



SAW Components

Data Sheet B3606





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B3606

Low-Loss Filter

140,00 MHz

Data Sheet

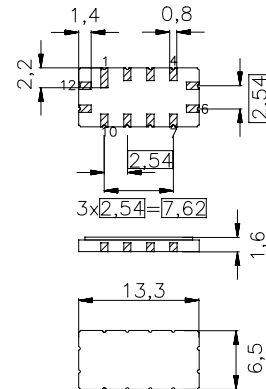
Ceramic package QCC 12

Features

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

Terminals

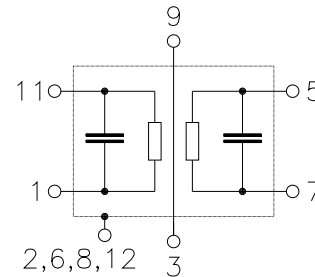
- Gold plated



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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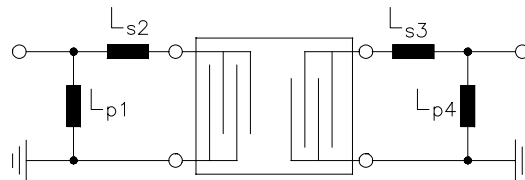
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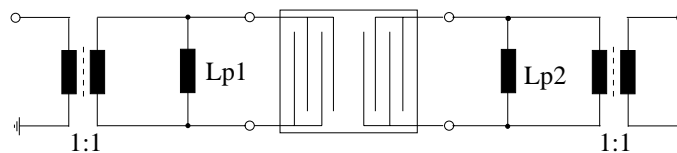
Data Sheet

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



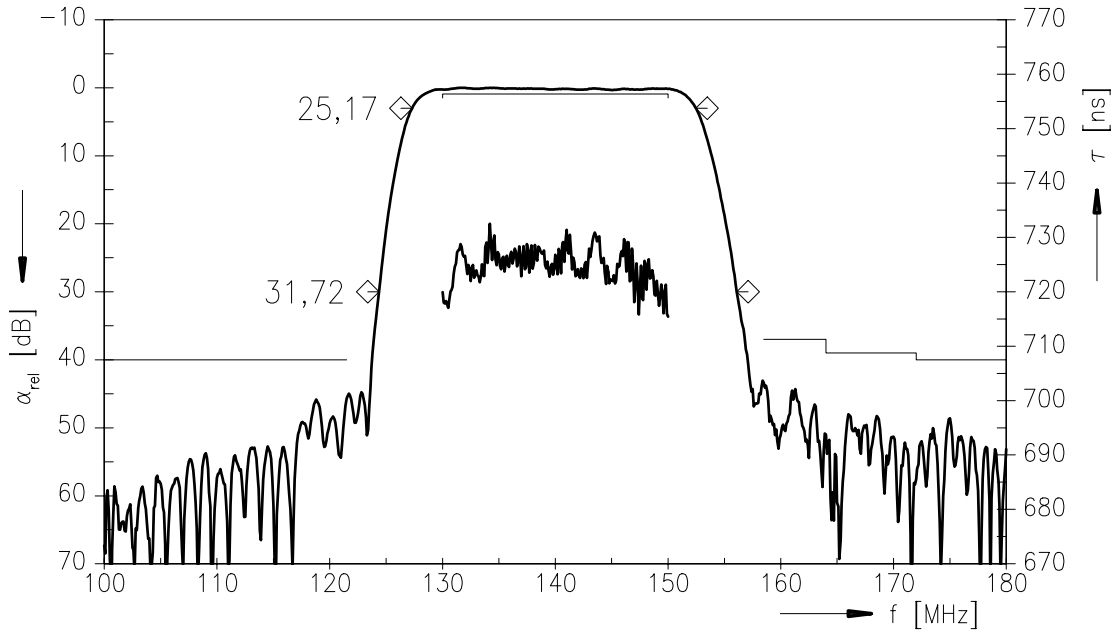
$L_{p1}=62\text{nH}$
 $L_{p2}=62\text{nH}$

Note: Component values depend on PCB layout.

