

## ▶ LTE FILTERS 57 and 60

Televes has designed two types of filters with different rejection and performance depending if there are TV services over channel 57 or not. Once decided the type of filter based on the location of the channels, we will need to choose the format.

### PLUG-IN INDOORS

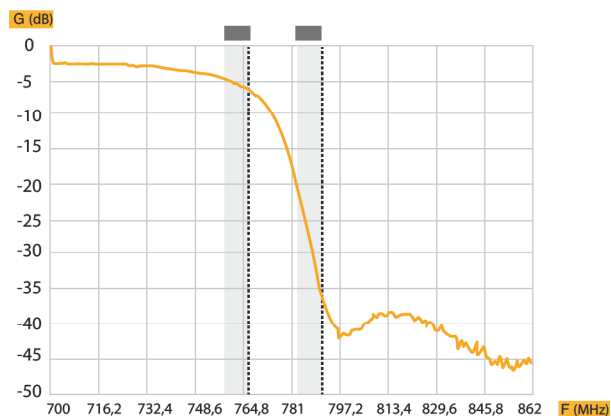


403401

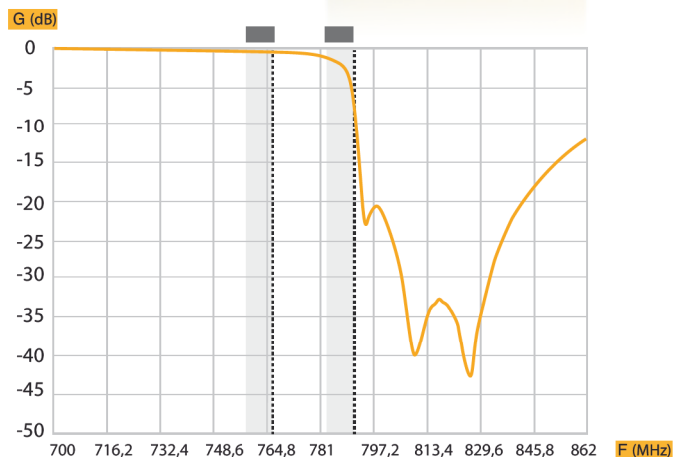
403101

REF	FILTERS	Pass band (MHz)	Rejected band (MHz)	Pass band attenuation (dB)	Rejected band attenuation (dB)
405101	LTE57 11/10 EasyF C21-57	470 - 766	791 - 862	<3 (7@766MHz)	>25
403101	LTE57 11/10 F C21-57				
405401	LTE60 11/10 EasyF 5-790	5 - 790	793 - 821	<1 (5@790MHz)	>20
403401	LTE60 11/10 F 5 - 790				
403301	CAVITIES 11/10 F 5 - 790			<0,5 (2@790MHz)	

The quality in the filter's response can only be appreciated with graphs as the ones below, where the performance of the filter in the high UHF channels can be seen in detail.



**C57 LTE filter** rejects signals from 766MHz onwards. Specifically recommended for DTT installations with multiplex below channel 57.



**C60 LTE filter** rejects signals from 782MHz onwards. Specifically recommended for DTT installations with multiplex channels 58, 59 or 60.

### The filters for LTE can be designed using different technologies:

■ **LC.** Using discrete components (L, C) important rejection to the interference band could be achieved but it will increase the insertion losses in the DTT band. Its use could lead to having to readjust the amplifiers in the system.

■ **Ceramic resonators.** The ceramic resonating filters resolve the problems with the insertion losses of the LC filters. If the resonators are not of high quality, variations in temperature will cause variations in the rejection and insertion losses in the DTT channels near LTE (canales 59 y 60).

■ **SAW Filters.** The surface wave filtering (SAW) achieves high rejection in small frequency intervals. It generates high insertion losses and why they need to be combined with an amplifier, which complicates its design and increases its cost.

■ **Cavity filters.** They are formed by three coupled transmission lines, which are located resonant metal cavities. They achieve optimum rejection characteristics (25-30 dB and even more), whilst maintaining minimum insertion losses (< 1 dB in the DTT band with 2 dB typical in the high UHF channels 59, 60).



### EASY F OUTDOORS

The most reliable and quick connection

**Reduces the installation time by 50%**

✓ **Built-in system**

You will never require extra connectors



405101

405401