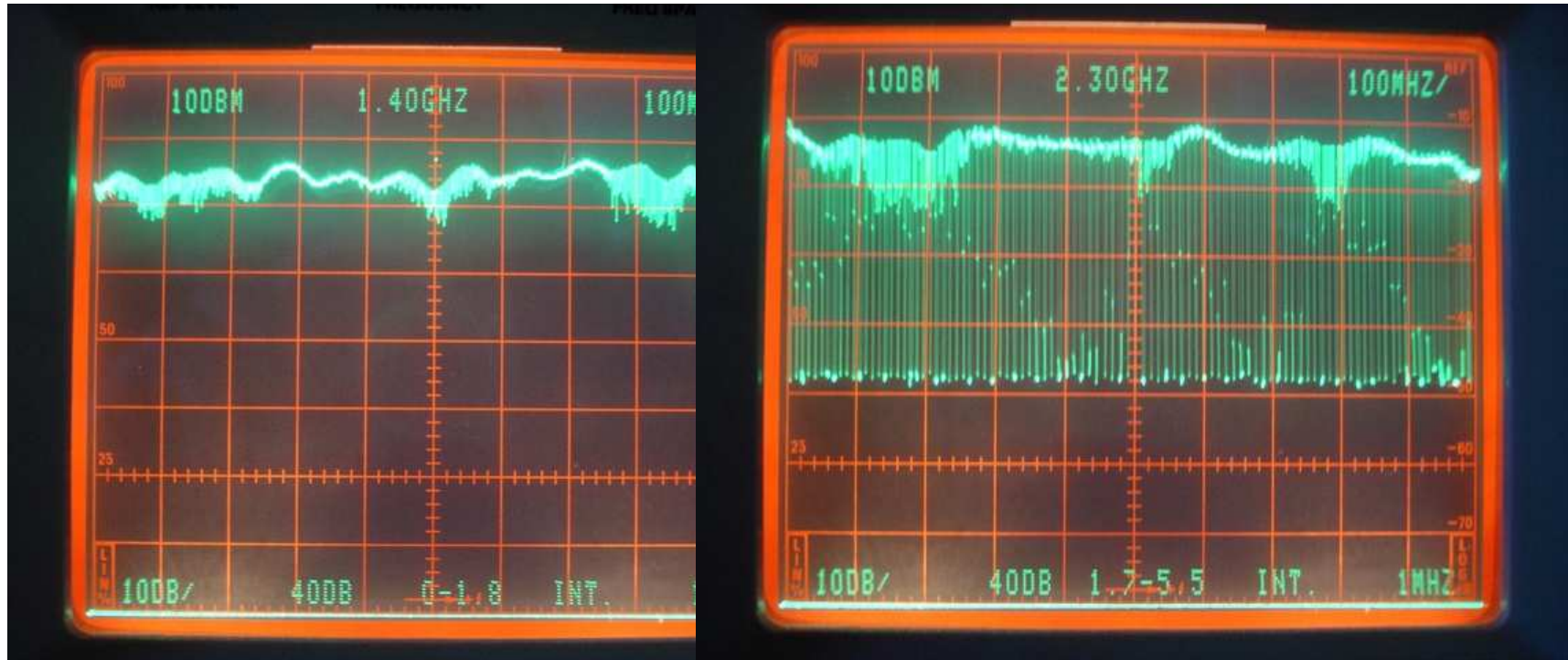
- HP 8657b 0.1–2060 MHz, Pout= +10 dBm
- Spectrum analyser Tektronix 492 or 494



