



SAW Components

Data Sheet B3606

Data Sheet

A large, stylized, 3D graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit board. The overall effect is a sense of depth and modernity.



SAW Components

B3606

Low-Loss Filter

140,00 MHz

Data Sheet

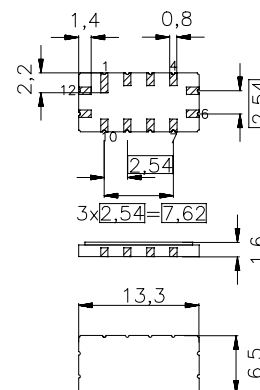
Ceramic package QCC 12

Features

- High performance IF bandpass filter
- Constant group delay
- Hermetically sealed ceramic package

Terminals

- Gold plated

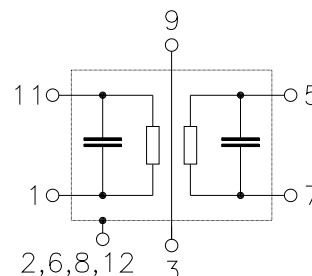


Dimensions in mm, approx. weight 0,4 g

Pin configuration

11	Input or balanced input
1	Input - ground or balanced input
5	Output or balanced output
7	Output - ground or bal. output
2, 6, 8, 12	Case ground
3, 4, 9, 10	Ground

Note: Input and output port can be mixed up



Type	Ordering code	Marking and Package according to	Packing according to
B3606	B39141-B3606-Z510	C61157-A7-A55	F61074-V8026-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40/+ 85	°C	source impedance 50 Ω
Storage temperature range	T_{stg}	- 55/+ 125	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	



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Characteristics

Operating temperature: $T = -40^{\circ}\text{C} \dots 85^{\circ}\text{C}$
Terminating source impedance: $Z_S = 50 \ \Omega$ and matching circuit
Terminating load impedance: $Z_L = 50 \ \Omega$ and matching circuit
TTI=Triple transit signal included; TTE=Triple transit signal excluded

		min.	typ.	max.	
Center frequency	f_C	139,75	140,00	140,25	MHz
(Center between 6dB points; @ $T = 25^{\circ}\text{C}$)					
Insertion attenuation at f_C	α_C	—	11,0	13,0	dB
Amplitude ripple (TTI, p-p)	$\Delta\alpha$				
130,0 ... 150,0 MHz		—	0,6	0,9	dB
Pass bandwidth					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	25,5	—	MHz
Phase ripple (TTE, p-p)	$\Delta\phi$				
130,0 ... 150,0 MHz		—	8,0	9,5	$^{\circ}$
131,0 ... 149,0 MHz		—	6,0	7,0	$^{\circ}$
Relative attenuation (relative to α_C)	α_{rel}				
100,0 ... 108,0 MHz		40,0	50,0	—	dB
108,0 ... 116,0 MHz		40,0	48,0	—	dB
116,0 ... 121,5 MHz		40,0	44,0	—	dB
158,5 ... 164,0 MHz		37,0	40,0	—	dB
164,0 ... 172,0 MHz		39,0	42,0	—	dB
172,0 ... 180,0 MHz		40,0	47,0	—	dB
Reflected wave signal suppression					
0,72 μs ... 0,62 μs before main pulse		45,0	50,0	—	dB
Reflected wave signal suppression					
0,62 μs ... 2,88 μs after main pulse		33,0	37,0	—	dB
Group delay at f_C	τ_C	0,71	0,72	0,73	μs
Group delay ripple (TTE, p-p)	$\Delta\tau$				
130,0 ... 150,0 MHz		—	15,0	—	ns
Temperature coefficient of frequency	TC_f	—	- 87	—	ppm/K



