
SAW Bandpass Filter (for Digital Cable TV)

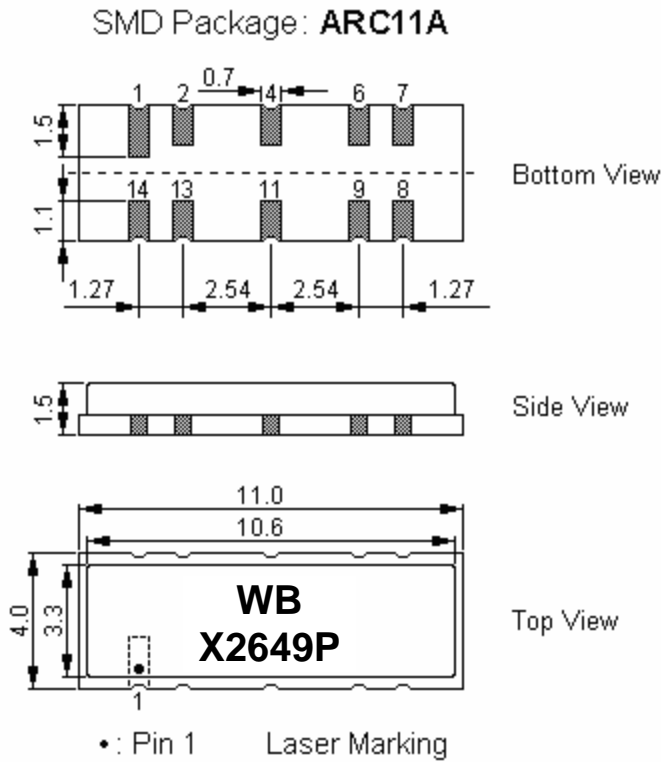
P/N: WBX2649P

Worldbond piezo-electric corp.
Website: www.worldbond.com
e-mail: sales@worldbond.com

Features

- IF filter for Digital Cable TV
- Surface Mounted Technology (SMT)

