



SAW filters for infrastructure systems

Series/Type: **B3606**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39141B3606Z510	B39141B5211Z510	2011-04-01	2011-06-30	2011-09-30

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.



SAW Components

B3606

Low-Loss Filter

140,00 MHz

Data Sheet

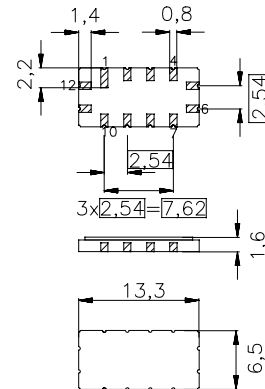
Ceramic package **QCC 12**

Features

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

Terminals

- Gold plated

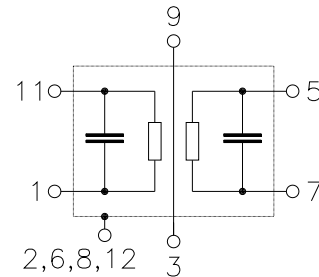


Dimensions in mm, approx. weight 0,4 g

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 (Center between 6dB points; @ $T = 25^{\circ}\text{C}$)	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) 130,0 ... 150,0 MHz	$\Delta\alpha$	—	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) 130,0 ... 150,0 MHz 131,0 ... 149,0 MHz	$\Delta\phi$	—	8,0 6,0	9,5 7,0	$^{\circ}$ $^{\circ}$
Relative attenuation (relative to α_C) 100,0 ... 108,0 MHz 108,0 ... 116,0 MHz 116,0 ... 121,5 MHz 158,5 ... 164,0 MHz 164,0 ... 172,0 MHz 172,0 ... 180,0 MHz	α_{rel}	40,0 40,0 40,0 37,0 39,0 40,0	50,0 48,0 44,0 40,0 42,0 47,0	— — — — — —	dB dB dB dB dB 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) 130,0 ... 150,0 MHz	$\Delta\tau$	—	15,0	—	ns
Temperature coefficient of frequency	TC_f	—	-87	—	ppm/K



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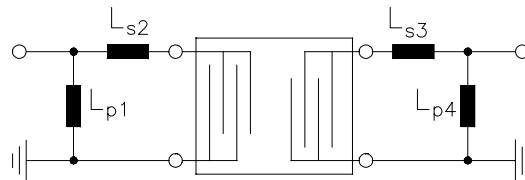
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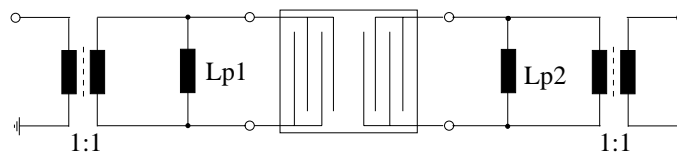
Data Sheet

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



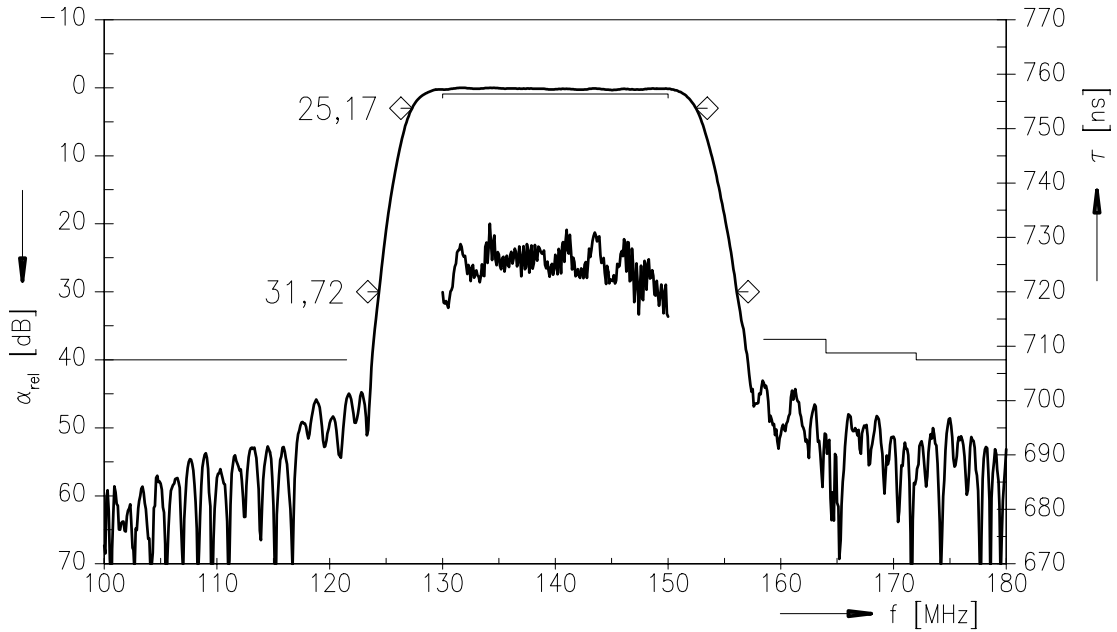
$L_{p1}=62\text{nH}$
 $L_{p2}=62\text{nH}$

Note: Component values depend on PCB layout.