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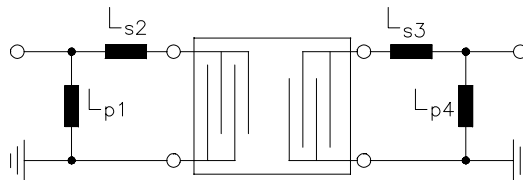
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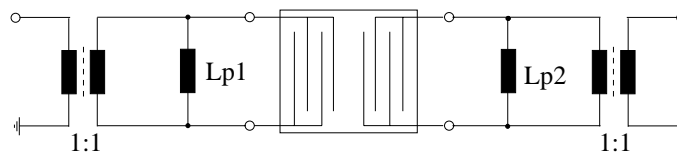
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Matching circuit: unbalanced - unbalanced



$L_{p1}=47\text{nH}$
 $L_{s2}=10\text{nH}$
 $L_{s3}=10\text{nH}$
 $L_{p4}=47\text{nH}$

Matching circuit: balanced - balanced



$L_{p1}=62\text{nH}$
 $L_{p2}=62\text{nH}$

Note: Component values depend on PCB layout.



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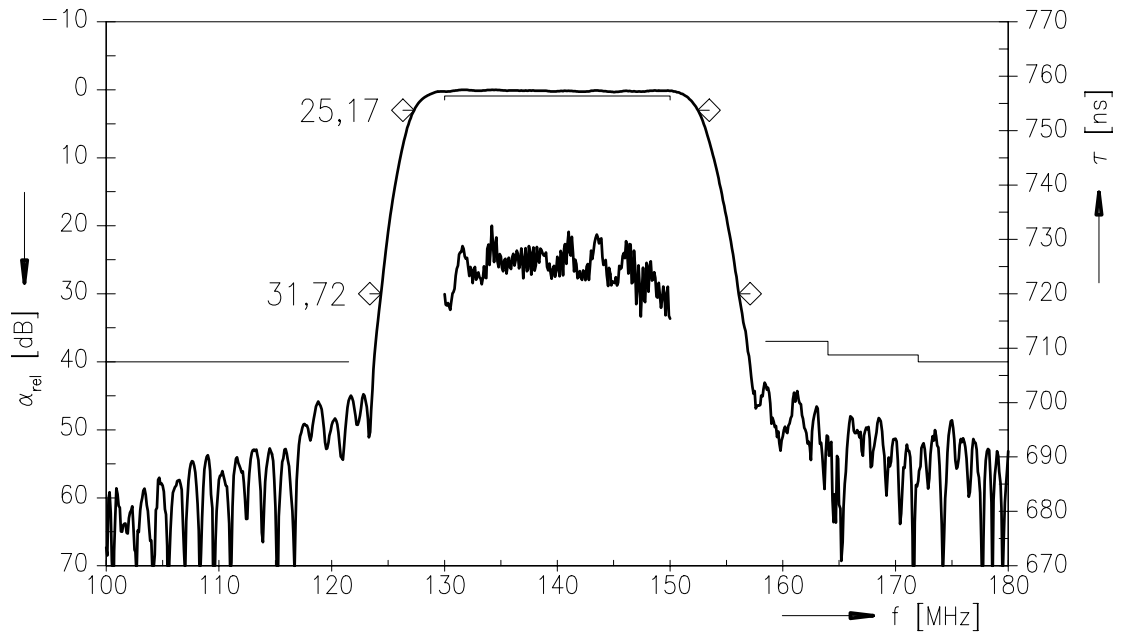
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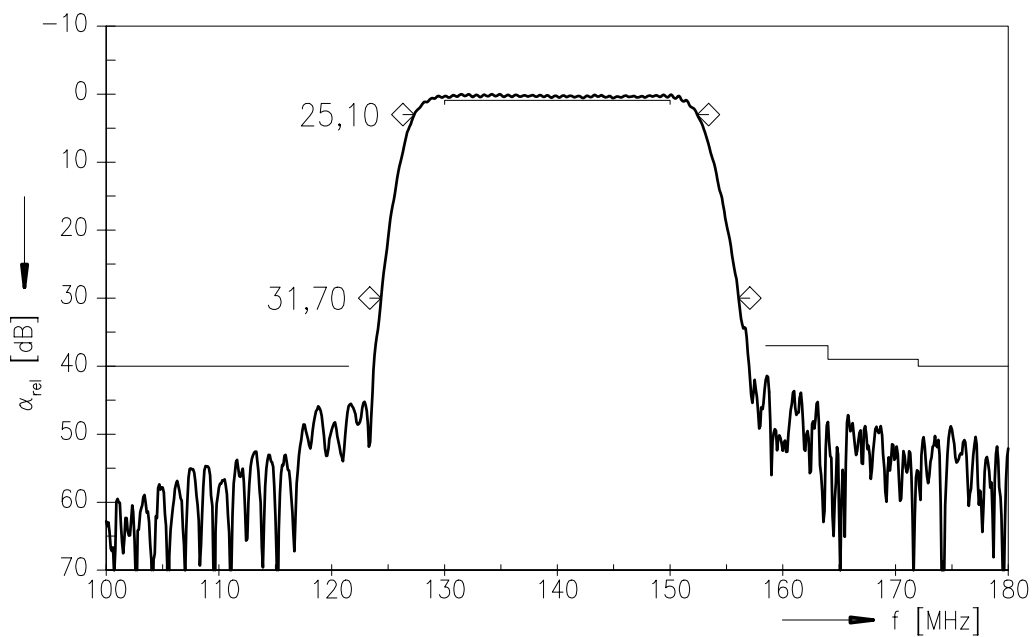
140,00 MHz

