



FCC Class II Permissive Change Request

08/28/07

August 28, 2007

Federal Communications Commission
Equipment Approval Services
P.O. Box 358315
Pittsburgh, PA 15251-5315

RE: CHPULT-1K10K2

Dear Technical Reviewer,

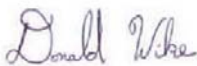
Pursuant to FCC Section 2.1043, please accept this letter as a change request to the grant dated 10/12/2006 for the above mentioned equipment.

Thomson Broadcast and Multimedia Inc. previously submitted data to certify its UHF digital transmitter to FCC CFR Title 47, part 27. We would now like to submit data that will amend our current certification to permit use of a second source for the output channel filter. This filter is used at the transmitter's output to ensure spectral occupancy mask compliance. Our current product is certified using a 12-section cavity filter from Dielectric Communications Inc. To enable better control over lead-time and component availability we additionally want to certify the product with a similar 12 section filter design by Electronic Research Inc. (alternate source). Upon receiving the commissions acceptance of this change Thomson could then supply this transmitter system using a filter from either manufacturer.

Test results show that using the ERI filter provides sufficient margin in relation to the spectral occupancy / spectral mask requirements as outlined under part 27.53. The new data pertaining to the use of the ERI filter is enclosed with this letter. Please refer to form 731; confirmation# EA661911 for all other pertinent information.

If you require more information to complete the ammendment of this product, to allow use of a second source output filter, please let me know.

Thank you,



Donald Wike
Manager, LP Product Development

FCC Sections 2.1043 (a) (b)(2)(4), 2.932 (b) (c) (d), 27.53

Test data:

The attached plot exhibits both filter responses overlaid for direct comparison. The trace in **red** shows the response of the filter used with the original certification(Dielectric), the trace in **blue** shows the response of the proposed alternate source(ERI).

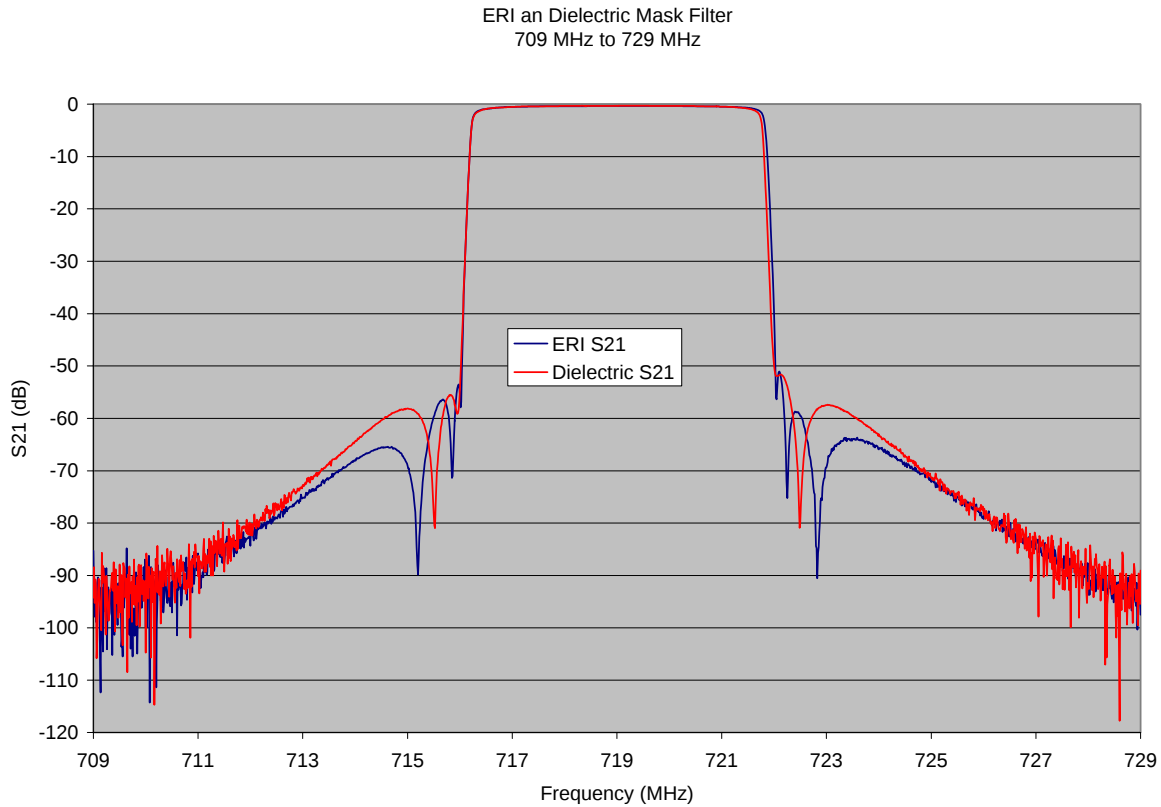


Figure 1 Comparison response data indicates the differences from the original filter submission

Photographs of the two different RF filter assemblies. The original item used for the transmitter as currently certified is shown first.



Figure 2 Photo of Dielectric 12-section filter assembly (original source)

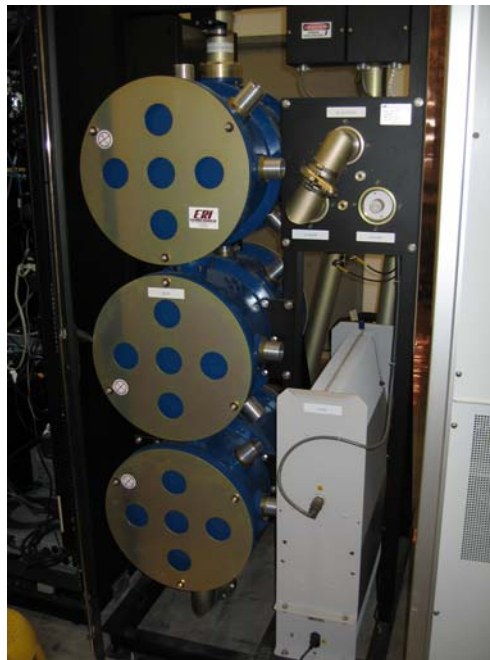


Figure 3 Photo of ERI 12-section filter assembly (alternate source)

The method used to demonstrate compliance to FCC part 27.53 , is outlined in detail within Thomson's original type certification test report; document number 35-0008. For simplicity this submittal will focus on direct comparison of the final results, obtained using the prescribed method, for each filter case.

FCC part 27.53- Emissions limits defined:

5200W transmitter:

$43 + 10 \log (5200) = 80.160$ dB suppression required

1. Results using the Dielectric 12 section filter (included in original certification)

Lower side rejection ratio – FCC limit = low side margin
 $109.76 \text{ dB} - 80.16 \text{ dB} = 29.60 \text{ dB}$

Upper side rejection ratio – FCC limit = high side margin
 $113.75 \text{ dB} - 80.16 \text{ dB} = 33.59 \text{ dB}$

2. Results using the ERI 12 section filter (alternate source)

Lower side rejection ratio – FCC limit = low side margin
 $113.41 \text{ dB} - 80.16 \text{ dB} = 33.25 \text{ dB}$

Upper side rejection ratio – FCC limit = high side margin
 $109.90 \text{ dB} - 80.16 \text{ dB} = 29.74 \text{ dB}$

Conclusion:

The use of either the Dielectric filter or ERI filter results in margins greater than 29dB, sufficient for compliance with FCC out of band emissions limits. This ample margin ensures long term stability and conformity despite normal manufacturing variation.