EPCOS

SAW Components

Data Sheet B5005

Data Sheet

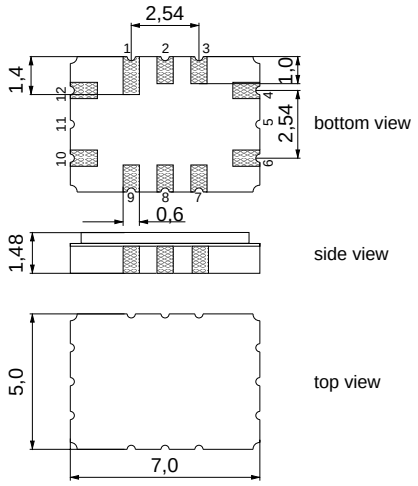
Ceramic package **QCC12C**

Features

- Low-loss IF filter for W-CDMA base station
- High near-by selectivity
- Temperature stable
- Balanced or unbalanced operation possible
- Ceramic SMD package

Terminals

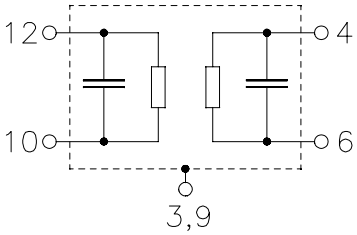
- Gold plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B5005	B39381-B5005-H310	C61157-A7-A95	F61074-V8170-Z000

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

Maximum ratings

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

Data Sheet

Characteristics

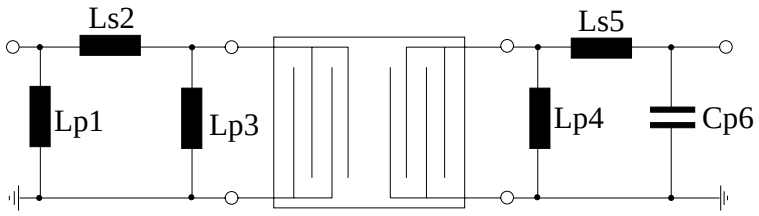
Operating temperature range: T_A = -10 ... +85 °C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	380,0	—	MHz
Minimum insertion attenuation	α_{min}	—	10,0	12,0	dB
Passband width					
$\alpha_{rel} \leq 1$ dB	$B_{1,0dB}$	3,84	4,2	—	MHz
$\alpha_{rel} \leq 30$ dB	B_{30dB}	—	6,6	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N \pm 1{,}92$ MHz		—	0,5	1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 1{,}92$ MHz		—	80	120	ns
VSWR					
$f_N \pm 1{,}92$ MHz		—	1,6:1	2,0:1	
Phase ripple (rms)	$\Delta\varphi$				
$f_N \pm 1{,}92$ MHz		—	0,6	—	° rms
Error vector magnitude	*EVM*				
$f_N \pm 1{,}92$ MHz		—	1,5	—	%
Adjacent channel suppression	*ACS*				
$f_N \pm 3{,}08$ MHz ... $f_N \pm 6{,}92$ MHz		—	35	—	dB
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 2{,}515$ MHz		4	6	—	dB
$f_N \pm 5$ MHz ... $f_N \pm 35$ MHz		35	40	—	dB
$f_N \pm 35$ MHz ... $f_N \pm 100$ MHz		40	45	—	dB
Temperature coefficient of frequency[1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	20	—	°C