2- Doubler measurements

Wide-band doubler meas from 0.9 to 2.8 GHz

Fin from 450 MHz to 1.4 GHz, Pin= + 10 dBm
-10 < Pout < 0 dBm



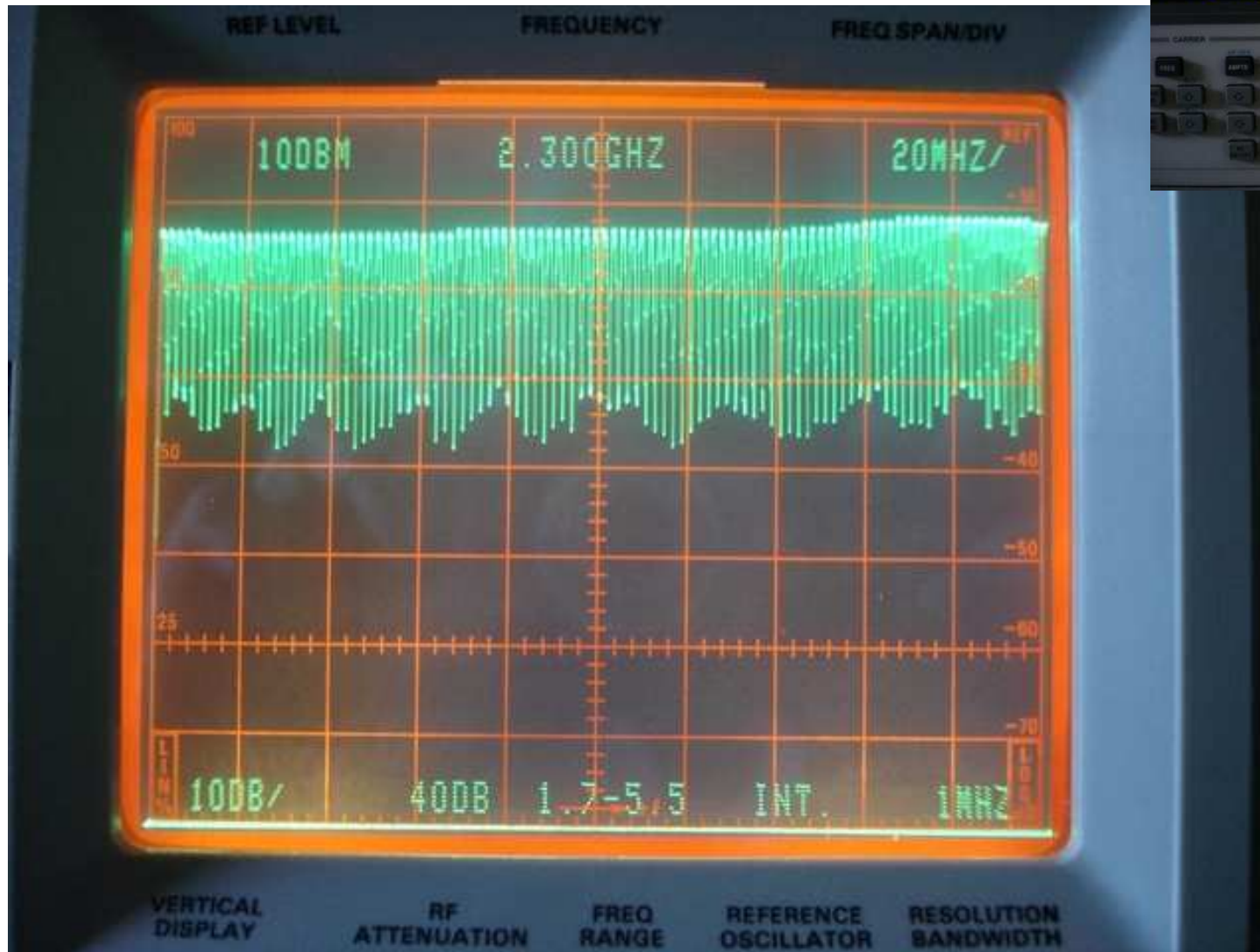
Specified for 0.1 – 2.6 GHz output

3- 2.3 GHz doubler

2.3 GHz doubler

$F_{in} = 1150 \text{ MHz}$, $P_{in} = +10 \text{ dBm}$