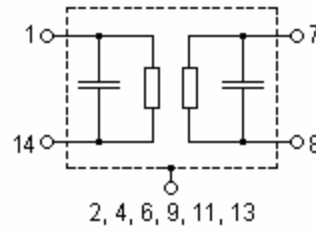
(1) Package dimension



(2) Pin configuration

1	Input
14	Input - ground
4, 9, 11, 13	Case - ground
2, 6	Ground
7	Output
8	Output

Unit: mm



(3) Performance

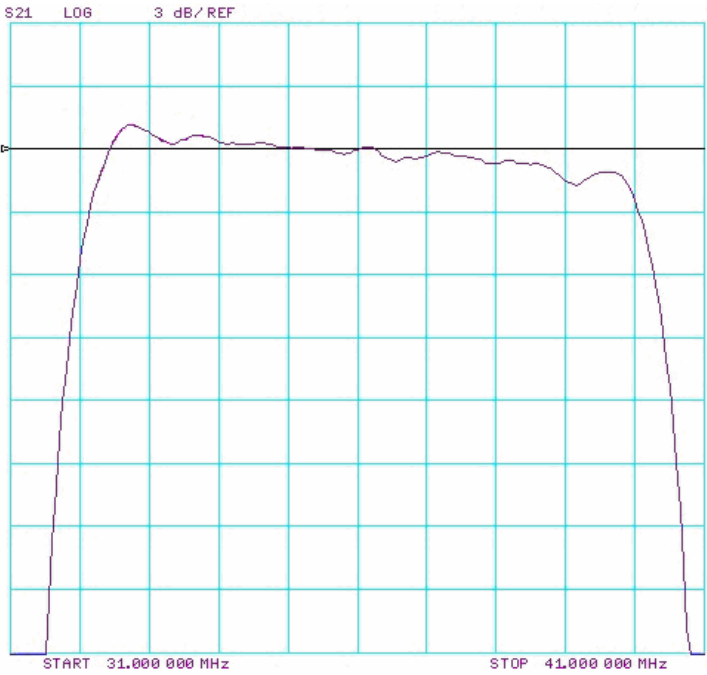
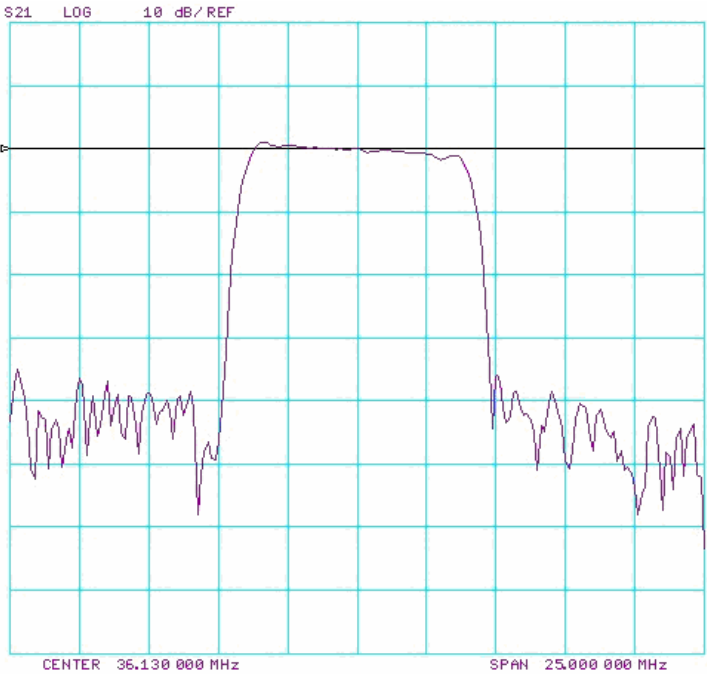
(3-1) Maximum ratings

Rating		Value	Unit
Operating temperature range	T_A	-25 to +65	°C
Storage temperature range	T_{stg}	-40 to +85	°C
DC voltage (between any terminals)	V_{DC}	0	V
AC voltage (between any terminals)	V_{PP}	10	V

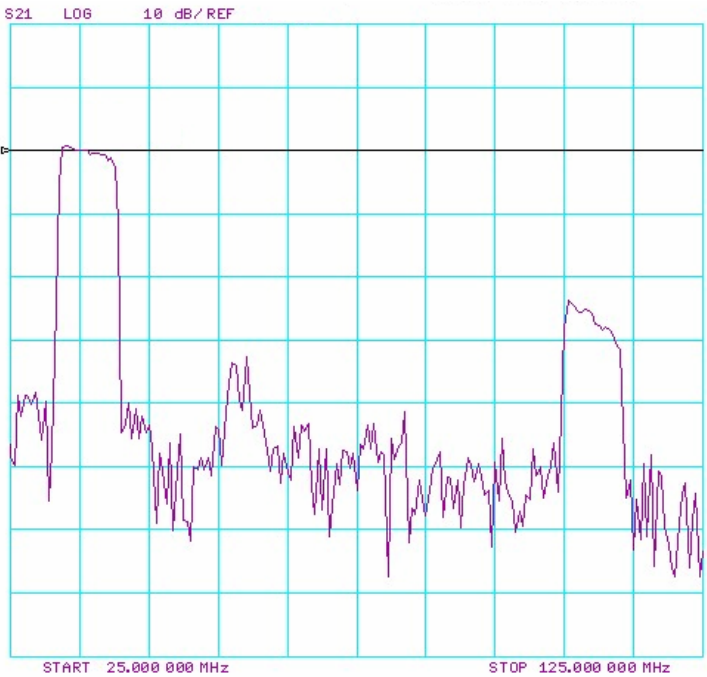
- (3-2) Electrical characteristics
Reference temperature: $T_A = 25(45)^\circ\text{C}$
Terminating source impedance: $Z_S = 50\Omega$
Terminating load impedance: $Z_L = 2\text{K}\Omega \parallel 3\text{pF}$