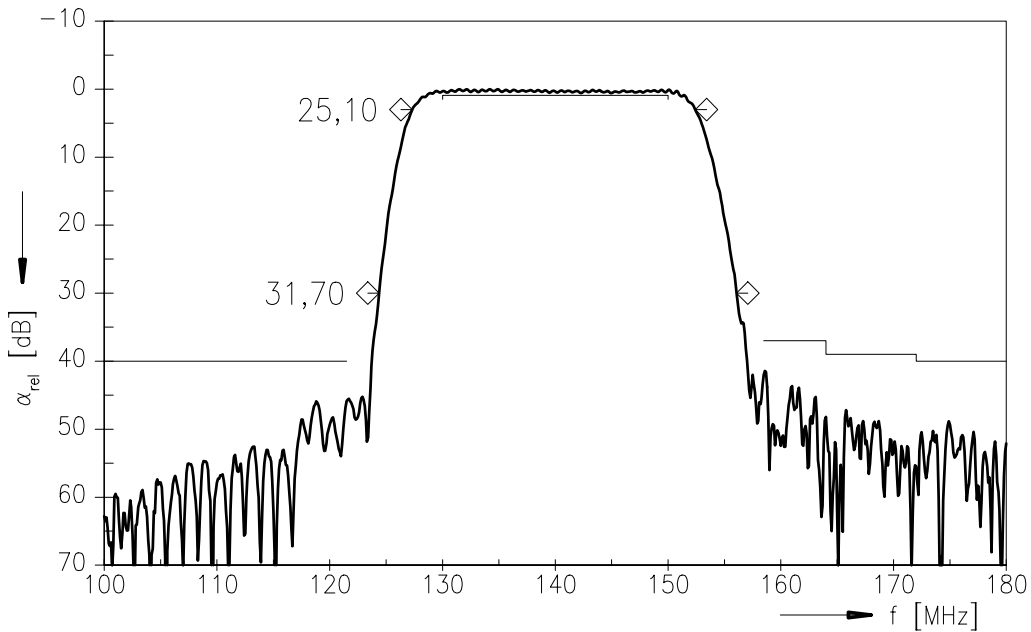


Data Sheet

Normalized frequency response (Triple transit signal excluded)



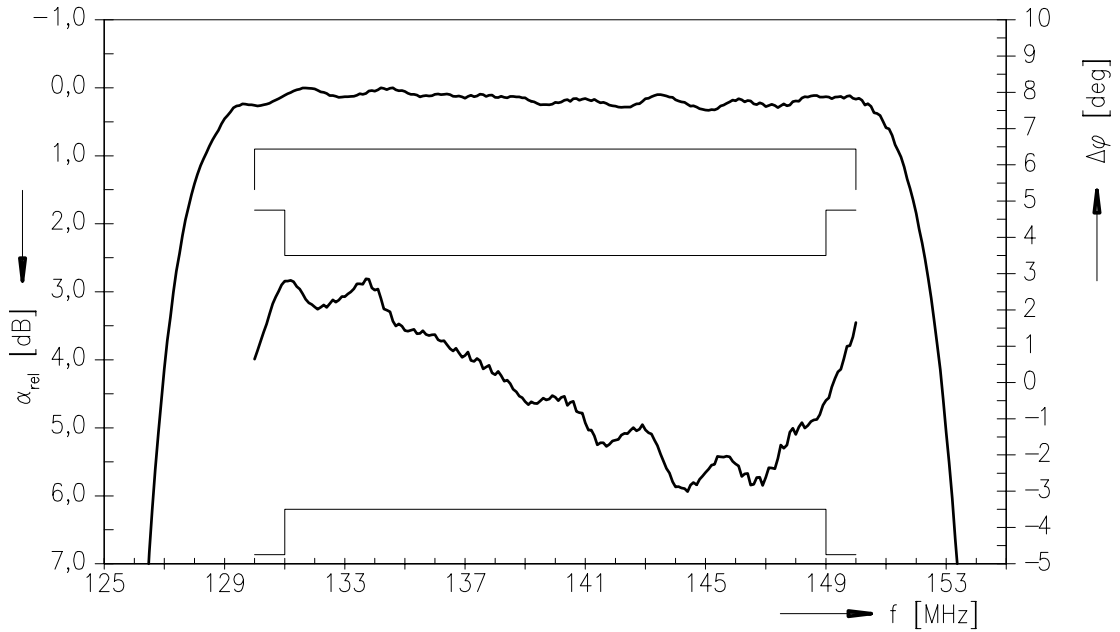
Normalized frequency response (Triple transit signal included)



