

K&L 2450 MHz Bandpassfilter

Matthias, DD1US, November 24th 2017

Hello,

Some time ago I was able to acquire 2 surplus filters from K&L of the type 5B120-2450/180-O/OP.

Here is how they look like:



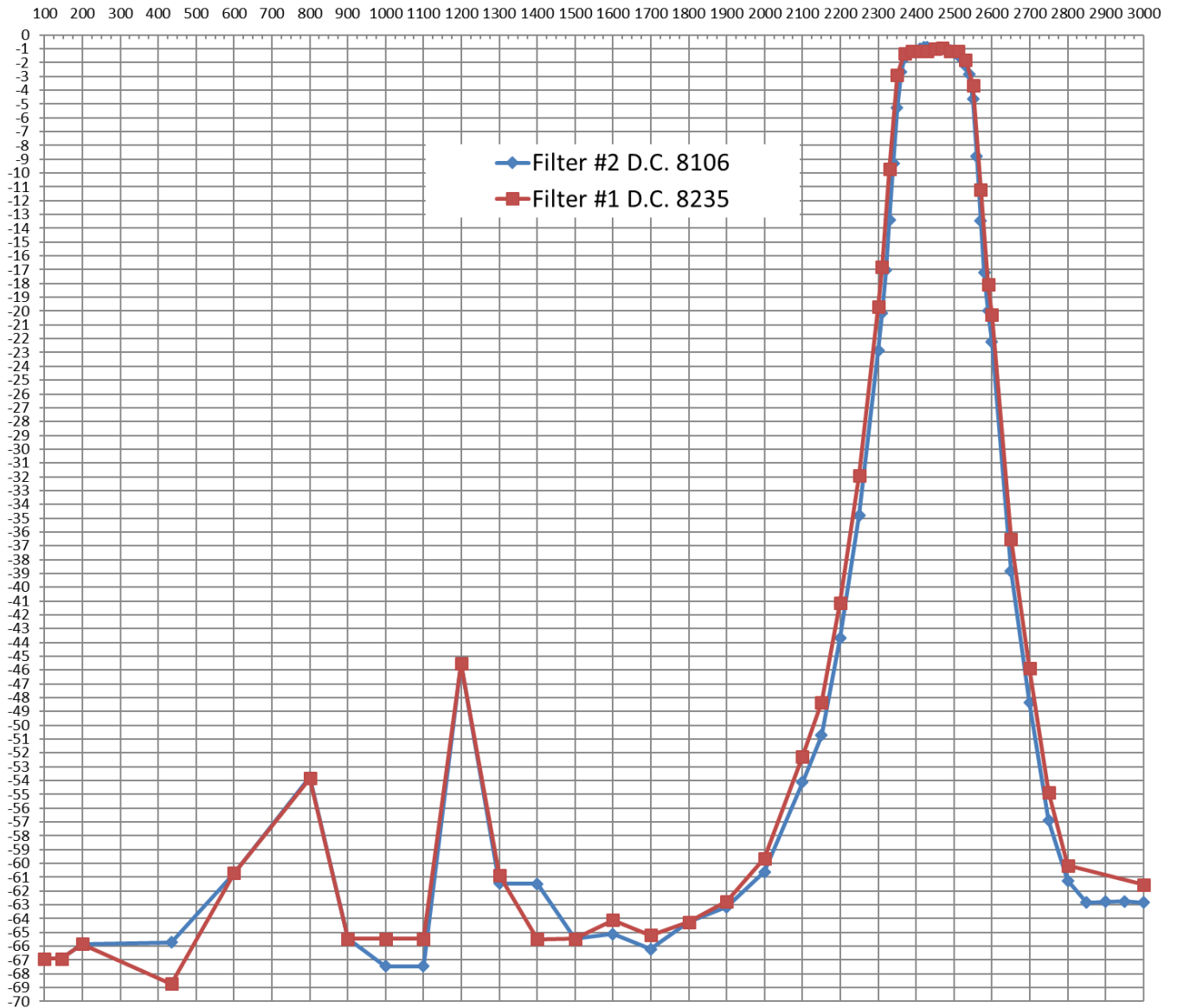
According to the nomenclature of K&L that means:

5 sections, tubular filter, band pass filter, center frequency 2450 MHz, bandwidth 180 MHz, input connector SMA female, output connector SMA male.

I measured the filter using a signal generator and power meter. The setup is limited to measure a maximum insertion loss of approximately 60dB.