Item		Min.	Typ.	Max.	Unit
Center frequency (Center between 10 dB points)	f_C		36.125		MHz
Insertion attenuation Reference level for the following data 36.13 MHz	IL	19.5	20.5	22.5	dB
Pass bandwidth					
$\alpha_{rel} \leq 1$ dB	$BW_{1\text{dB}}$	-	7.4	-	MHz
$\alpha_{rel} \leq 3$ dB	$BW_{3\text{dB}}$	-	7.8	-	MHz
$\alpha_{rel} \leq 30$ dB	$BW_{30\text{dB}}$	-	9.8	-	MHz
Relative attenuation					
32.32 MHz	α_{rel}	-	1.5	-	dB
39.94 MHz		0.5	2.0	2.5	dB
32.13 MHz		2.5	3.5	4.5	dB
40.13 MHz		2.1	3.7	4.3	dB
31.25 MHz		28.0	36.0	-	dB
47.25 MHz		37.0	45.0	-	dB
Lower sidelobe					
25.00 ... 30.15 MHz	-	30.0	36.0	-	dB
30.15 ... 31.25 MHz	-	28.0	45.0	-	dB
Upper sidelobe					
41.30 ... 42.00 MHz	-	30.0	37.0	-	dB
42.00 ... 50.00 MHz	-	33.0	39.0	-	dB
Reflected wave signal suppression 1.1 μs ... 6.0 μs after main pulse (test pulse 250 ns, carrier frequency 36.13MHz)	-	40.0	52.0	-	dB
Feedthrough signal suppression 1.2 μs ... 1.1 μs before main pulse (test pulse 250 ns, carrier frequency 36.13MHz)	-	-	48.0	-	dB
Group delay ripple (p-p) 32.13 ... 40.13 MHz	$\Delta\tau$	-	40.0	-	ns
Impedance at 36.13MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	-	-	3.5 12.5	-	$\text{K}\Omega \parallel \text{pF}$
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	-	-	4.0 3.3	-	$\text{K}\Omega \parallel \text{pF}$
Temperature coefficient of frequency	TC_f	-	-72	-	ppm/K