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

Matching network to 50Ω

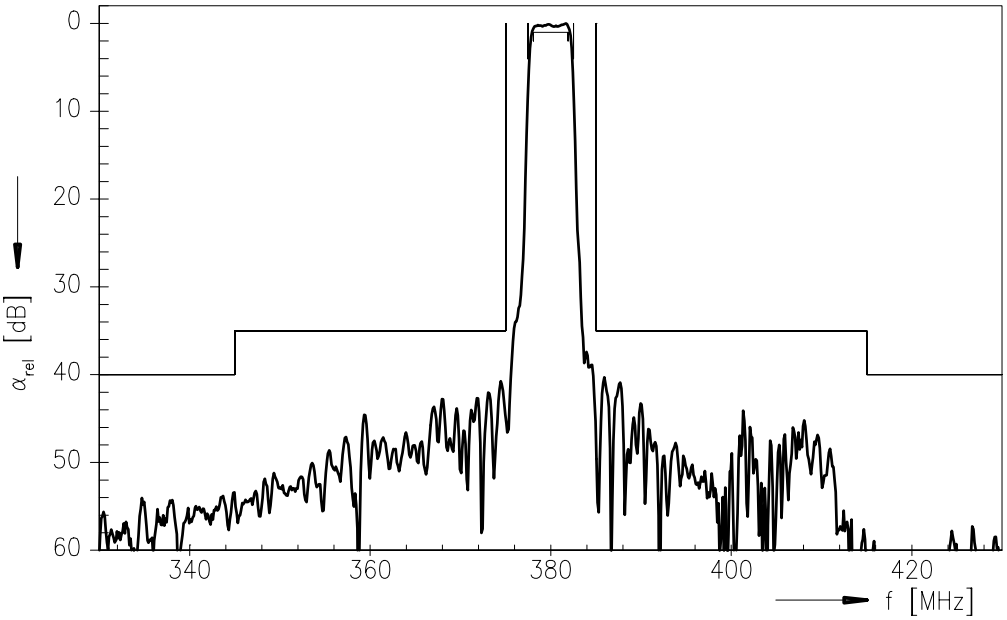
(Element values depend upon PCB layout)



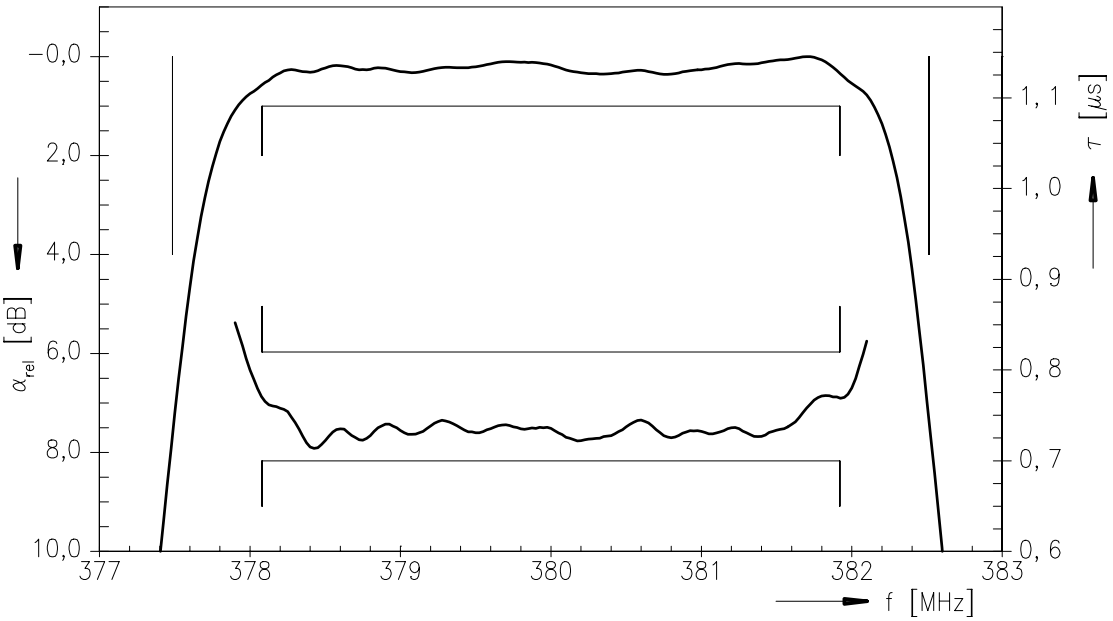
L_{p1} = 18 nH
L_{s2} = 62 nH
L_{p3} = 56 nH

L_{p4} = 27 nH
L_{s5} = 47 nH
C_{p6} = 5,6 pF

Transfer function



Transfer function (pass band)



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