$P_{out} = +3 \text{ dBm}$



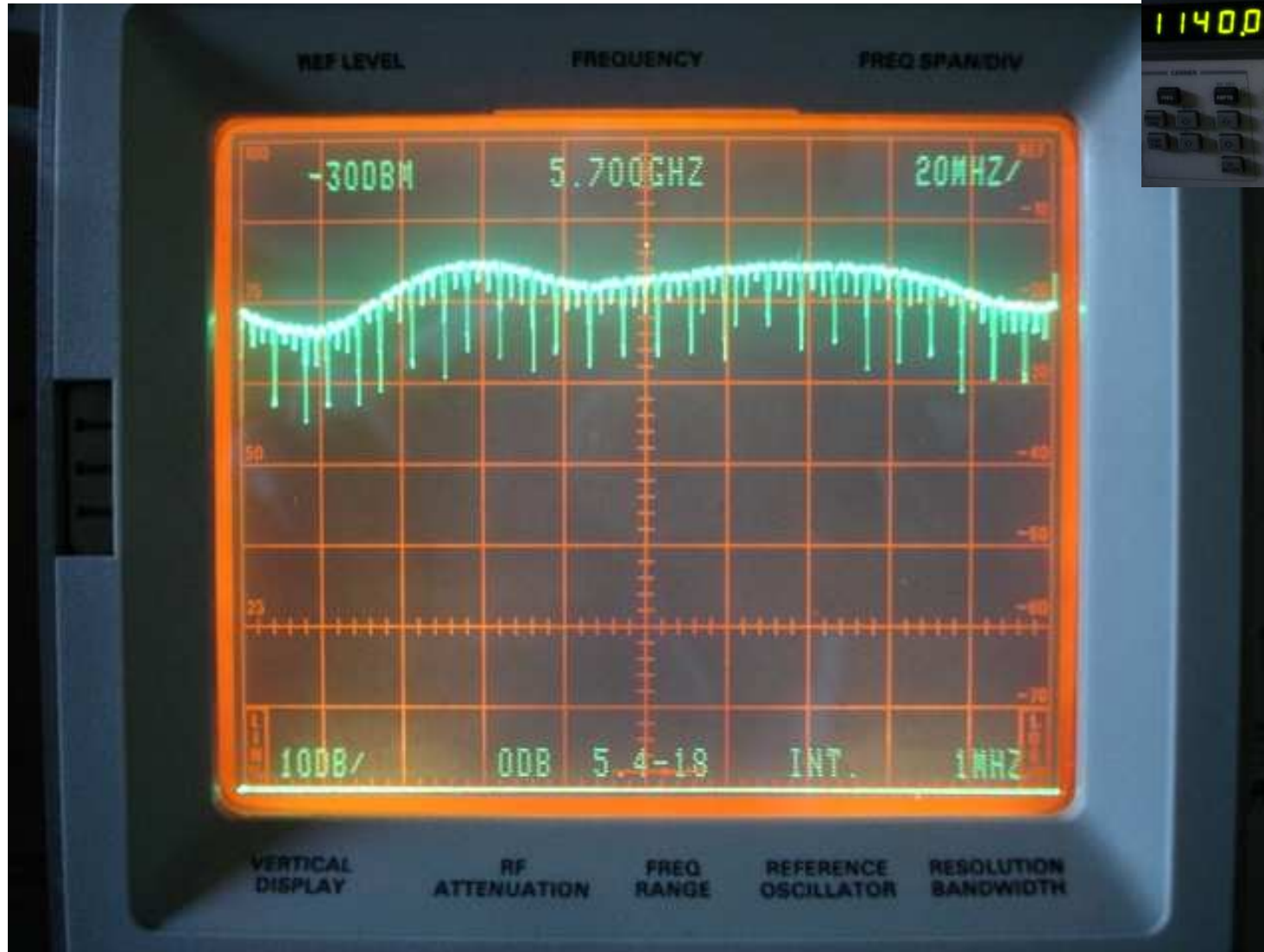
F5DQK september 2008

HP 08754-60057 doubler

4- 5.7 GHz x5 multiplier

5.7 GHz x5 multiplier

$F_{in} = 1140 \text{ MHz}$, $P_{in} + 10 \text{ dBm}$
 $P_{out} = -45 \text{ to } -48 \text{ dBm}$



