



SAW filters for infrastructure systems

Series/Type: B3882

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39171B3882Z710		2012-01-13	2012-12-31	2013-03-30

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.

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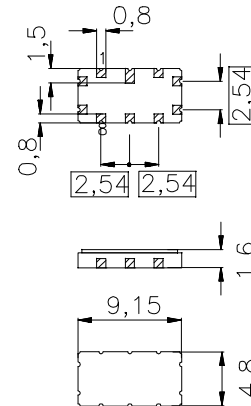
Data Sheet

 Ceramic package **QCC10B**
Features

- Low-loss filter
- Multichannel CDMA2000 capable
- Balanced or unbalanced operation possible
- Temperature stable
- Hermetically sealed ceramic SMD package

Terminals

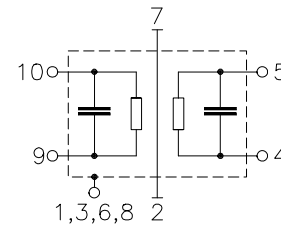
- Gold plated



Dimensions in mm, approx. weight 0,23 g

Pin configuration

- | | |
|------------|----------------------------------|
| 10 | Input |
| 9 | Input ground or balanced input |
| 5 | Output |
| 4 | Output ground or balanced output |
| 2, 7 | Ground |
| 1, 3, 6, 8 | To be grounded |



Type	Ordering code	Marking and Package according to	Packing according to
B3882	B39171-B3882-Z710	C61157-A7-A49	F61074-V8172-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-40/ +85	°C
Storage temperature range	T_{stg}	-40/ +85	°C
DC voltage	V_{DC}	5	V
Source power	P_s	10	dBm

SAW Components	B3882
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Low-Loss Filter	168,96 MHz
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Data Sheet
Characteristics

Operating temperature: $T = 0 \dots +85 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ single ended and matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ single ended and matching network

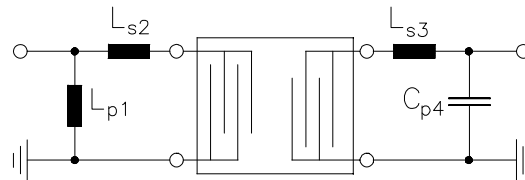
		min.	typ.	max.	
Nominal frequency	f_N	—	168,96	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}	—	13,0	14,5	dB
Passband width					
$\alpha_{\text{rel}} \leq 1 \text{ dB}$	$B_{1\text{dB}}$	—	4,4	—	MHz
$\alpha_{\text{rel}} \leq 5 \text{ dB}$	$B_{5\text{dB}}$	—	4,9	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	6,1	—	MHz
Amplitude ripple¹⁾ (p-p)	$\Delta\alpha$				
$f_N \pm 1,92 \text{ MHz}$		—	0,5	0,9	dB
$f_N \pm k*1,25 \text{ MHz} \pm 0,6144 \text{ MHz}$		—	0,4	0,7	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 1,92 \text{ MHz}$		—	70	120	ns
Phase Linearity¹⁾ (rms)	$\Delta\phi$				
$f_N \pm 1,92 \text{ MHz}$		—	1,0	1,4	$^\circ$
$f_N \pm k*1,25 \text{ MHz} \pm 0,6144 \text{ MHz}$		—	1,0	1,4	$^\circ$
Average Error Vector Magnitude¹⁾	<i>EVM</i>				
$f_N \pm 1,92 \text{ MHz}$		—	1,9	3,0	%
$f_N \pm k*1,25 \text{ MHz} \pm 0,6144 \text{ MHz}$		—	1,9	3,0	%
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N \pm 2,5 \text{ MHz} \dots f_N \pm 3,0 \text{ MHz}$		4	5	—	dB
$f_N \pm 3,0 \text{ MHz} \dots f_N \pm 17,5 \text{ MHz}$		10	20	—	dB
$f_N \pm 17,5 \text{ MHz} \dots f_N \pm 66,0 \text{ MHz}$		45	50	—	dB
Temperature coefficient of frequency²⁾	TC_f	—	- 0,036	—	ppm/ K^2
Turnover temperature	T_0	—	35	—	$^\circ\text{C}$

¹⁾Amplitude ripple/Phase Linearity/Average Error Vector Magnitude: where $k = (-1,0,1)$

²⁾ Temperature dependence of f_c : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

Data Sheet
Matching network to 50 Ω single ended input and output:

