VIDEO OVERSAMPLING SMD FILTERS

RA SERIES

- Reflowable
- Surface mount compatibility
- Flat or Sinx/x versions
- Washable
- Small size, low cost
- Luminance and Chrominance versions

With reduced analogue filter costs resulting from oversampling techniques, there is an increased need for manufacturing facilities to avoid the large production costs associated with the presently available through hole packages. The Faraday RA range of oversampling filters can be used in surface mount assembly lines allowing vacuum pick up and reflow (see Page 2).
This range of analogue filters has been designed for use in conjunction with a half band interpolating/decimating filter such as the TRW2242 or with the many encoder chips available which employ digital filtering and an output D to A converter. This type of digital filtering has good attenuation between the frequencies of Fs/4 and 3Fs/4 where Fs is the Master Clock rate. When the normal clock rate of 27 MHz is used for the luminance channel the signal can be expected to have insignificant energy between 6.75 MHz and 20.25 MHz.
In order to preserve the integrity of the signal these filters have a good amplitude and group delay characteristics in the passband, similar to the requirements of CCIR601 but due to the above considerations do not have significant attenuation below 21 MHz.

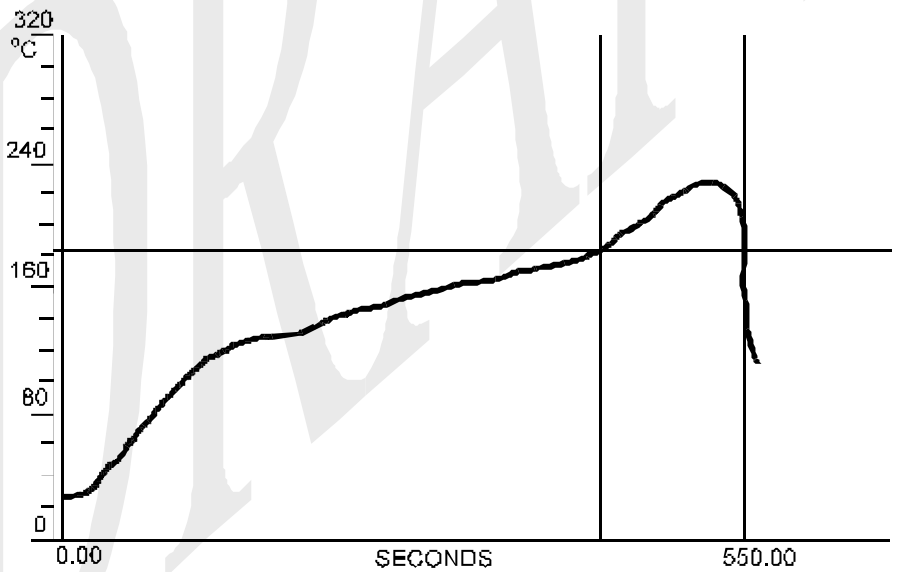
Order code:	RAYSA	RAYFA	RACSA	RACFA
Impedance	75Ω	75Ω	75Ω	75Ω
Sinx/x correction	Yes	No	Yes	No
Sampling Freq.	27.0 MHz	27.0 MHz	13.5 MHz	13.5 MHz
End of Passband	5.75 MHz	5.75 MHz	2.75 MHz	2.75 MHz
Amp. ripple	< 0.25 dB	< 0.12 dB	< 0.30 dB	< 0.12 dB
G.D. ripple	< 10 ns	< 6 ns	< 20 ns	< 12 ns
Start of stopband	21.5 MHz	21.5 MHz	10.75 MHz	10.75 MHz
Stopband atten. *wrt 100 kHz*	> 40 dB	> 40 dB	> 40 dB	> 40 dB
Delay time nom. *at 200 kHz*	27 ns	30 ns	50 ns	58 ns
Aqueous Washable	Yes	Yes	Yes	Yes
Package	DR00274A	DR00274A	DR00274A	DR00274A

The RA Series filters have been successfully tested to the following reflow profile using a five zone IR/Convection oven.

