EPCOS

SAW Components

Data Sheet B5035

Data Sheet

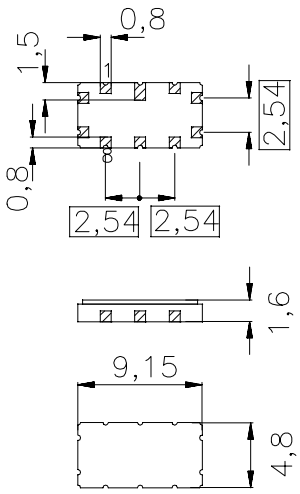
Features

- IF low-loss filter for W-CDMA base station
- Usable bandwidth 3,84 MHz
- Balanced or unbalanced operation possible
- Temperature stable
- Ceramic SMD package

Terminals

- Gold plated

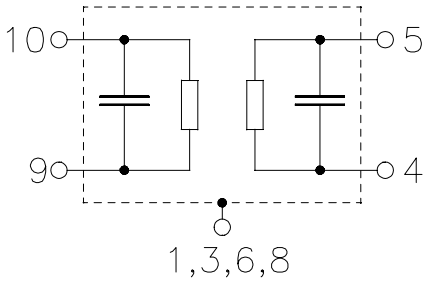
Ceramic package **QCC10B**



Dimensions in mm, appr. weight 0,23 g

Pin configuration

10, 9	Input
5, 4	Output
1, 3, 6, 8	Case ground
2, 7	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B5035	B39211-B5035-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}	0	V
Source power	P_s	0	dBm

Characteristics

Operating temperature range: T = +5 ... +75 °C
Terminating source impedance: Z_S = 200 Ω balanced and matching network
Terminating load impedance: Z_L = 200 Ω balanced and matching network

			min.	typ.	max.	
Nominal frequency		f_N	—	208,0	—	MHz
Minimum insertion attenuation		α_{min}	—	11	13	dB
Passband width	$\alpha_{rel} \leq 1$ dB	B_{1dB}	—	4,2	—	MHz
Amplitude ripple (p-p)	$f_N \pm 1{,}92$ MHz	$\Delta\alpha$	—	0,6	1,0	dB
Phase ripple (p-p)	$f_N \pm 1{,}92$ MHz	$\Delta\varphi$	—	5	—	°
Phase ripple (rms)	$f_N \pm 1{,}92$ MHz	$\Delta\varphi$	—	1,1	1,5	°
Error vector magnitude		*EVM*	—	2,6	6,0	%
Absolute group delay (mean within $f_N \pm 1{,}92$ MHz)		τ_{mean}	1,129	1,134	1,139	µs
Relative attenuation (relative to α_{min})		α_{rel}				
$f_N \pm 2{,}515$ MHz ... $f_N \pm 2{,}6$ MHz			17	20	—	dB
$f_N \pm 2{,}6$ MHz ... $f_N \pm 2{,}8$ MHz			25	30	—	dB
$f_N \pm 2{,}8$ MHz ... $f_N \pm 3{,}3$ MHz			30	35	—	dB
$f_N \pm 3{,}3$ MHz ... $f_N \pm 20$ MHz			40 [1]	45	—	dB
$f_N \pm 20$ MHz ... $f_N \pm 28$ MHz			45	50	—	dB
$f_N \pm 28$ MHz ... $f_N \pm 60$ MHz			55 [2]	60	—	dB
Adjacent channel selectivity		*ACS*				
5,0 MHz offset of carrier			45	49	—	dB
Input IP3			40	—	—	dBm
Temperature coefficient of frequency [3]		TC_f	—	– 0,036	—	ppm/K²
Turnover temperature		T_0	—	20	—	°C

[1] Except for two narrow-band responses between 219 and 222 MHz which may reach 2 dB above

[2] Except for two narrow-band responses between 236 and 240 MHz which may reach 2 dB above

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

Characteristics

Operating temperature range: T = -40 ... +85 °C
Terminating source impedance: Z_S = 200 Ω balanced and matching network
Terminating load impedance: Z_L = 200 Ω balanced and matching network

			min.	typ.	max.	
Nominal frequency		f_N	—	208,0	—	MHz
Minimum insertion attenuation		α_{min}	—	11	13,2	dB
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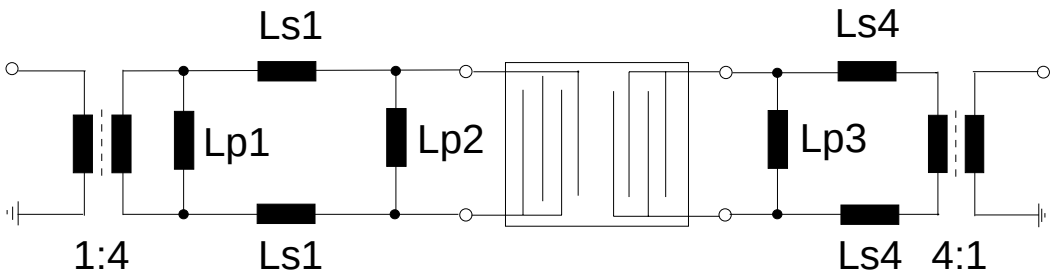
Matching network to 200 Ω

