

PRACTICAL 601 FILTERS

YUV ANTIALISING

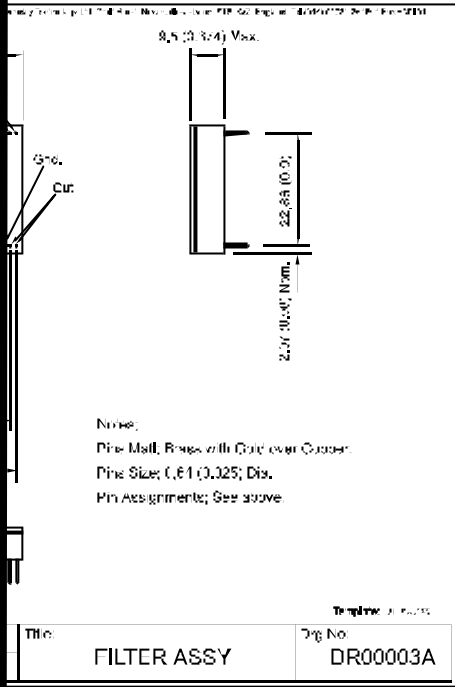
In many 4:2:2 YUV format A-D and D-A video interface applications operating at standard sampling rates of 13.5 MHz for the luminance (Y) channel and 6.75 MHz for the Colour Difference (U and V) channels a filter meeting the full requirements of Rec. ITU-R BT. 601-5 should be specified but cost may be prohibitive. Practical 601 filters allow a small compromise in performance resulting in significant cost savings which may be acceptable.

- Choice of package format to suit requirement
- Flat and Sinx/x versions
- Tight passband ripple specification
- Aqueously washable versions available

Filter type	Luminance Pre	Luminance Post	Chrominance Pre	Chrominance Post
Passband Shape	Flat	Sinx/x	Flat	Sinx/x
Impedance (ohms)	75	75	75	75
Sampling Frequency	13.50 MHz	13.50 MHz	6.75 MHz	6.75 MHz
Insertion loss at 100 kHz	< 1.5 dB	< 4.5 dB	< 1.5 dB	< 4.5 dB
End of Passband	5.50 MHz	5.50 MHz	2.20 MHz	2.2 MHz
Amplitude ripple (dB) wrt 100 kHz	< 0.05 to 5.25 MHz < 0.10 to 5.50 MHz	< 0.05 ¹ to 5.25 MHz < 0.10 ¹ to 5.50 MHz	<± 0.050 to 2.20 MHz	<± 0.050 ² to 2.20 MHz
Delay time at 200 kHz	550 ± 5 ns	556 ± 5 ns	1051 ± 5 ns	1060 ± 7 ns
Group delay ripple wrt delay at 200 kHz	< 6 ns to 5.50 MHz	< 6 ns to 5.50 MHz	<± 6 ns to 2.20 MHz <± 12 ns to 2.40 MHz	<± 6 ns to 2.20 MHz <± 12 ns to 2.40 MHz
Attenuation at 1/2 S.F. wrt loss at 100 kHz	> 12 dB	> 12 dB ¹	> 6 dB	> 6 dB ²
Start of stopband	8.00 MHz	8.00 MHz	4.00 MHz	4.00 MHz
Stopband attenuation wrt loss at end of passband	> 40 dB	> 40 dB	> 40 dB	> 40 dB
Type number DR00024B package	FL594	FL595	FL596	FL597
Type number DR00003A package	FL400	FL470	FL423	FL471

¹Measured against sinx/x roll-off for a sampling frequency of 13.5 MHz.

²Measured against sinx/x roll-off for a sampling frequency of 6.75 MHz.



20.32 (3/4) Max.

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