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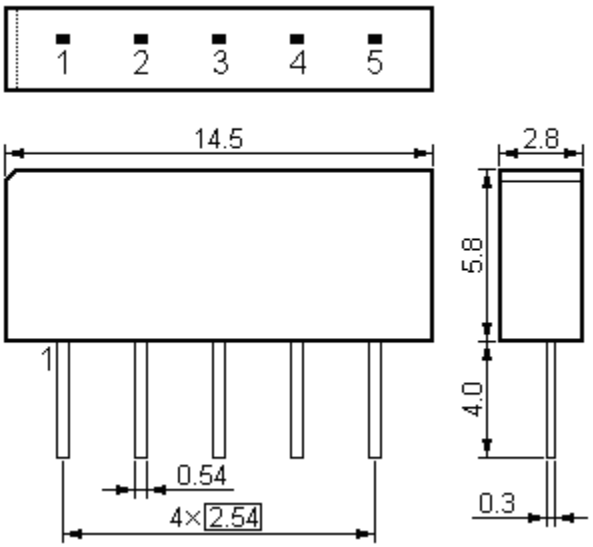
Bandpass Filter for Digital Terrestrial TV Applications 36.17 MHz

ACTX2748D/36.17/SIP5D

Features

- IF filter for digital TV
- Switchable between two bandwidths
- Optimised for cascade of two devices
- Plastic Package

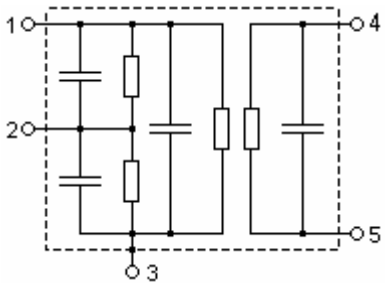
Package Dimension



Pin Configuration

1	Input
2	Switching Input
3	Chip carrier - ground
4	Output
5	Output

Plastic Package **SIP5D**
Unit: mm



In keeping with our ongoing policy of product evolvement and improvement, the above specification is subject to change without notice.

ISO9001: 2000 Registered - Registration number 6830/2

For quotations or further information please contact us at:

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Issue : 1 C1
Date : SEPT 04

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Performance

Maximum Ratings

Rating		Value	Unit
Operable Temperature Range	T_A	-25 to +65	°C
Storage Temperature Range	T_{stg}	-40 to +85	°C
DC Voltage (between any terminals)	V_{DC}	5	V
AC Voltage (between any terminals)	V_{PP}	10	V

Characteristics of channel 1 (switching pin 2 connected to ground)

Reference temperature: T_A = 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

Item			min.	typ.	max.	Unit
Insertion attenuation		*IL*				
Reference level for the following data	36.17	MHz	19.5	21.0	22.5	dB
Pass bandwidth						
α_{rel} ≤ 1.5 dB		$BW_{1.5}$	7.2	7.5	7.8	MHz
α_{rel} ≤ 3 dB		BW_3	7.7	8.0	8.3	MHz
α_{rel} ≤ 15 dB		BW_{15}	8.6	8.9	9.2	MHz
α_{rel} ≤ 30 dB		BW_{30}	8.8	9.4	10.0	MHz
Relative attenuation		α_{rel}				
Lower sidelobe	25.00 ... 31.15	MHz	28.0	34.0	—	dB
Upper sidelobe	41.15 ... 42.00	MHz	27.0	33.0	—	dB
	42.00 ... 45.00	MHz	24.0	30.0	—	dB
Reflected wave signal suppression						
1.1 µs ... 6.0 µs after main pulse (test pulse 250 ns, carrier frequency 36.17 MHz)			42.0	50.0	—	dB
Feed-through signal suppression						
1.3 µs ... 1.2 µs before main pulse (test pulse 250 ns, carrier frequency 36.17 MHz)			—	50.0	—	dB
Group delay ripple (p-p)		Δt				
	32.25 ... 40.05	MHz	—	50	—	ns
Temperature coefficient of frequency		TC_f	—	–72	—	ppm/K

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Advanced crystal technology

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Characteristics of channel 2 (switching pin 2 connected to pin 1)

Reference temperature: T_A = 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

