EPCOS

SAW Components

Data Sheet B3606

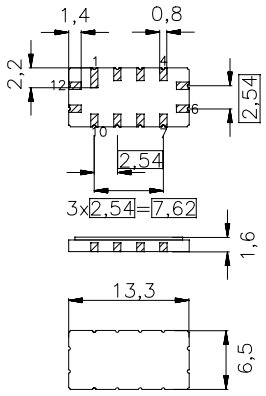
Ceramic package **QCC 12**

Features

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

Terminals

- Gold plated

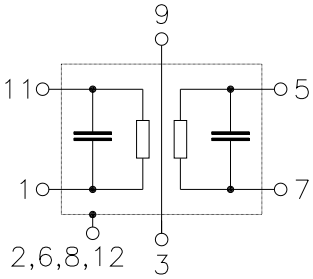


Dimensions in mm, approx. weight 0,4 g

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 **S**ensitive **D**evice (**ESD**)

Maximum ratings

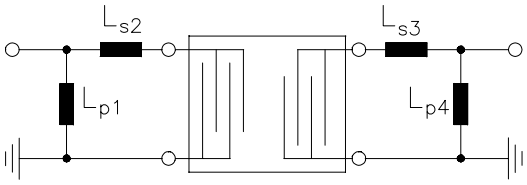
Operable temperature range	T	– 40/+ 85	˚C	
Storage temperature range	T_{stg}	– 55/+ 125	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	source impedance 50 Ω

Characteristics

Operating temperature: T = -40˚C ... 85˚C
Terminating source impedance: Z_S = 50 Ω and matching circuit
Terminating load impedance: Z_L = 50 Ω and matching circuit
TTI=Triple transit signal included; TTE=Triple transit signal excluded

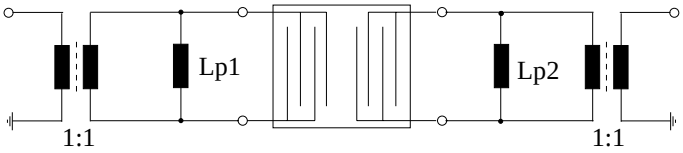
		min.	typ.	max.	
Center frequency (Center between 6dB points; @ T = 25˚C)	f_C	139,75	140,00	140,25	MHz
Insertion attenuation at f_C	α_C	—	11,0	13,0	dB
Amplitude ripple (TTI, p-p)	$\Delta\alpha$				
130,0 ... 150,0 MHz		—	0,6	0,9	dB
Pass bandwidth					
$\alpha_{rel} \leq$ 3 dB	B_{3dB}	—	25,5	—	MHz
Phase ripple (TTE, p-p)	$\Delta\varphi$				
130,0 ... 150,0 MHz		—	8,0	9,5	°
131,0 ... 149,0 MHz		—	6,0	7,0	°
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