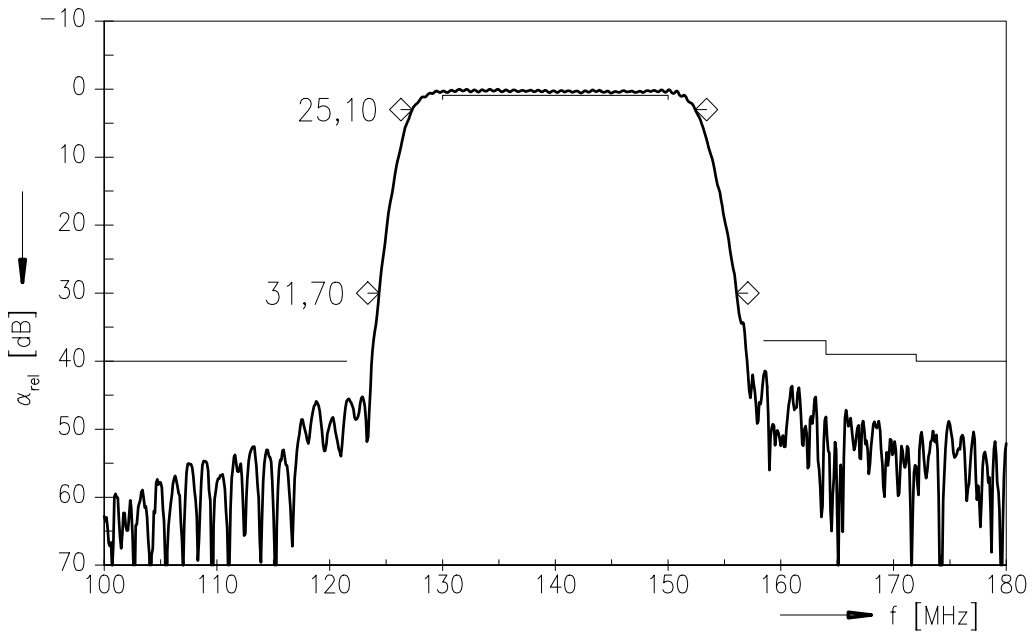


Data Sheet

Normalized frequency response (Triple transit signal excluded)



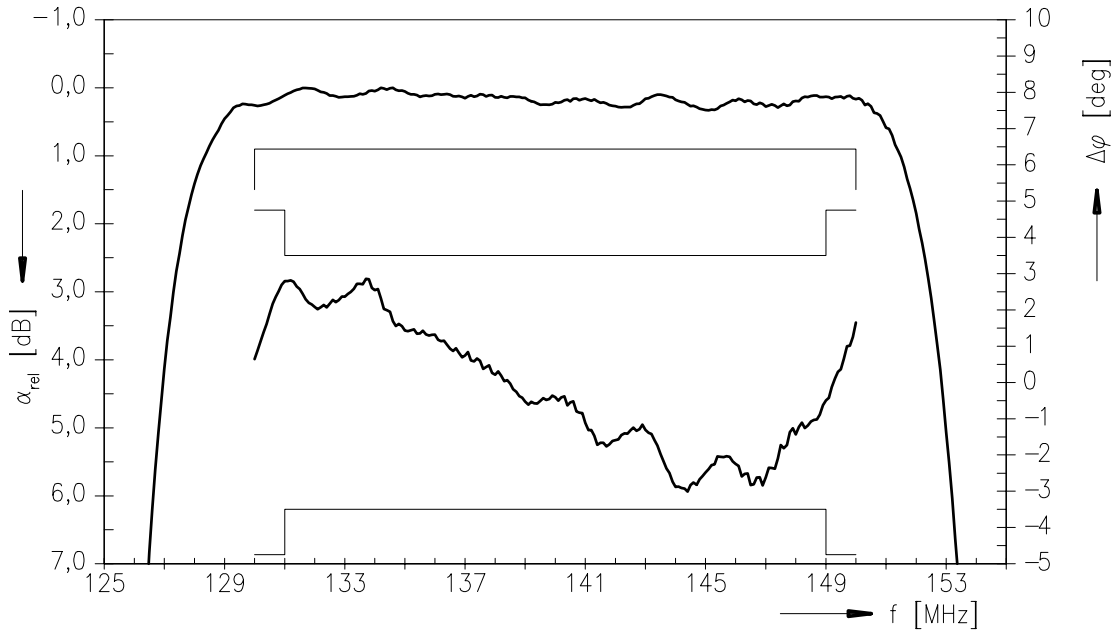
Normalized frequency response (Triple transit signal included)