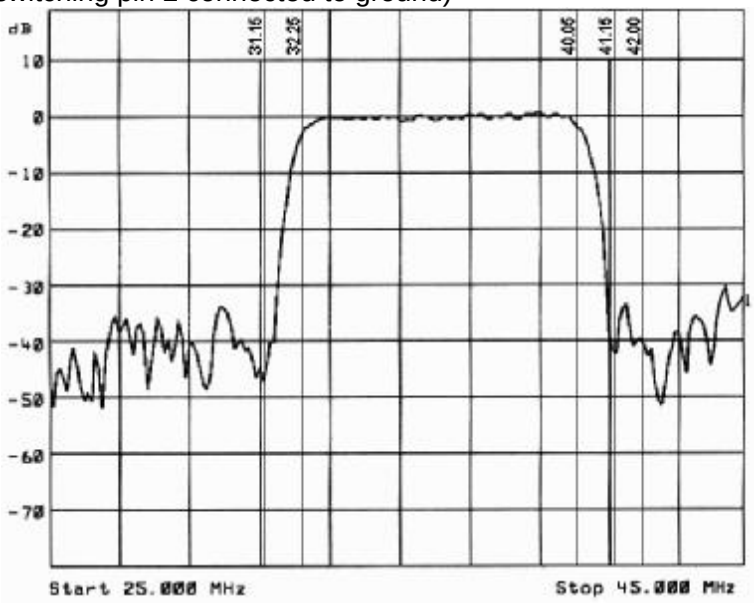
Item			min.	typ.	max.	Unit
Insertion attenuation		*IL*				
Reference level for the following data	36.17 MHz		19.5	21.0	22.5	dB
Pass bandwidth						
α_{rel} ≤ 1.5 dB		$BW_{1.5}$	6.4	6.7	7.0	MHz
α_{rel} ≤ 3 dB		BW_3	6.7	7.0	7.3	MHz
α_{rel} ≤ 15 dB		BW_{15}	7.7	8.0	8.3	MHz
α_{rel} ≤ 30 dB		BW_{30}	7.9	8.5	9.1	MHz
Relative attenuation		α_{rel}				
Lower sidelobe	25.00 ... 31.55 MHz		28.0	34.0	—	dB
Upper sidelobe	40.75 ... 45.00 MHz		27.0	32.0	—	dB
Reflected wave signal suppression 1.1 µs ... 6.0 µs after main pulse (test pulse 250 ns, carrier frequency 36.17 MHz)			42.0	50.0	—	dB
Feed-through signal suppression 1.3 µs ... 1.2 µs before main pulse (test pulse 250 ns, carrier frequency 36.17 MHz)			—	50.0	—	dB
Group delay ripple (p-p)		Δt				
	32.75 ... 39.55 MHz		—	50	—	ns
Temperature coefficient of frequency		TC_f	—	–72	—	ppm/K

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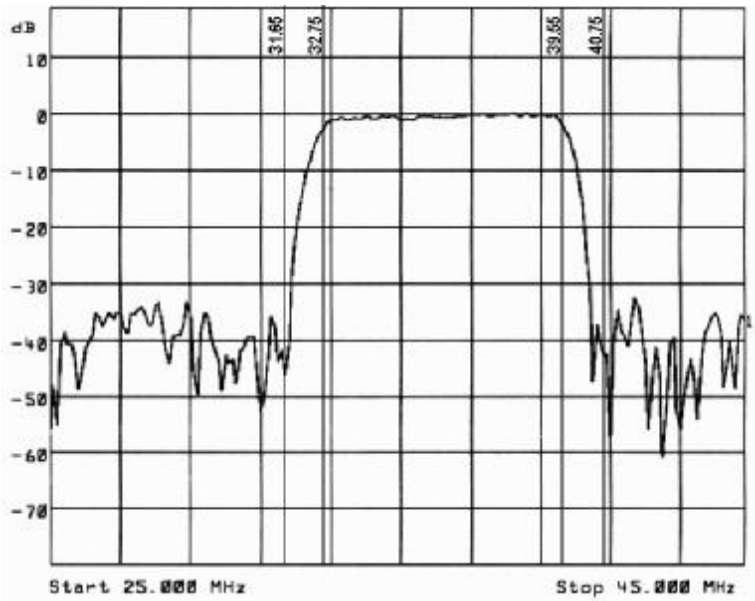
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Frequency Response

Channel 1 (switching pin 2 connected to ground)



Channel 2 (switching pin 2 connected to pin 1)



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!

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