



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The following products presented in this data sheet are being withdrawn.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

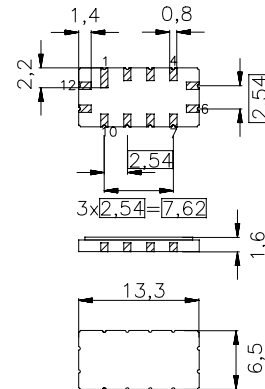
Ceramic package QCC 12

Features

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

Terminals

- Gold plated

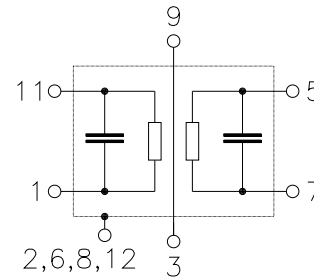


Dimensions in mm, approx. weight 0,4 g

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


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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 | $\Delta\varphi$ | — | 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 |



SAW Components

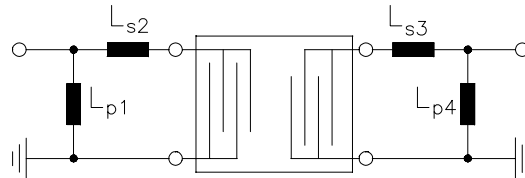
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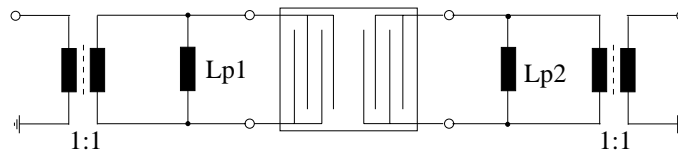
Data Sheet

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



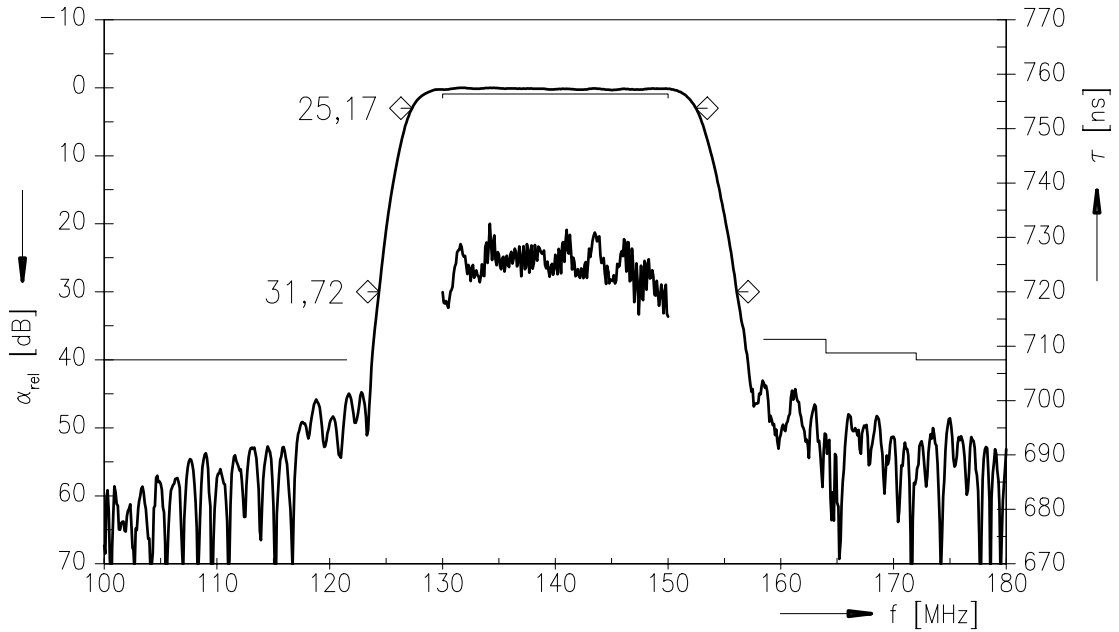
$L_{p1}=62\text{nH}$
 $L_{p2}=62\text{nH}$

Note: Component values depend on PCB layout.

