EPCOS

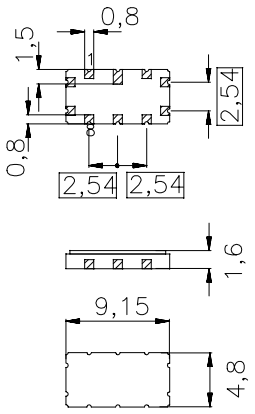
SAW Components

Data Sheet B3882

Ceramic package **QCC10B**

Features

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



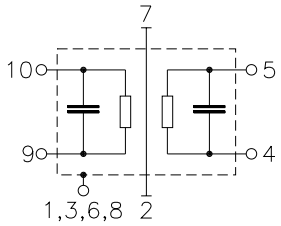
Terminals

- 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 **S**ensitive **D**evice (**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	

Characteristics

Operating temperature: T = 0 .. +85 °C

Terminating source impedance: Z_S=50 Ω single ended and matching network

Terminating load impedance: Z_S=50 Ω single ended and matching network

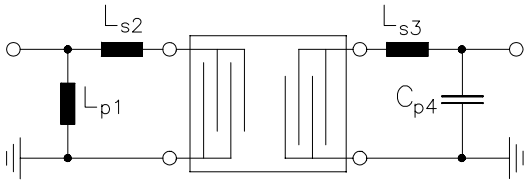
		min.	typ.	max.	
Nominal frequency	f_N	—	168,96	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	13,0	14,5	dB
Passband width					
$\alpha_{rel} \leq$ 1 dB	B_{1dB}	—	4,4	—	MHz
$\alpha_{rel} \leq$ 5 dB	B_{5dB}	—	4,9	—	MHz
$\alpha_{rel} \leq$ 30 dB	B_{30dB}	—	6,1	—	MHz
Amplitude ripple[1] (p-p)	$\Delta\alpha$				
$f_N \pm$ 1,92 MHz		—	0,5	0,9	dB
$f_N \pm$ k*1,25 MHz $\pm$ 0,6144 MHz		—	0,4	0,7	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm$ 1,92 MHz		—	70	120	ns
Phase Linearity[1] (rms)	$\Delta\varphi$				
$f_N \pm$ 1,92 MHz		—	1,0	1,4	°
$f_N \pm$ k*1,25 MHz $\pm$ 0,6144 MHz		—	1,0	1,4	°
Average Error Vector Magnitude[1]	*EVM*				
$f_N \pm$ 1,92 MHz		—	1,9	3,0	%
$f_N \pm$ k*1,25 MHz $\pm$ 0,6144 MHz		—	1,9	3,0	%
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm$ 2,5 MHz ... $f_N \pm$ 3,0 MHz		4	5	—	dB
$f_N \pm$ 3,0 MHz ... $f_N \pm$ 17,5 MHz		10	20	—	dB
$f_N \pm$ 17,5 MHz ... $f_N \pm$ 66,0 MHz		45	50	—	dB
Temperature coefficient of frequency[2]	TC_f	—	– 0,036	—	ppm/K²
Turnover temperature	T_0	—	35	—	°C

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

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

Matching network to 50 Ω single ended input and output:

(Element values depend upon PCB layout)