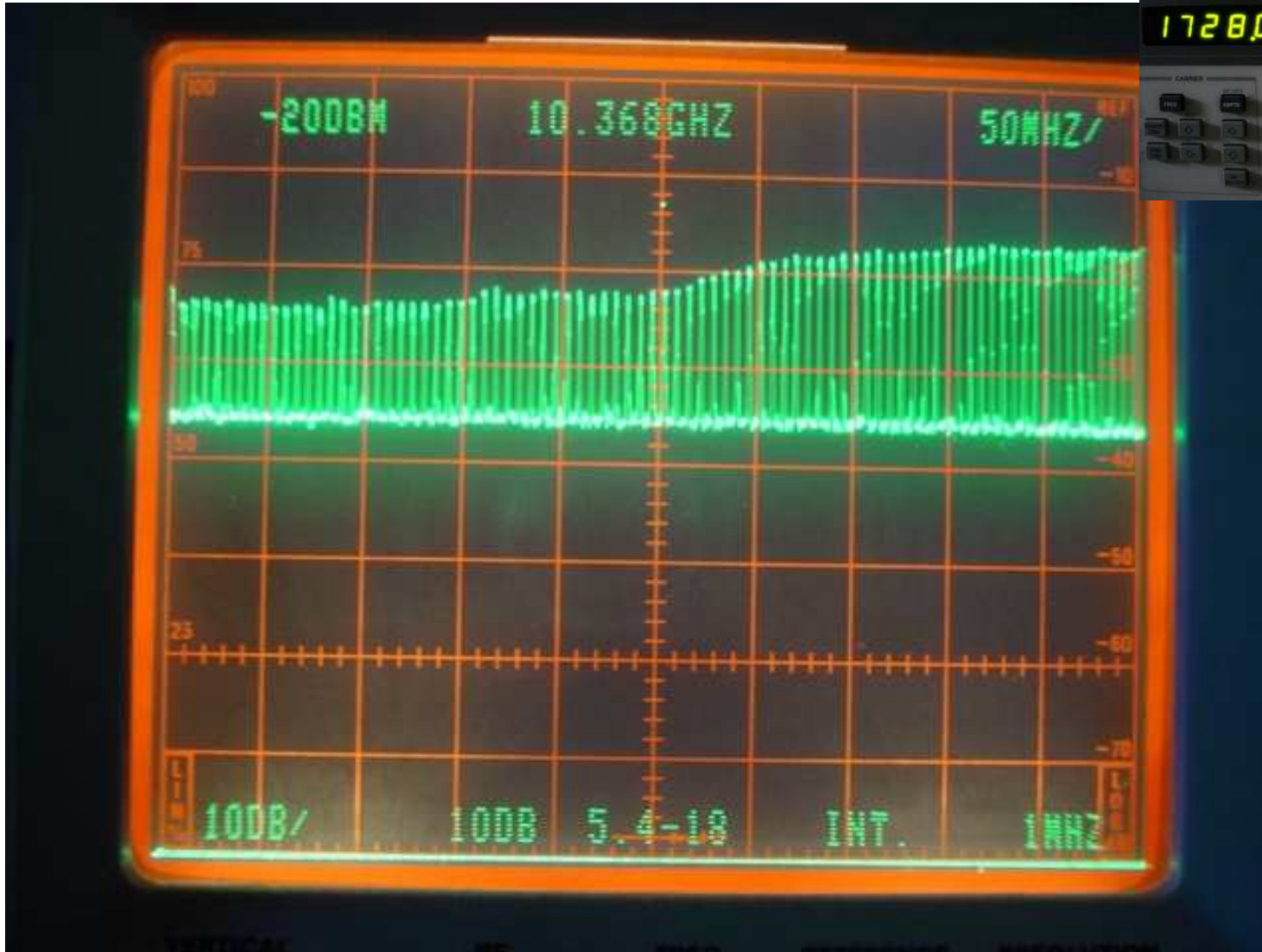
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HP 08754-60057 doubler