Matching circuit: unbalanced - unbalanced



L_{P1}=47nH
L_{S2}=10nH
L_{S3}=10nH
L_{P4}=47nH

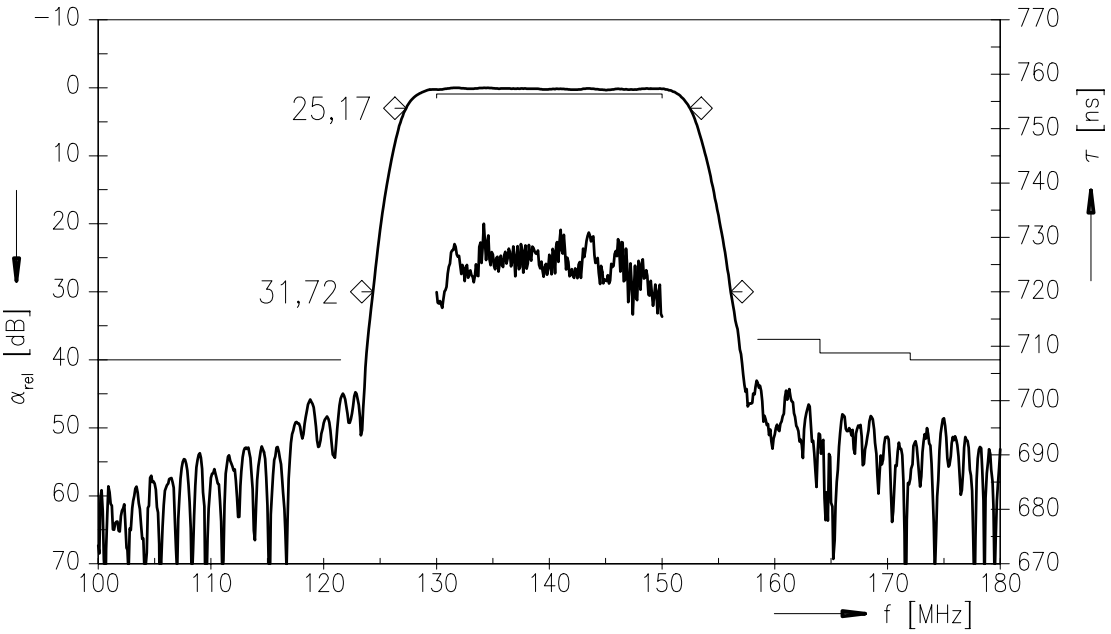
Matching circuit: balanced - balanced



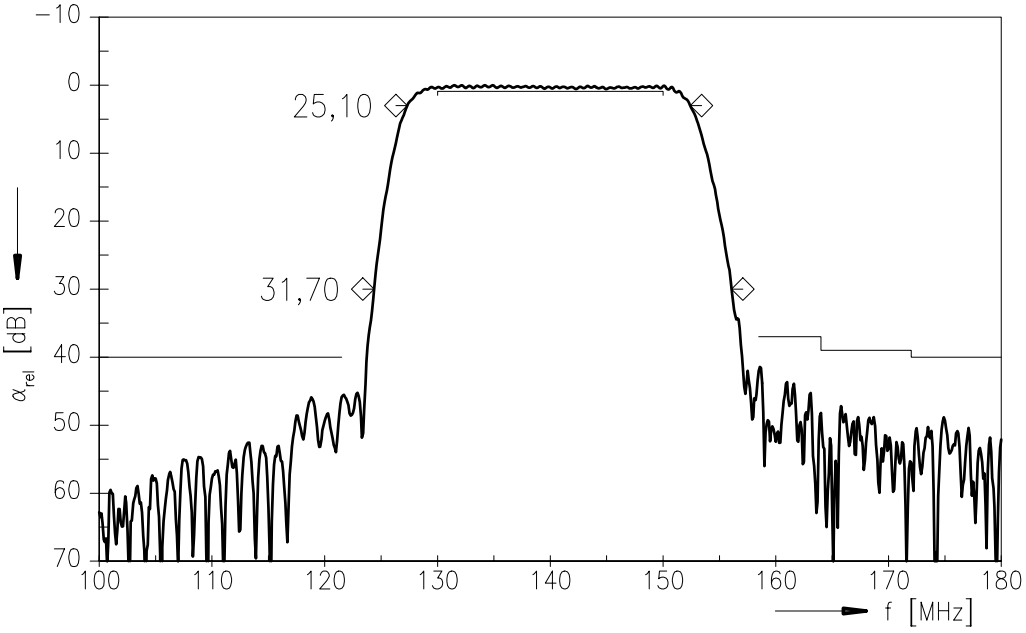
L_{P1}=62nH
L_{P2}=62nH

Note: Component values depend on PCB layout.

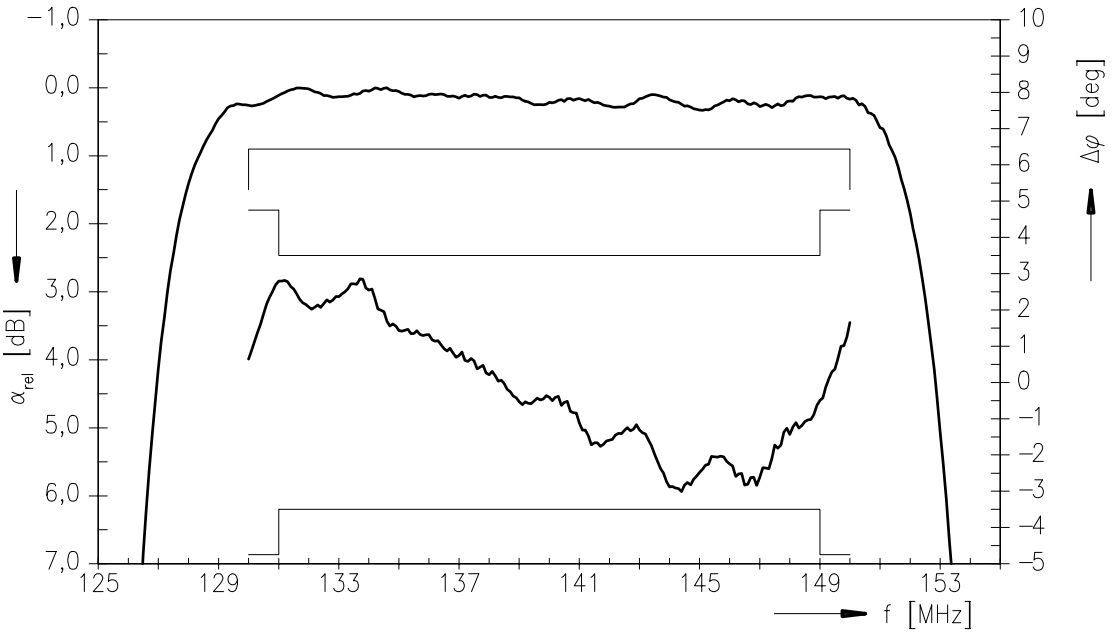
Normalized frequency response (Triple transit signal excluded)