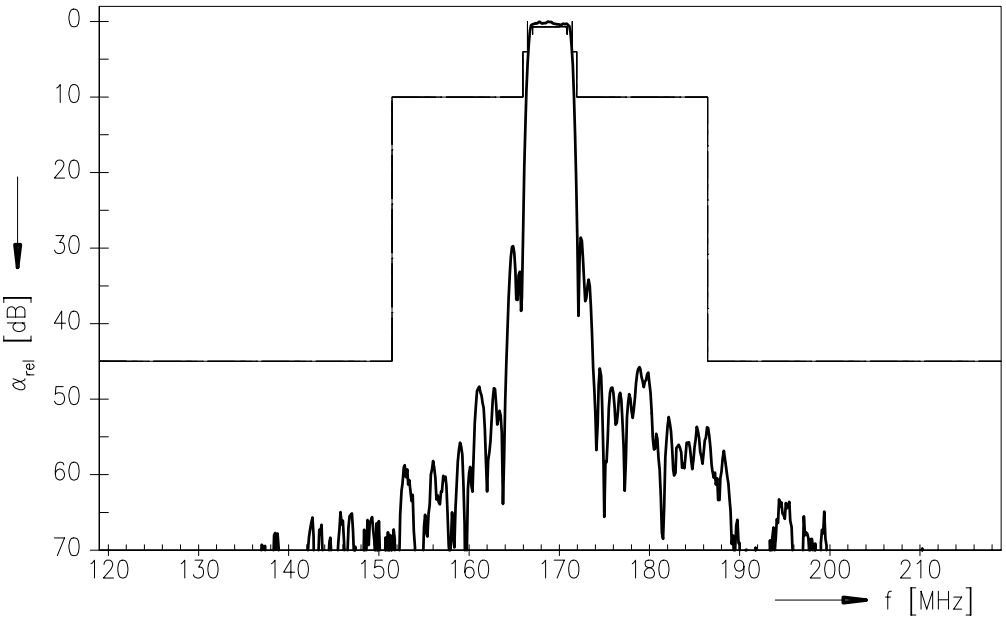
L_{p1} = 18 nH

L_{s2} = 68 nH

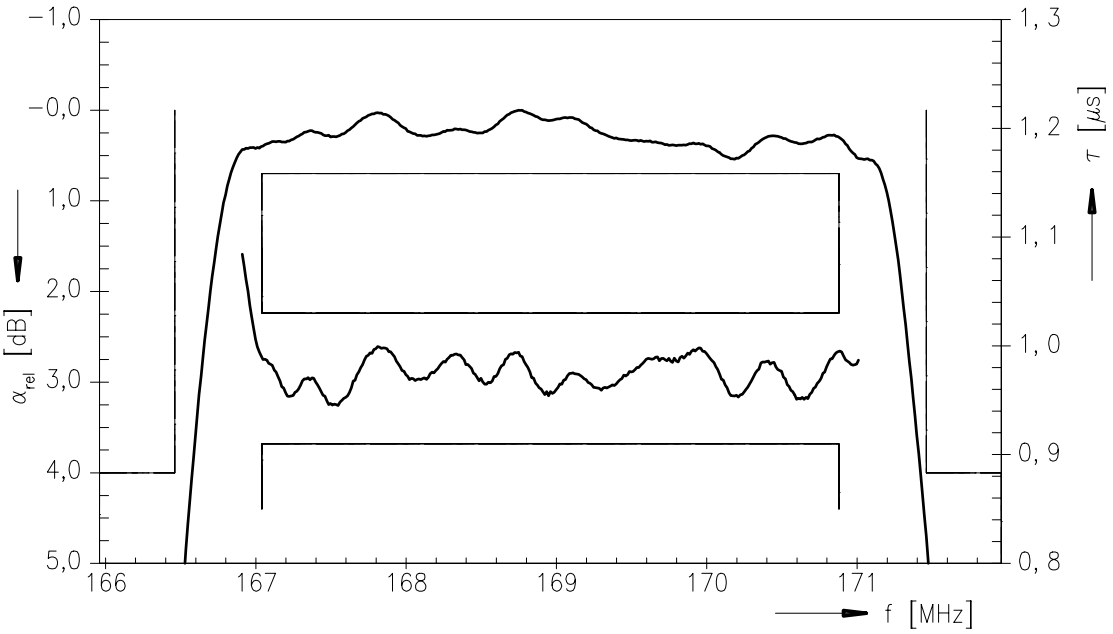
L_{s3} = 120 nH

C_{p4} = 56 pF

Normalized frequency response



Normalized frequency response (pass band)



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