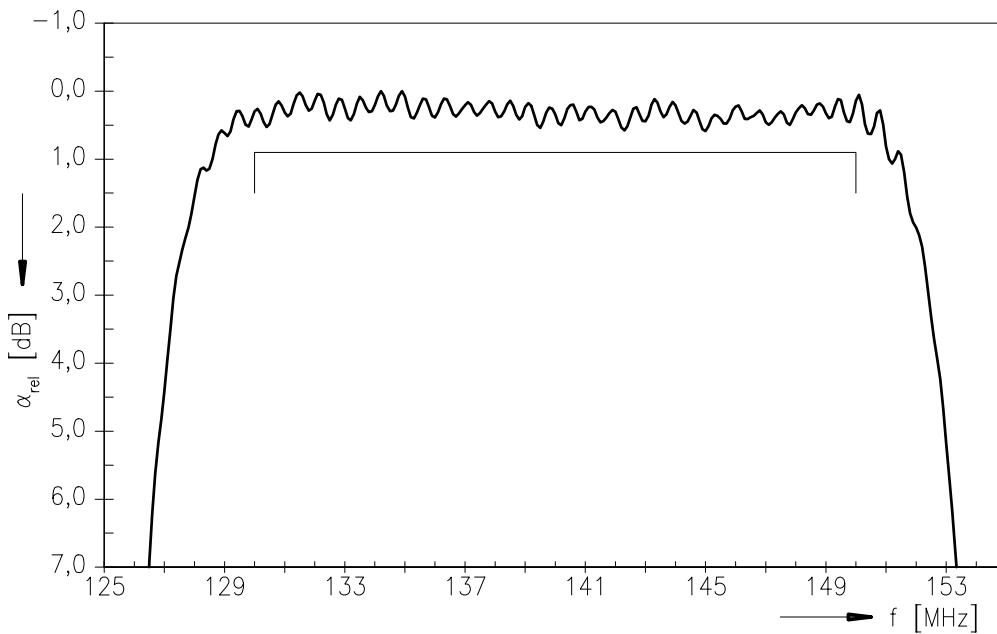


Data Sheet

Normalized frequency response (Triple transit signal excluded)



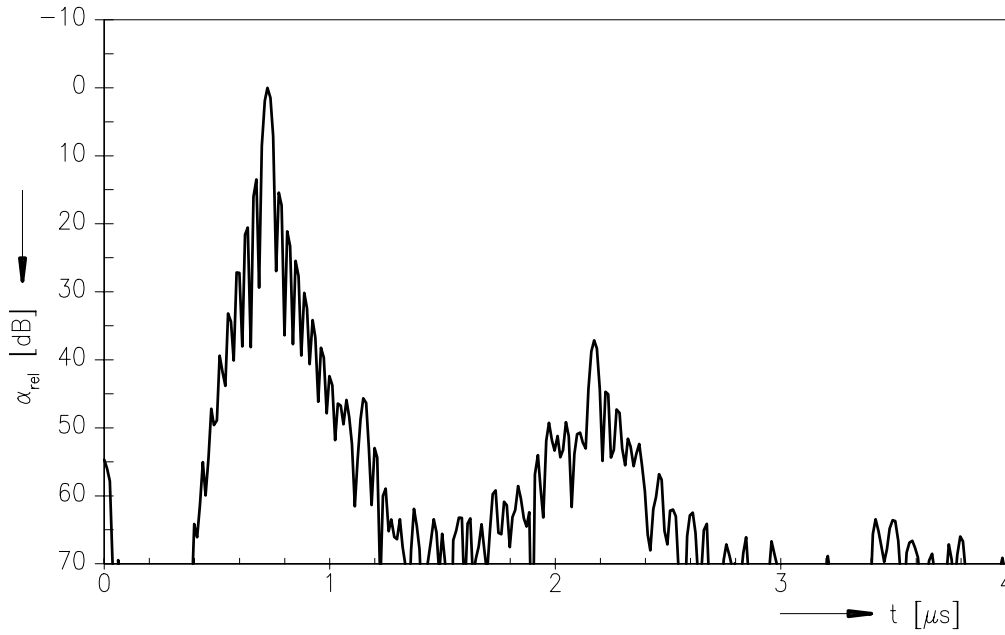
Normalized frequency response (Triple transit signal included)





Data Sheet

Normalized time response





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Attachment

1) Pyroelectric pulse amplitude < 50 mV.



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