

**Bandpass Filter for Digital Terrestrial TV Applications**

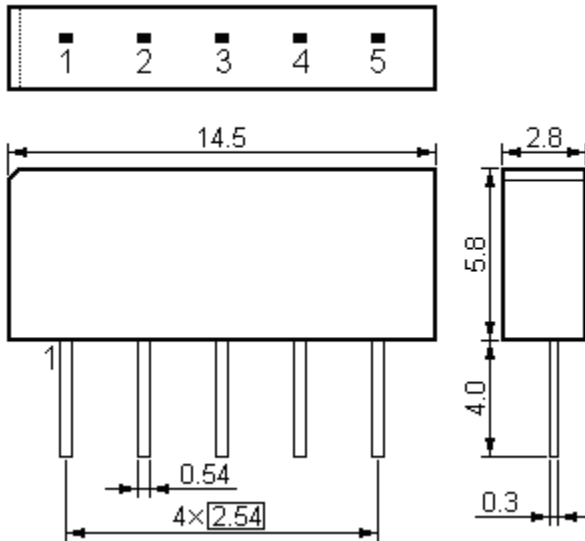
**36.00 MHz**

**ACTX3142D/36.0/SIP5D**

**Features**

- n IF filter for digital TV
- n Optimised for cascade of two devices
- n Plastic Package

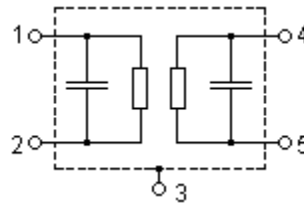
**Package Dimension**



**Pin Configuration**

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

Plastic Package **SIP5D**  
 Unit: mm



**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)	$V_{DC}$	12	V
AC Voltage (between any terminals)	$V_{PP}$	10	V

In keeping with our ongoing policy of product evolution 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:**

**3 The Business Centre, Molly Millars Lane, Wokingham, Berks, RG41 2EY, UK**

<http://www.actcrystals.com>

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Electronic Characteristics

Reference temperature:  $T_A = 25\text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 2\ \text{k}\Omega \parallel 3\ \text{pF}$

Item		min.	typ.	max.	Unit
<b>Insertion attenuation</b>	$IL$				
Reference level for the following data	36.00 MHz	19.0	20.5	22.0	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
	32.35 ... 39.65 MHz	—	0.7	—	dB
<b>Pass bandwidth</b>					
$\alpha_{rel} \leq 1.5\ \text{dB}$	$BW_{1.5}$	—	7.7	—	MHz
$\alpha_{rel} \leq 3\ \text{dB}$	$BW_{3\text{dB}}$	—	8.0	—	MHz
$\alpha_{rel} \leq 15\ \text{dB}$	$BW_{15\text{dB}}$	—	8.9	—	MHz
$\alpha_{rel} \leq 30\ \text{dB}$	$BW_{30\text{dB}}$	—	9.4	—	MHz
<b>Relative attenuation</b>	$\alpha_{rel}$				
	31.65 MHz	8.0	12.0	—	dB
	40.35 MHz	6.0	9.0	—	dB
	31.30 MHz	22.0	32.0	—	dB
	40.70 MHz	20.0	27.0	—	dB
Lower sidelobe	25.00 ... 31.00 MHz	35.0	40.0	—	dB
Upper sidelobe	41.00 ... 45.00 MHz	32.0	38.0	—	dB
<b>Reflected wave signal suppression</b>					
1.0 $\mu\text{s}$ ... 6.0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 36.00 MHz)		42.0	52.0	—	dB
<b>Feed-through signal suppression</b>					
1.3 $\mu\text{s}$ ... 1.2 $\mu\text{s}$ before main pulse (test pulse 250 ns, carrier frequency 36.00 MHz)		—	50.0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta t$				
	32.35 ... 39.65 MHz	—	50	—	ns
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K

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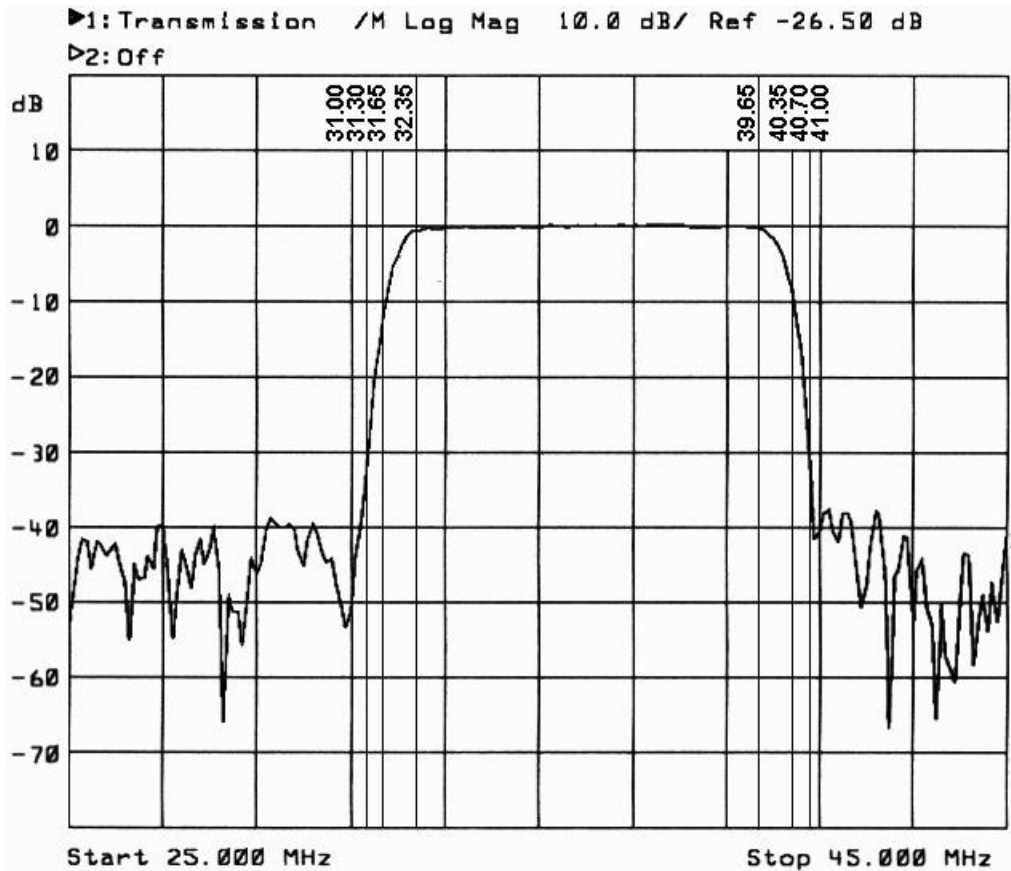
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### Frequency Response



**i CAUTION: Electrostatic Sensitive Device. Observe precautions for handling!**

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