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Normalized frequency response (Triple transit signal excluded)



Normalized frequency response (Triple transit signal included)





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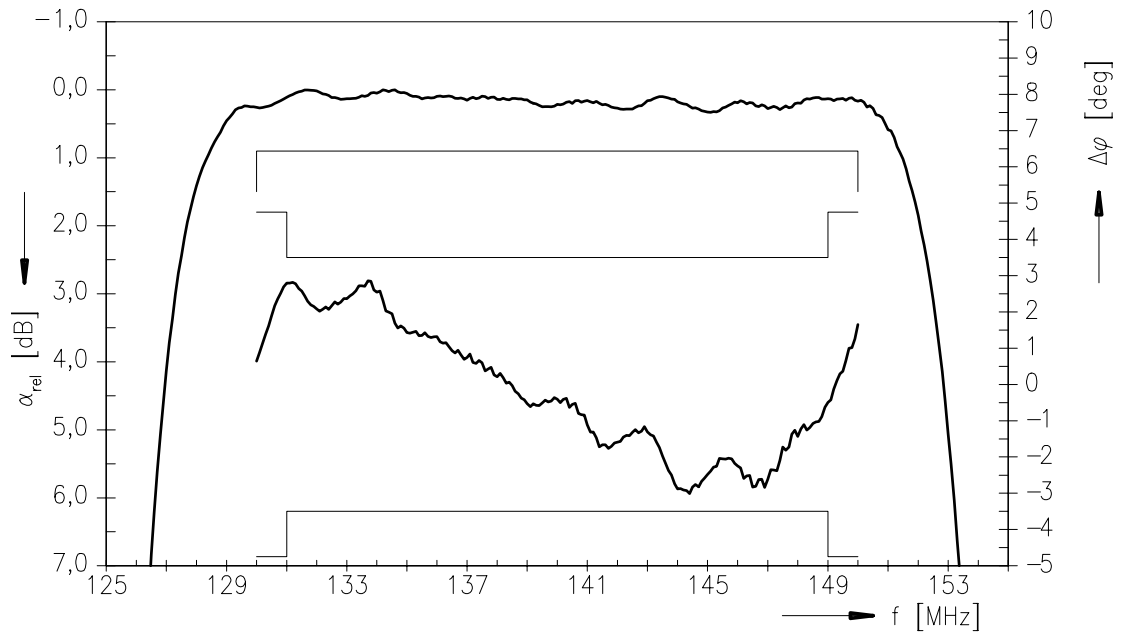
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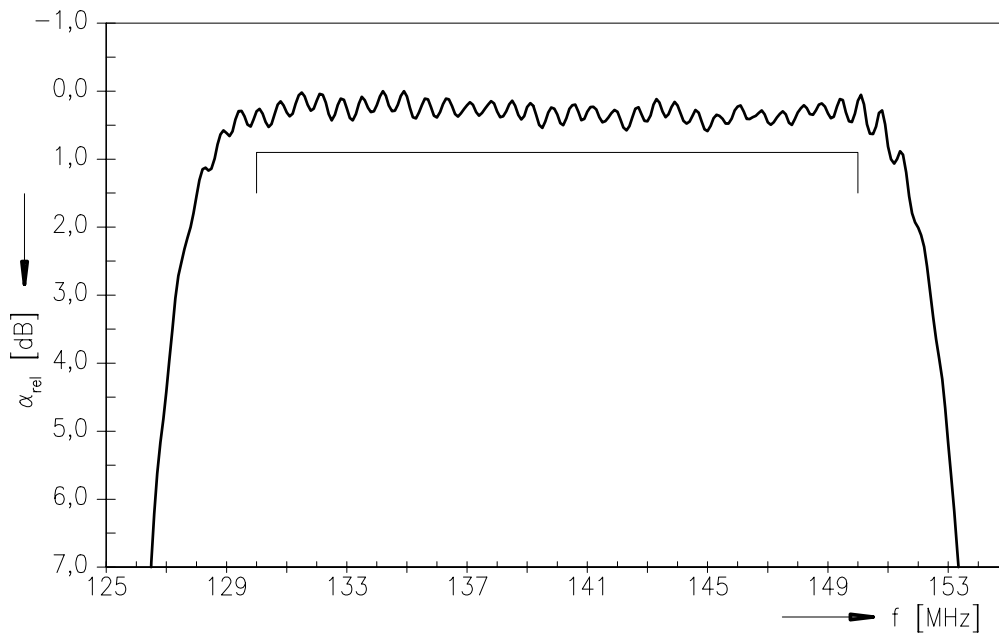
140,00 MHz