Belt speed =10in/min

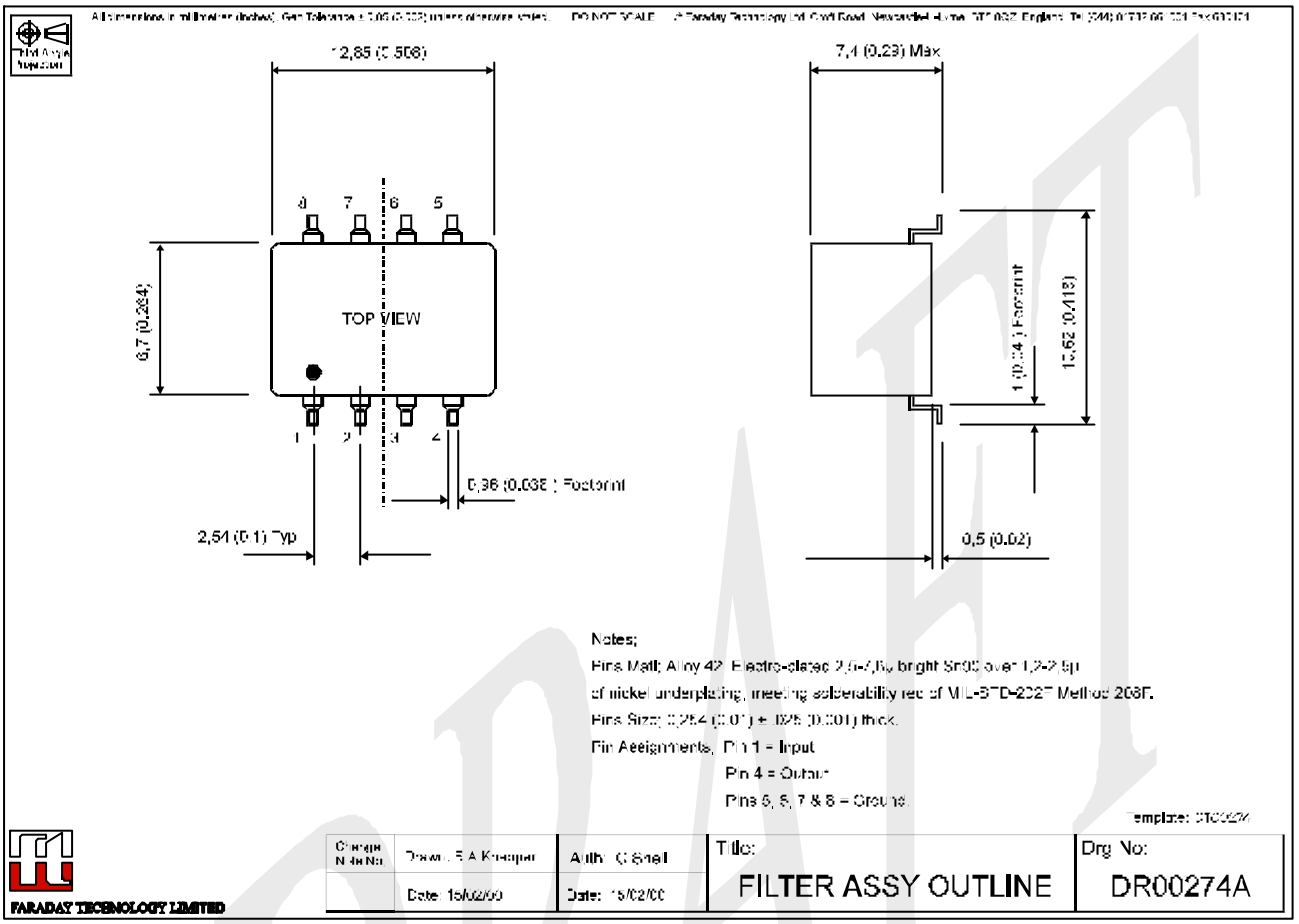
°C	P1	P2	P3	P4	RF
set	260	200	200	300	320
	260	200	200	300	320

	Surf	Systems	Reflow
temp bar = 183	■	■	■
above temp bar sec	89	0	0
max temp	224	0	0
← left bar temp	180	0	0
right bar temp →	183	0	0
avr slope °C/sec	0.0	0.0	0.0
time between bars	95.70 secs		



Note that the temperatures given are “actual” temperatures not oven settings.

PACKAGE DETAIL



Faraday Technology Ltd.
Croft Road Industrial Estate,
Newcastle, Staffordshire
ST5 0QZ. England.

Tel: + 44 (0)1782 661501
Fax: + 44 (0)1782 630101
Email: sales@faradaytech.co.uk
Web site: http://www.faradaytech.co.uk