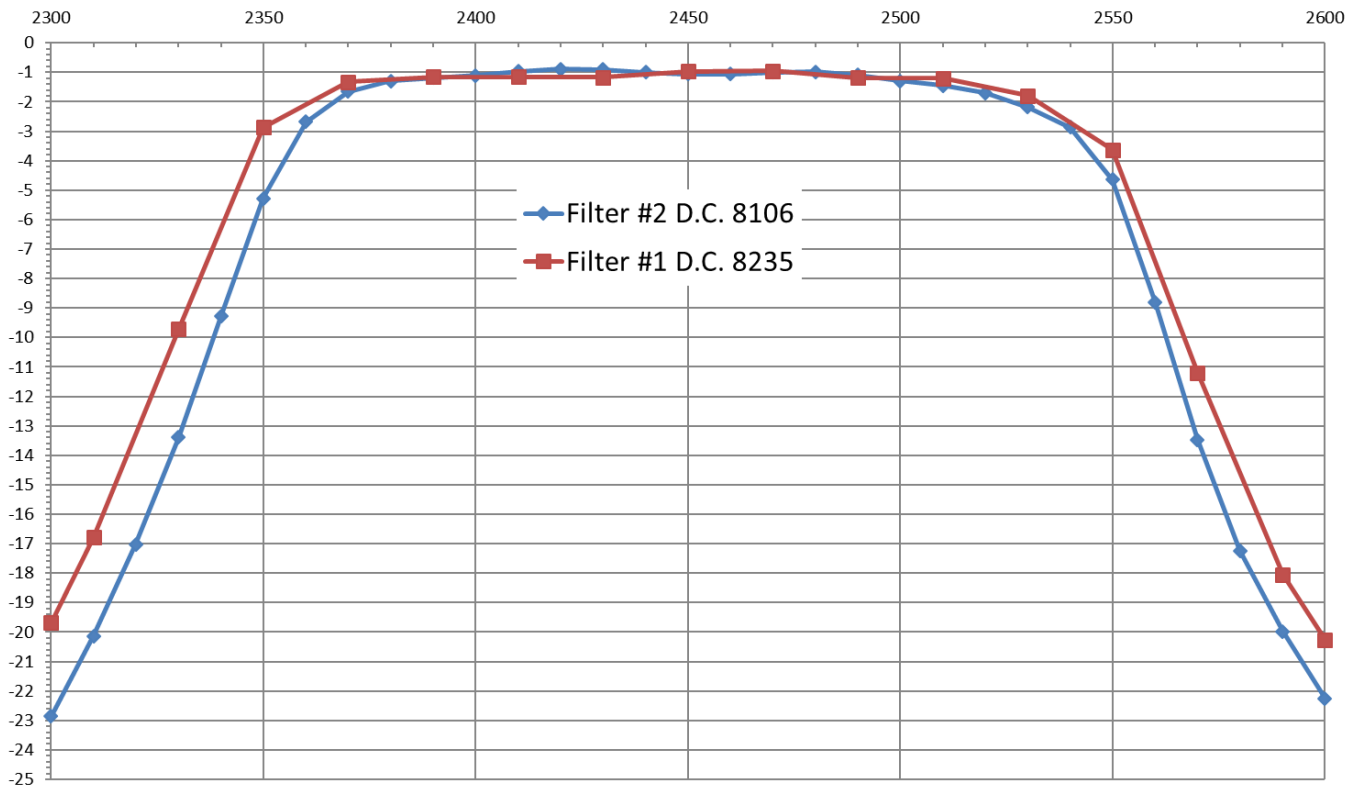
The serial numbers of my filters are D.C.-8235 and D.C.-8106.

Here is the transfer characteristic from 100 MHz to 3000 MHz:



The filters are quite identical in their characteristic including the spurious responses at $f_c/2$ and $f_c/3$ where the attenuation degrades from more than -65dB to -45dB respectively -54dB.

Here is the transfer characteristic from 2300 MHz to 2600 MHz:



My measurement shows a 3dB bandwidth of 190 MHz respectively 200 MHz. The center frequency is as specified 2450 MHz. The insertion loss in the passband which is about 150 MHz wide is very flat (1.0dB +/- 0.1dB).

I am planning to use one of the filters to reject the cellular phone signals at 800-1000 and 1800-2100 MHz in my DATV-receiver setup for the ISS (which is transmitting at 2395 MHz).

I always appreciate feedback. Many thanks in advance.

Best regards

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