EPCOS

SAW Components

Data Sheet B4542

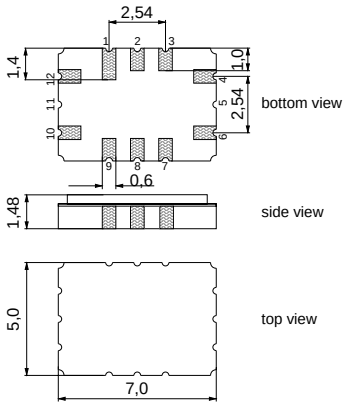
Ceramic package **QCC12C**

Features

- Low-loss IF filter for cordless application
- Channel selection in DECT system
- Ceramic package for **S**urface **M**ounted **T**echnology **(SMT)**

Terminals

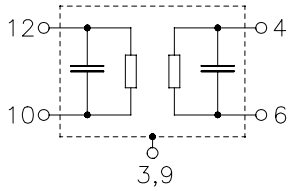
- Ni, gold-plated



Dimensions in mm, approx. weight 0,23 g

Pin configuration

12	Input
10	Input ground or balanced input
6	Output
4	Output ground or balanced output
3, 9	Case – ground
1, 2, 7, 8	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4542	B39111-B4542-H310	C61157-A7-A95	F61074-V8170-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

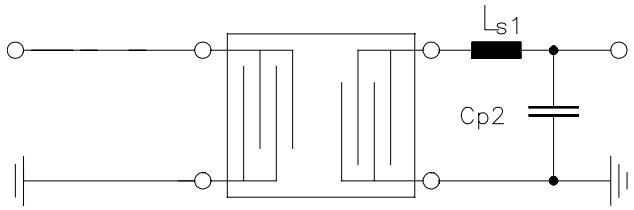
Operable temperature range	T	– 40/+ 85	˚C
Storage temperature range	T_{stg}	– 40/+ 85	˚C
DC voltage	V_{DC}	0	V
Source power	P_s	10	dBm

Characteristics

Operating temperature range: T = +25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 130 Ω || 62 nH

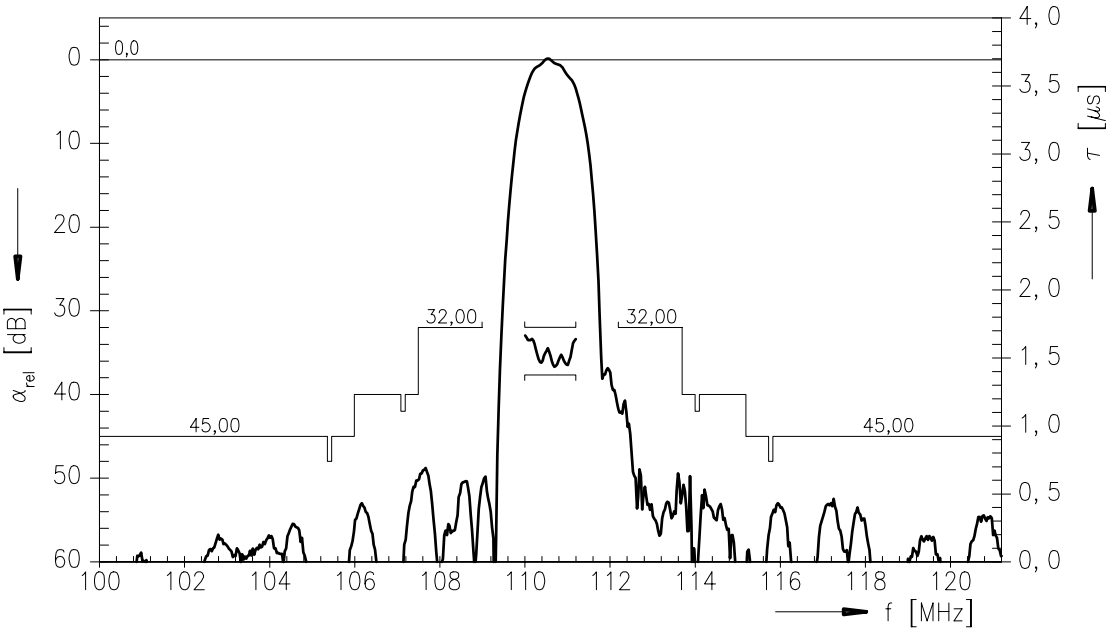
		min.	typ.	max.	
Nominal frequency	f_N	—	110,59	—	MHz
Center frequency (center frequency between 10 dB points)	f_c	110,48	110,59	110,70	MHz
Minimum insertion attenuation (including loss in matching coils)	α_{min}	—	12,2	13,5	dB
Passband width	B_{3dB}		1,1		MHz
	B_{30dB}		2,3		MHz
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 600 kHz ... f_N + 600 kHz		—	270	350	ns
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 1{,}6$ MHz ... $f_N \pm 3{,}1$ MHz		32	44	—	dB
$f_N \pm 3{,}1$ MHz ... $f_N \pm 4{,}6$ MHz		40	49	—	dB
$f_N \pm 4{,}6$ MHz ... $f_N \pm 20$ MHz		45	52	—	dB
$f_N \pm$ 1,728 MHz		32	44	—	dB
$f_N \pm 2\times 1{,}728$ MHz		42	53	—	dB
$f_N \pm 3\times 1{,}728$ MHz		48	55	—	dB
Impedance at f_N					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	170 || 30	—	Ω || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	170 || 30	—	Ω || pF
Temperature coefficient of frequency	TC_f	—	– 18	—	ppm/K