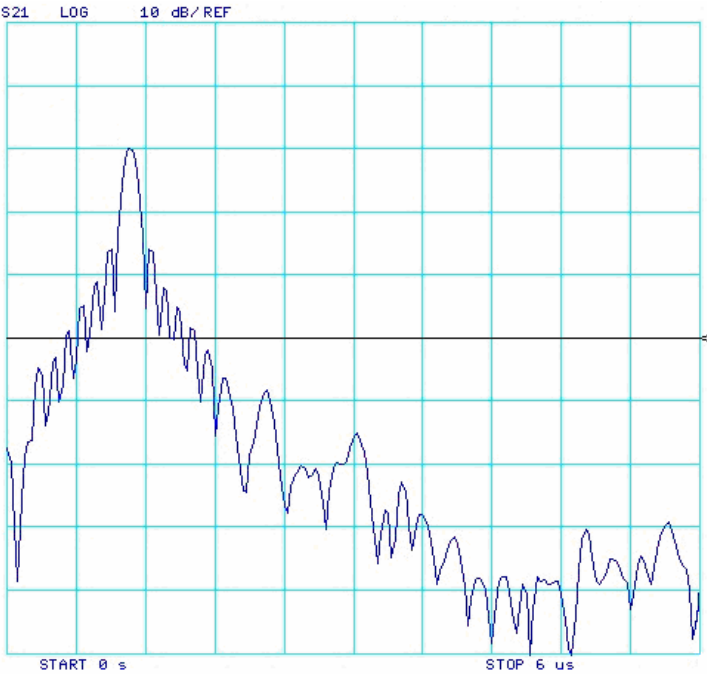
(4) Frequency response



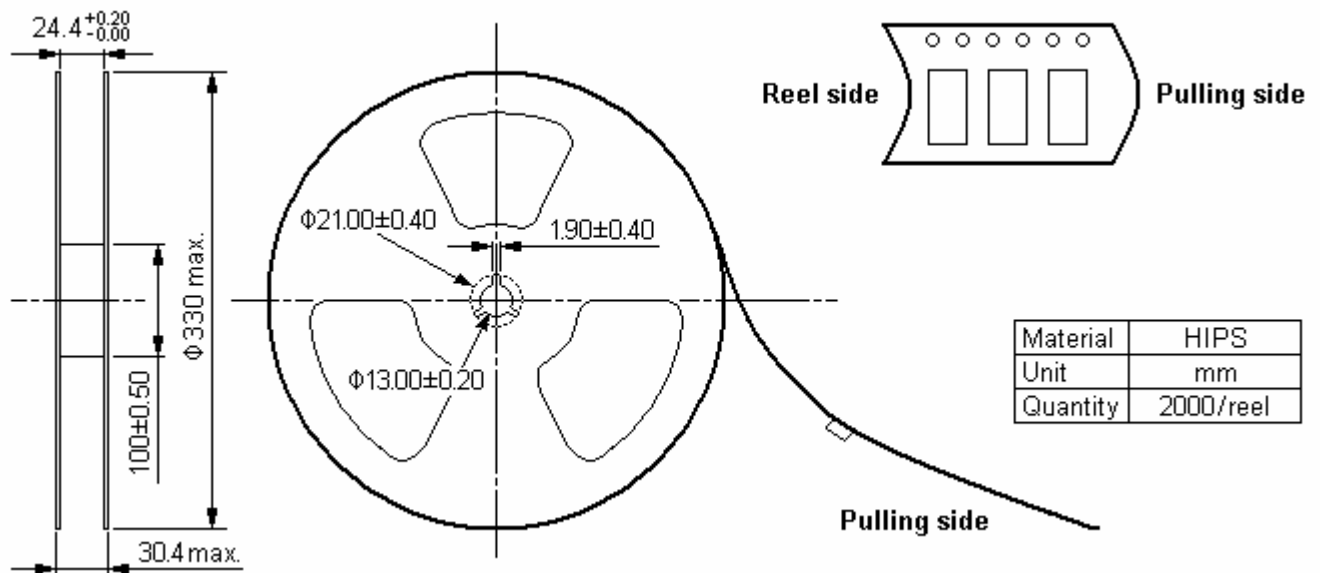
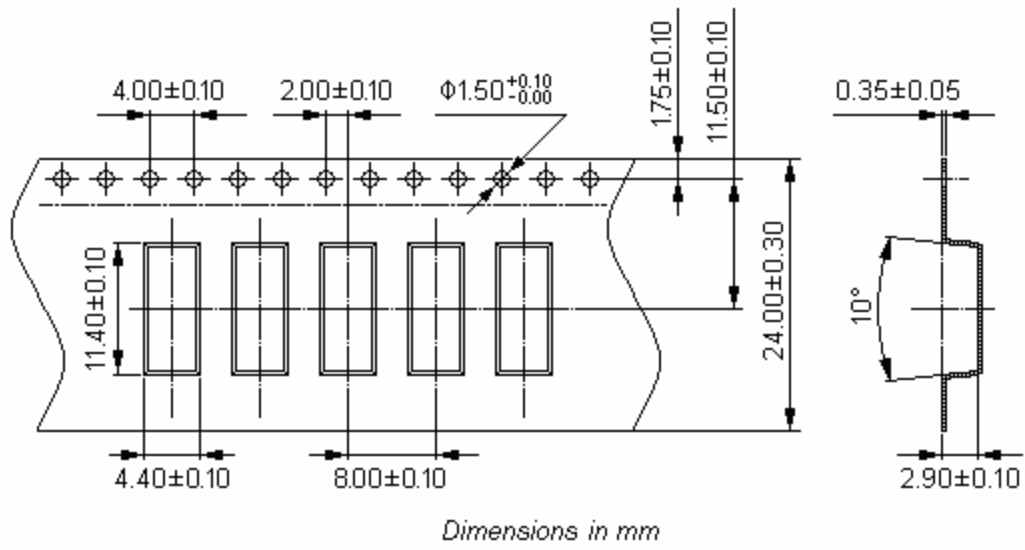
(4) Frequency response (continue)



(5) Time domain response



(6) Packing dimension (tape & reel)



(7) Reflow soldering temperature profile

