



# HDTV ANTIALIASING FILTERS

## ZERO LOSS

- Zero Insertion loss
- Low output impedance via op-amp driver stage
- Integer multiple clock delay between luminance and chrominance filters
- Fully compliant to SMPTE 260M
- pin DIP package

Meeting all the pre and post filtering characteristics of SMPTE 260M this range of HDTV antialiasing filters include a video buffer to give 0dB insertion loss. This more complete and accurate solution removes some of the ambiguity of optimising buffers and filters separately particularly illustrated at the high bandwidths required for HDTV applications.

<i>Part number</i>	<b>AH1175</b>	<b>AH1176</b>
<i>Filter type</i>	Luminance Pre	Luminance Post
<i>Input Impedance</i>	75 ohms	75 ohms
<i>Insertion loss at 100 kHz</i>	0 dB $\pm$ 0.05 dB	0 dB $\pm$ 0.05 dB
<i>End of passband</i>	30 MHz	30 MHz
<i>Passband amplitude ripple</i>	< 0.1 dB	< 0.1 dB <sup>1</sup>
<i>Group delay ripple</i>	< 2 ns to 20 MHz < 3 ns to 30 MHz	< 2 ns to 20 MHz < 3 ns to 30 MHz
<i>Delay time at 200 kHz</i>	112 ns $\pm$ 2 ns	112 ns $\pm$ 2 ns
<i>Attenuation at 37.125 MHz wrt 100 kHz <sup>1</sup></i>	> 12 dB	> 12 dB
<i>Attenuation at 44.25 MHz wrt 100 kHz</i>	> 40 dB	> 40 dB
<i>Start of stopband</i>	54.25 MHz	54.25 MHz
<i>Stopband attenuation wrt 100 kHz</i>	> 50 dB to 150 MHz	> 50 dB to 150 MHz
<i>Supply voltage</i>	$\pm$ 5 volts	$\pm$ 5 volts
<i>Typical current</i>	5 mA per rail	5 mA per rail
<i>Aqueous Washable</i>	No	No
<i>Package</i>	DR00161A	DR00161A
<i>Part number</i>	<b>AH1177</b>	<b>AH1178</b>
<i>Filter type</i>	Chrominance Pre	Chrominance Post
<i>Input impedance</i>	75 ohms	75 ohms
<i>Insertion loss at 100 kHz</i>	0 dB $\pm$ 0.05 dB	0 dB $\pm$ 0.05 dB
<i>End of passband</i>	15 MHz	15 MHz
<i>Passband amplitude ripple</i>	< 0.1 dB	< 0.1 dB <sup>2</sup>
<i>Group delay ripple</i>	< 2 ns to 10 MHz < 3 ns to 15 MHz	< 2 ns to 10 MHz < 3 ns to 15 MHz
<i>Delay time at 200 kHz</i>	220 ns $\pm$ 3 ns	215 ns $\pm$ 3 ns
<i>Attenuation at 18.5625 MHz wrt 100 kHz <sup>2</sup></i>	> 12 dB	> 12 dB
<i>Attenuation at 22.125 MHz wrt 100 kHz</i>	> 40 dB	> 40 dB
<i>Start of stopband</i>	27.125 MHz	27.125 MHz
<i>Stopband attenuation wrt 100 kHz</i>	> 50 dB to 100 MHz	> 50 dB to 100 MHz
<i>Supply voltage</i>	$\pm$ 5 volts	$\pm$ 5 volts
<i>Typical current</i>	5 mA per rail	5 mA per rail
<i>Aqueous Washable</i>	No	No
<i>Package</i>	DR00161A	DR00161A

<sup>1</sup> Includes Sinx/x correction for a Sampling Frequency of 74.25 MHz.

# PACKAGE DETAIL

---

<sup>2</sup> Includes Sinx/x correction for a Sampling Frequency of 37.125 MHz.

# PACKAGE DETAIL