Matching network to 50 Ω (element values depend on PCB layout)**:**

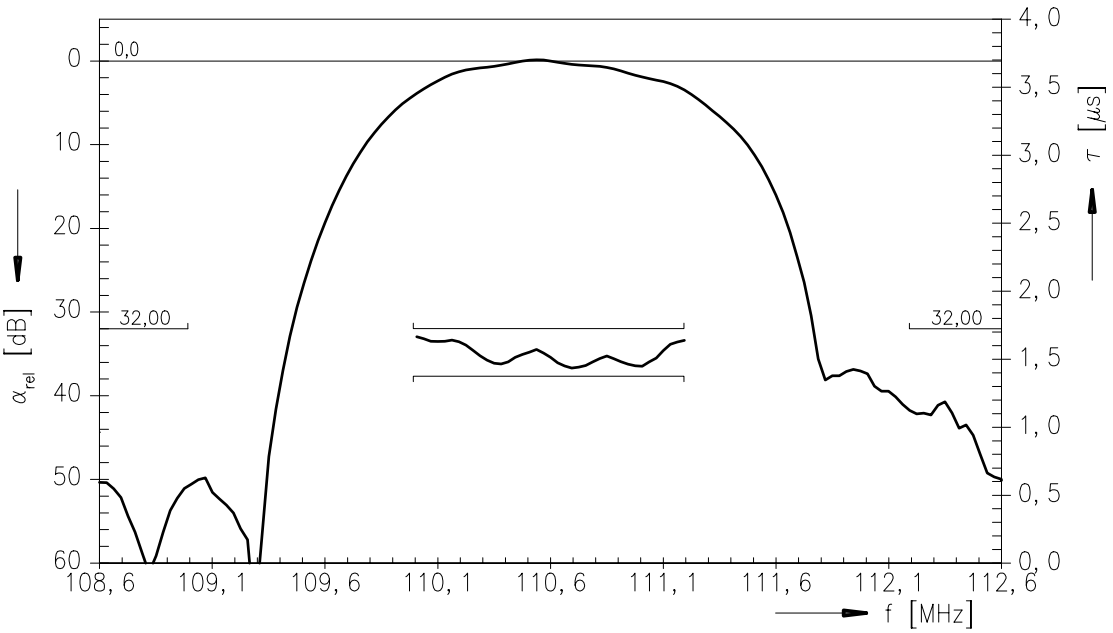


L_{s1} = 82 nH
C_{p2} = 47 pF

Transfer function:



Transfer function (pass band):



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