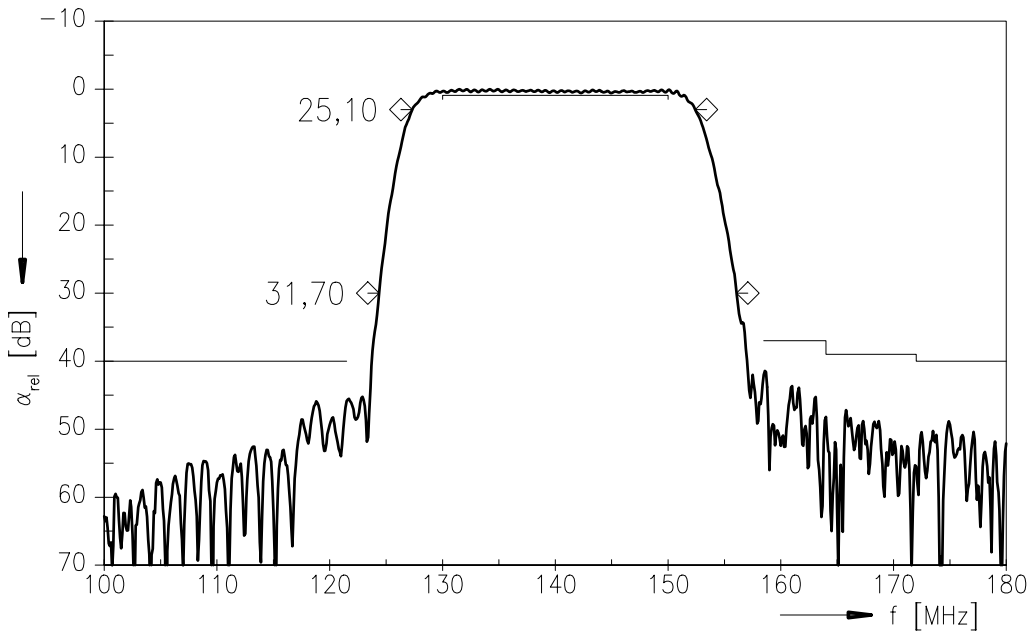


Data Sheet

Normalized frequency response (Triple transit signal excluded)



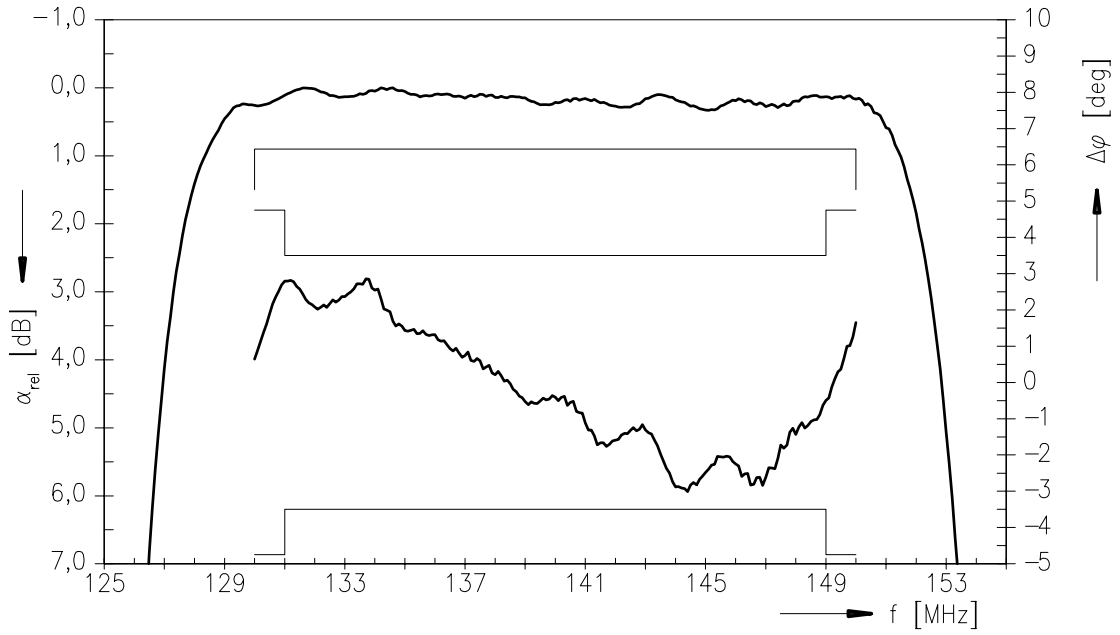
Normalized frequency response (Triple transit signal included)