5- 10.368 GHz x6 multiplier

10.368 GHz x6 multiplier

Fin= 1728 MHz, Pin + 10 dBm
Pout = -42 to -38 dBm



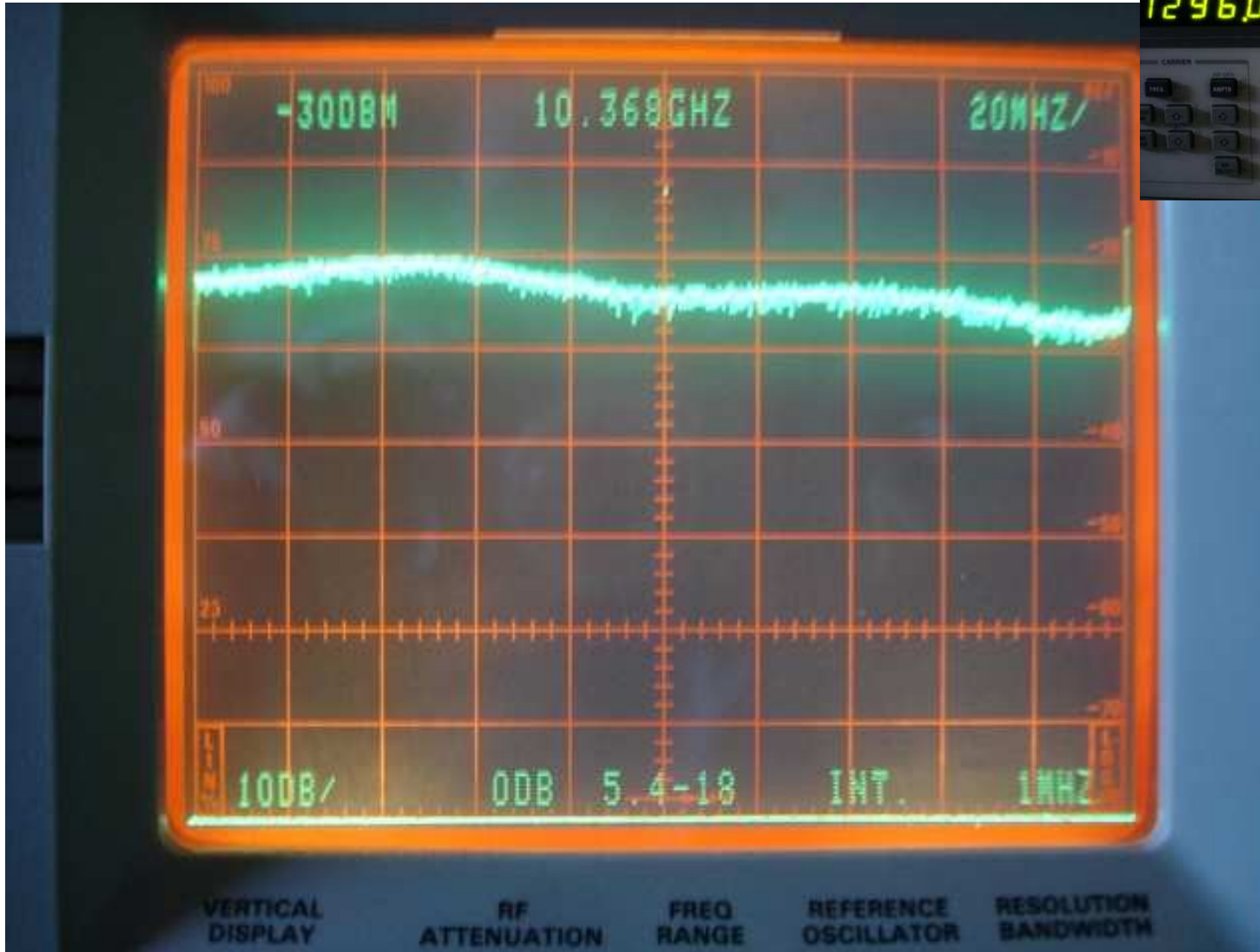
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HP 08754-60057 doubler

6- 10.368 GHz x8 multiplier

10.368 GHz x8 multiplier

Fin= 1296 MHz, Pin + 10 dBm
Pout = -50 to -56 dBm



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HP 08754-60057 doubler

7- Conclusion

- An inexpensive and rapid way getting 2.3, 5.7 and 10.368 GHz QRP références for every GHz transverter
- Rx alignment with a 1.3 GHz QRP source or a low-cost synthesizer
- **CAUTION Pin =+ 10 dBm**, not more !!!!