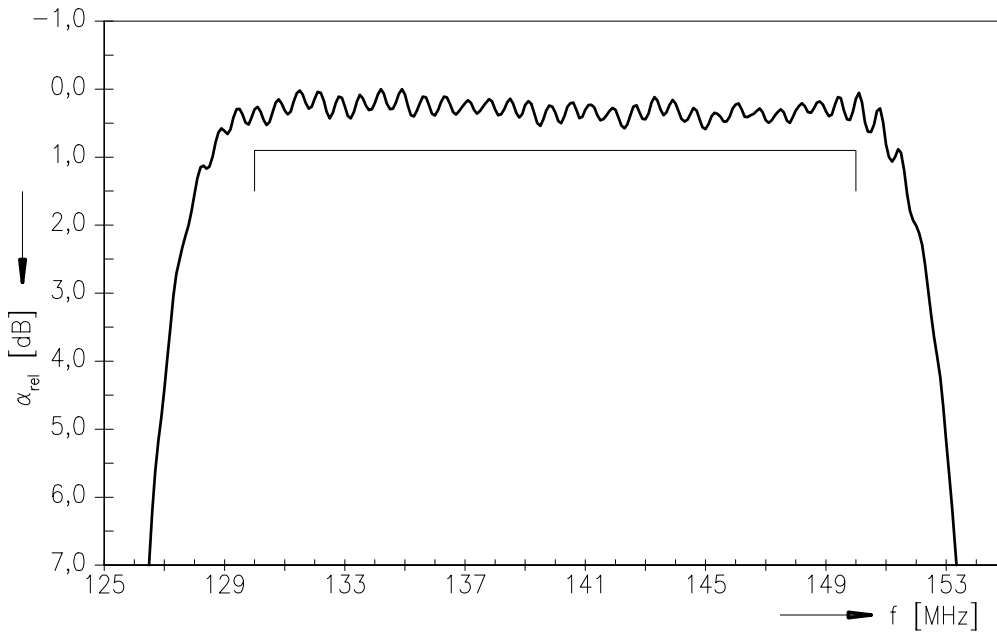


Data Sheet

Normalized frequency response (Triple transit signal excluded)



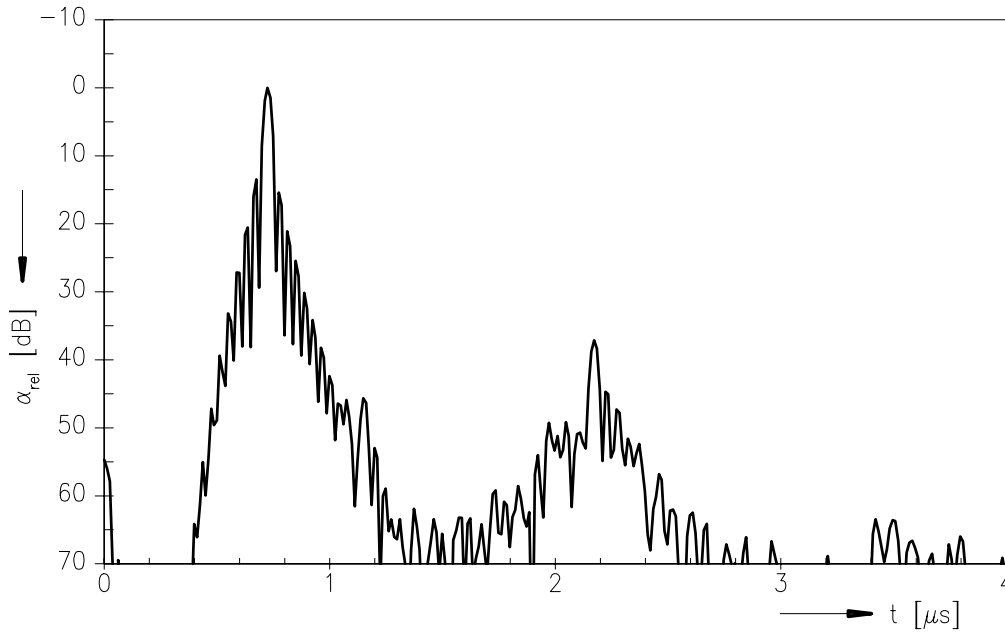
Normalized frequency response (Triple transit signal included)





Data Sheet

Normalized time response





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Attachment

1) Pyroelectric pulse amplitude < 50 mV.



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Surface Acoustic Wave Components Division, SAW MC IS PD

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