Transformers are only required for measurement in a 50 Ω environment



L_{s1} = 100 nH

L_{p2} = 100 nH

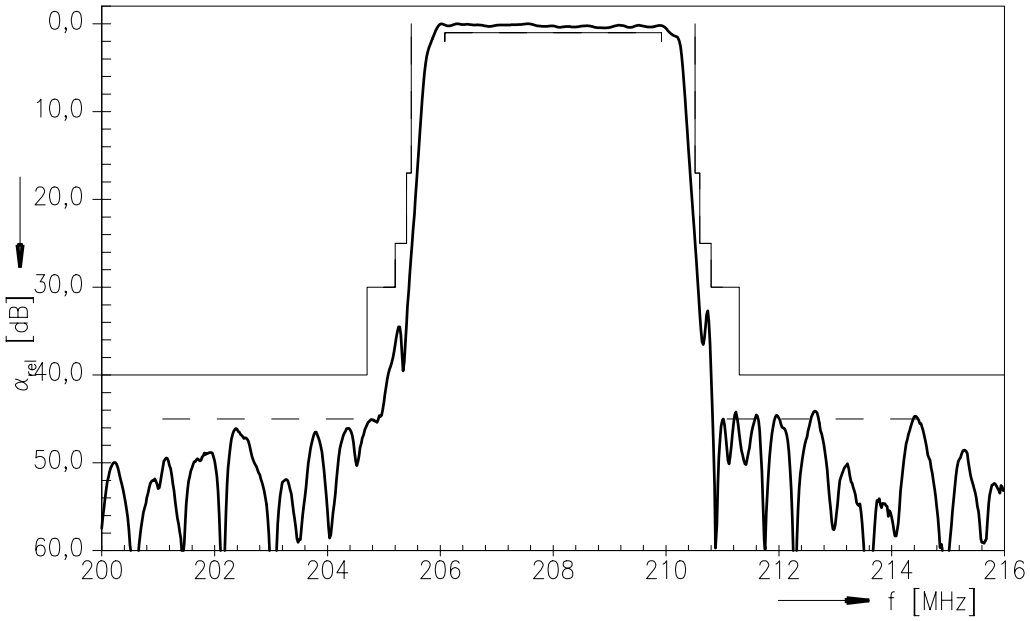
L_{p1} = 560 nH (for trimming)

L_{p3} = 150 nH

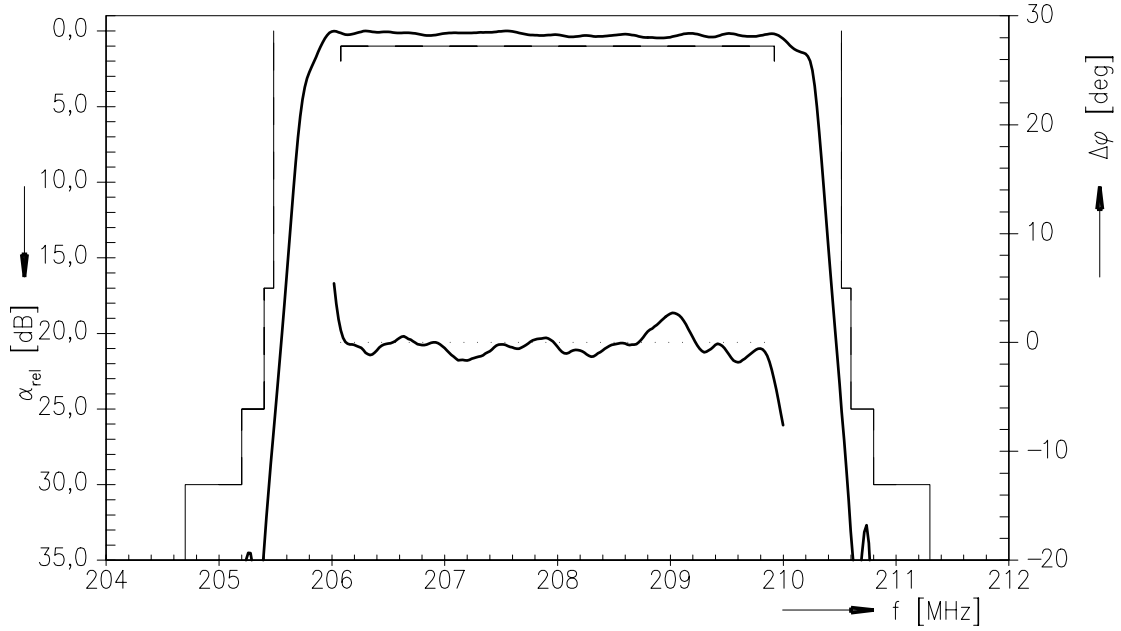
L_{s4} = 150 nH

Element values depend upon board layout.

Transfer function



Transfer function (pass band)



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW COM
P.O. Box 80 17 09, 81617 Munich, GERMANY

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