

Multimedia Reconstruction Filters

FL476 / FL477 Low Cost

These filters are designed to be used with Half-band Interpolating/Decimating digital filters, for example the TRW TMC2242, or with devices employing an output D/A which incorporates digital filters such as the TRW Digital Video Encoder TMC22190.

The digital filters have good attenuation between the frequencies of $F_s/4$ and $3F_s/4$ where F_s is the PXCK (Master clock) rate and, combined with double speed oversampling, this simplifies the specification for the analogue reconstruction and antialiasing pre filters as when the normal PXCK rate of 27 MHz is used there is little signal energy between 6.75 MHz and 20.25 MHz.

To reconstruct the analogue signal an additional filter is required to attenuate the clock frequency and its sidebands.

To preserve the integrity of the signal the analogue filter must have a passband similar to the requirement of CCIR rec 601 but it does not need significant attenuation below 21 MHz.

An additional feature in the Faraday filters is a zero at 27 MHz to maximise suppression at the PXCK rate. Sinx/x correction may be added by grounding one pin in the device.

PACKAGE DETAIL

	FL476	FL477
	<i>Through hole connections</i>	<i>Surface mount</i>
<i>Filter Shape</i>	Lowpass	Lowpass
<i>Sinx/x correction</i>	Pin selectable	Pin selectable
<i>Sampling Frequency</i>	27 MHz	27 MHz
<i>End Of Passband</i>	5.75 MHz	5.75 MHz
<i>Passband Amplitude Ripple</i>	<i>to 5.5 MHz</i> < 0.05 dB <i>to 5.75 MHz</i> < 0.1 dB	< 0.05 dB < 0.1 dB
<i>Start Of Stopband</i>	21.5 MHz	21.5 MHz
<i>Stopband Attenuation</i> wrt 100 kHz	> 40 dB	> 40 dB
<i>Group Delay Ripple</i>	< 6 ns	< 6 ns
<i>Group Delay Bandwidth</i>	5.75 MHz	5.75 MHz
<i>Delay Time at 200 kHz</i>	<i>Flat mode</i> 58 ns nominal <i>Sinx/x mode</i> 55 ns nominal	58 ns nominal 55 ns nominal
<i>Impedance</i>	75 ohms	75 ohms
<i>Temperature Range</i>	0°C to 70°C	0°C to 70°C
<i>Aqueous Washable</i>	Yes	Yes
<i>SMD Reflow Limitations as Data Sheet:</i>	n/a	Fara309
<i>Package</i>	DR00030A	DR00055A

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PACKAGE DETAIL