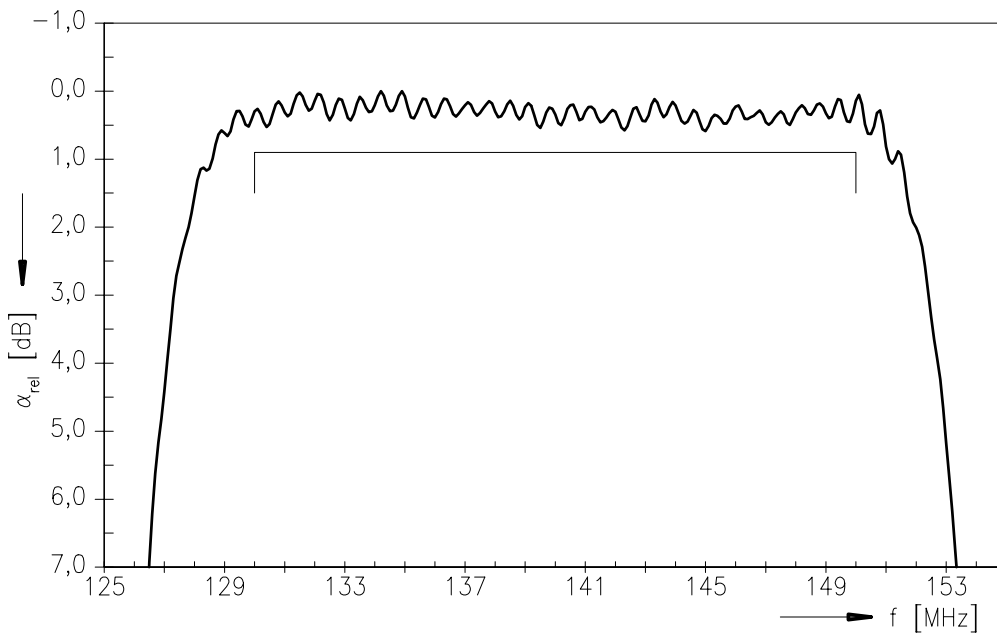


Data Sheet

Normalized frequency response (Triple transit signal excluded)



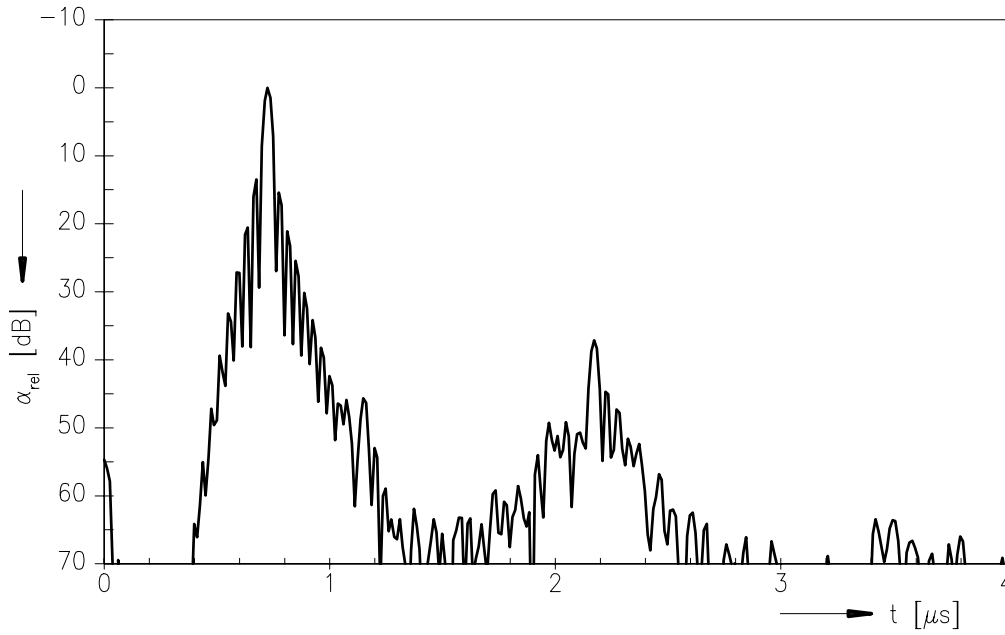
Normalized frequency response (Triple transit signal included)





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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