(Element values depend upon PCB layout)



$$L_{p1} = 18 \text{ nH}$$

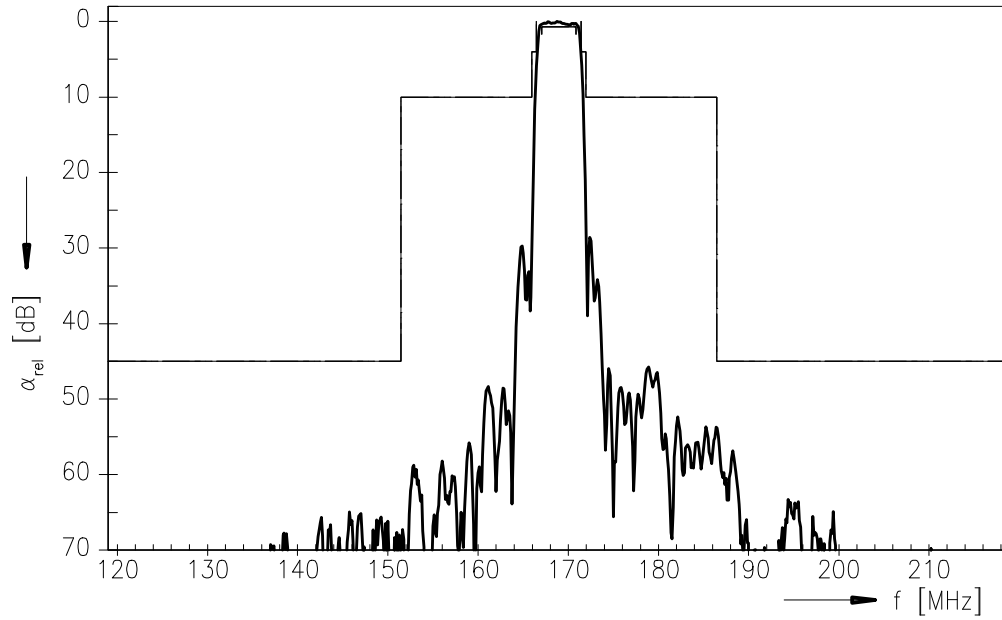
$$L_{s2} = 68 \text{ nH}$$

$$L_{s3} = 120 \text{ nH}$$

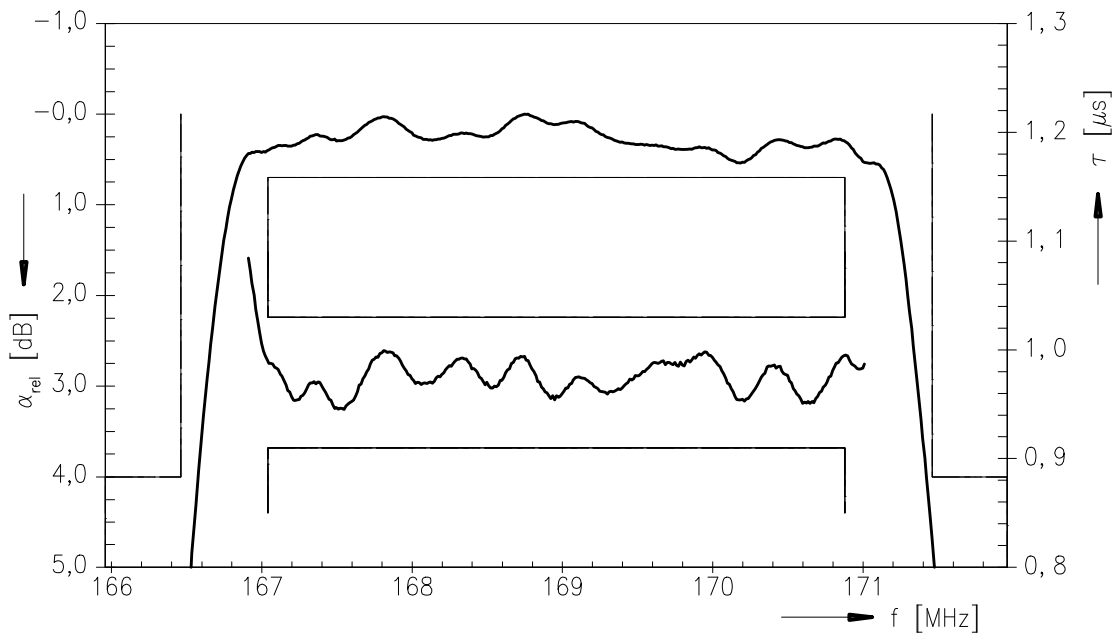
$$C_{p4} = 56 \text{ pF}$$

Data Sheet

Normalized frequency response



Normalized frequency response (pass band)



SAW Components	B3882
Low-Loss Filter	168,96 MHz

Data Sheet

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