

# RFR SERIES

## ANTI\_ALIASING FILTERS

These filters are designed especially for use in systems where composite video signals are digitised. A sampling frequency of four times the colour subcarrier frequency is normally used as with D2 systems. The filters have a bandwidth of 5.5 MHz for 625 line systems, a stopband attenuation of 50 dB after 11.75 MHz and a zero at the sampling rate of 17.72 MHz. The attenuation at the sampling frequency is approximately 80 dB so minimising aliasing effects. The relatively slow roll-off and controlled group delay over the whole of the passband minimises time domain ringing ensuring the system has an excellent performance. Flat (pre filter) and  $\sin x/x$  (post filter) versions are available. The module is 40 pin DIL suitable for direct mounting in a pcb. Ground pins should be taken to separate earth points to maintain transmission line characteristics if the full stopband performance is required.

<i>Type Number</i>	<b>RFR1772F</b>	<b>RFR1772S</b>
<i>Filter Shape</i>	Lowpass	Lowpass
<i>Passband Shape</i>	Flat	$\sin x/x$
<i>Sampling Frequency</i>	17.72 MHz	17.72 MHz
<i>Attenuation at S.F. wrt 100 kHz</i>	> 70 dB	> 70 dB
<i>Insertion Loss at 100 kHz</i>	< 0.8 dB	< 2.5 dB
<i>End Of Passband</i>	5.5 MHz	5.5 MHz
<i>Passband Ripple wrt 100 kHz</i>	$\pm 0.10$ dB	$\pm 0.15$ dB
<i>Loss at half S.F. wrt 100 kHz</i>	18.0 dB	16.5 dB
<i>Start Of Stopband</i>	11.75 MHz	11.75 MHz
<i>Stopband Attenuation</i>	> 50 dB	> 50 dB
<i>Group Delay Ripple wrt 200 kHz</i>	$\pm 5.0$ ns	$\pm 5.0$ ns
<i>Group Delay Bandwidth</i>	5.5 MHz	5.0 MHz
<i>Delay Time at 200 kHz</i>	250 ns nom	240 ns nom
<i>Pulse And Bar K - Rating</i>	< 0.5 %	< 0.5 %
<i>Luminance / Chrominance Gain</i>	< 2 %	n/a
<i>Luminance / Chrominance Delay</i>	< 5 ns	< 5 ns
<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>Package Type</i>	DR00020B	DR00020B

# PACKAGE DETAIL