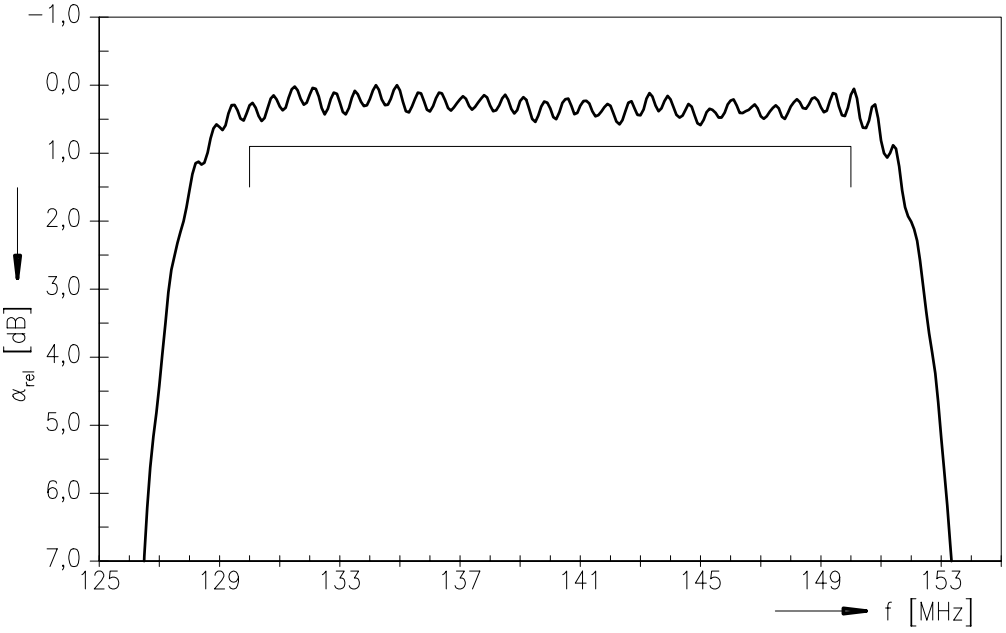
Normalized frequency response (Triple transit signal included)



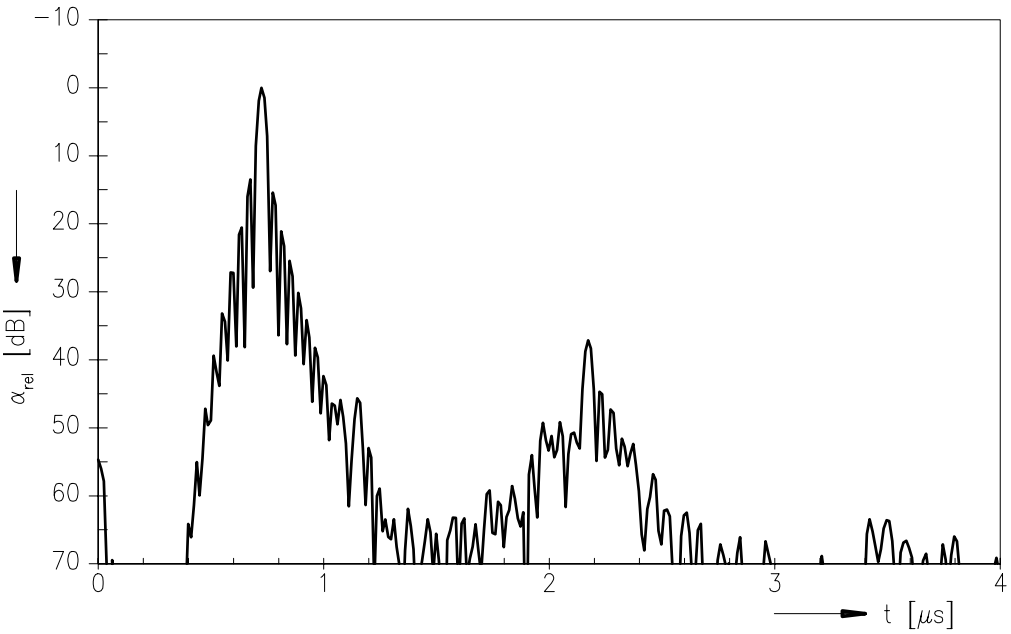
Normalized frequency response (Triple transit signal excluded)



Normalized frequency response (Triple transit signal included)



Normalized time response



Attachment

1) Pyroelectric pulse amplitude < 50 mV.

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