EPCOS

SAW Components

Data Sheet B5035

Data Sheet

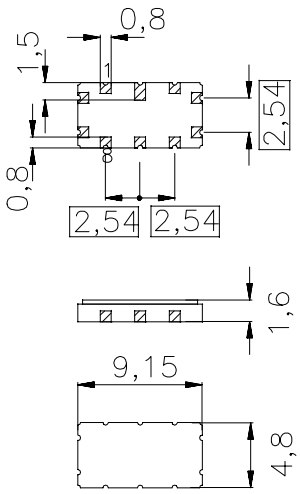
Features

- 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

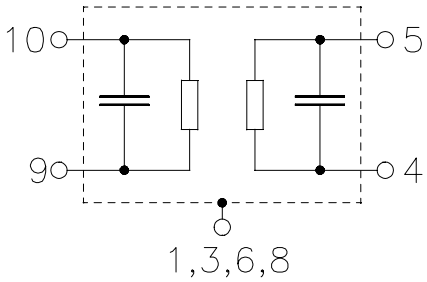
Ceramic package **QCC10B**



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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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	°
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Absolute group delay (mean within $f_N \pm 1{,}92$ MHz)		τ_{mean}	1,129	1,134	1,139	µs
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Turnover temperature		T_0	—	20	—	°C

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

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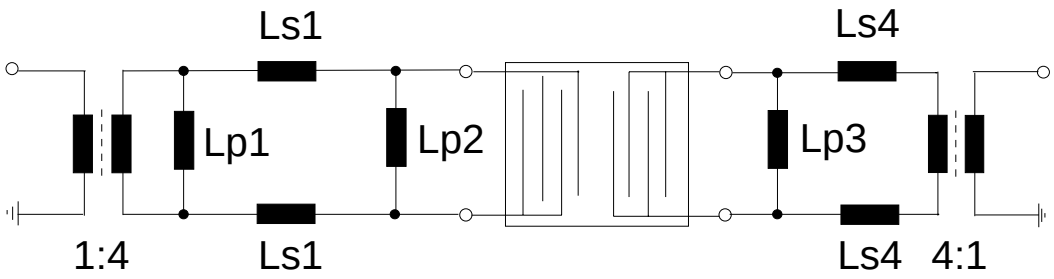
Matching network to 200 Ω

Transformers are only required for measurement in a 50 Ω environment

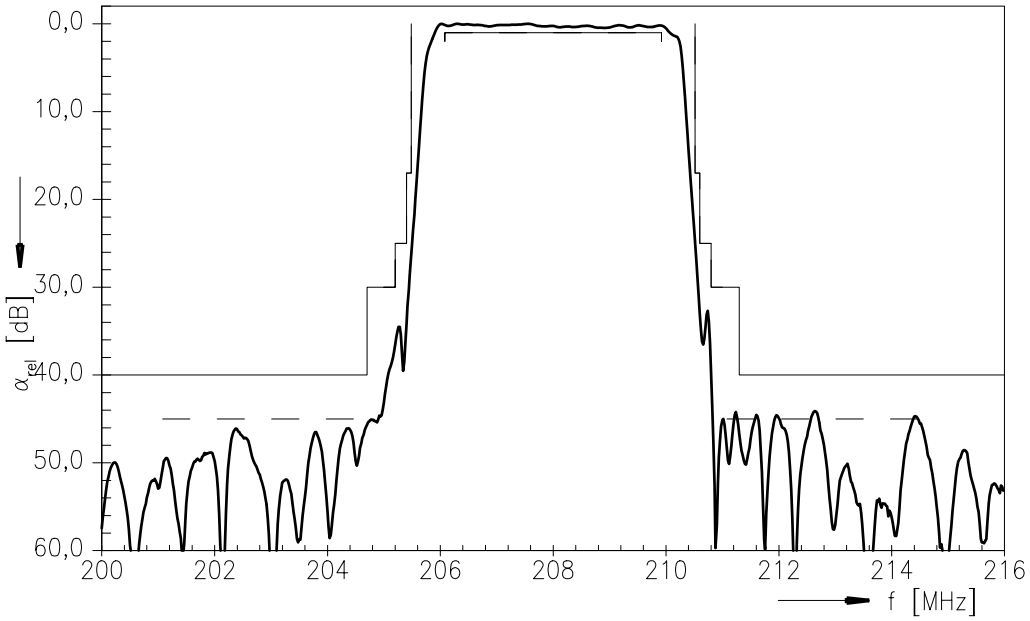


L_{s1} = 100 nH
L_{p2} = 100 nH
L_{p1} = 560 nH (for trimming)

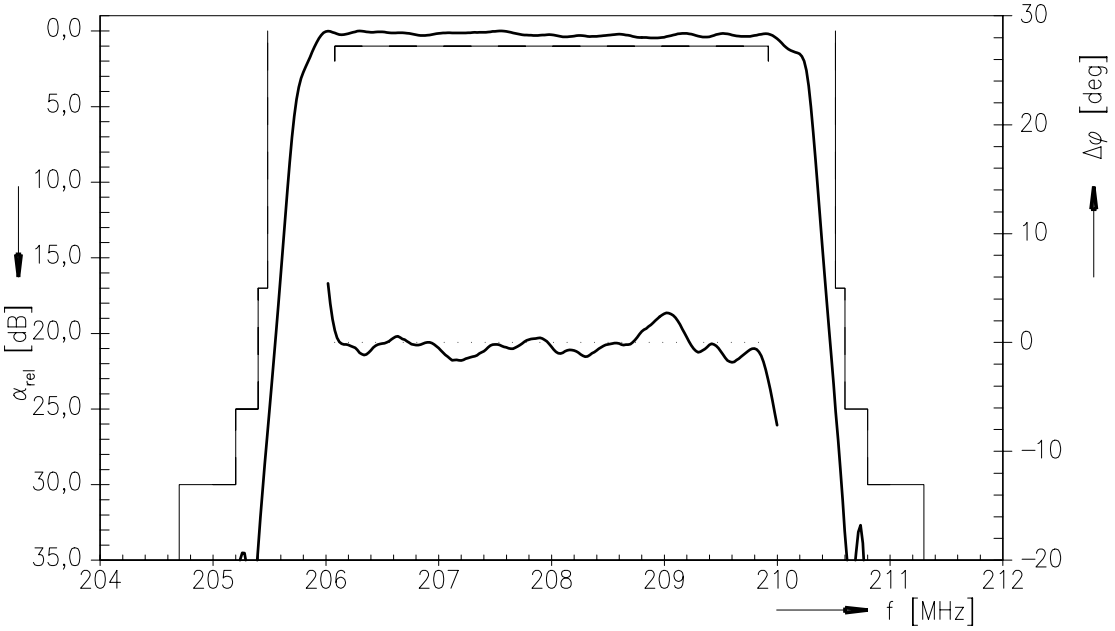
L_{p3} = 150 nH
L_{s4} = 150 nH

Element values depend upon board layout.

Transfer function



Transfer function (pass band)



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