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Normalized frequency response (Triple transit signal excluded)



Normalized frequency response (Triple transit signal included)





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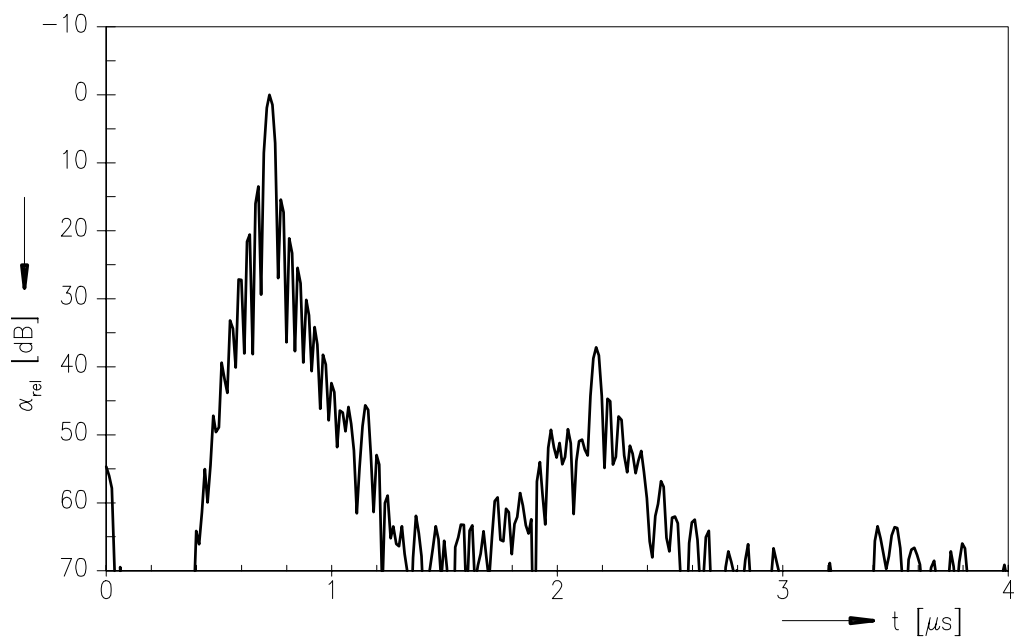
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Normalized time response





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Attachment

1) Pyroelectric pulse amplitude < 50 mV.



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