EPCOS

SAW Components

Data Sheet B3688

Data Sheet

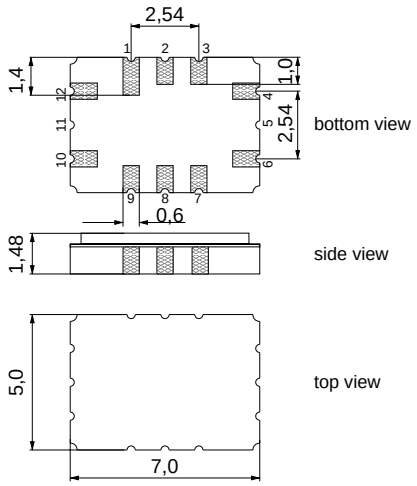
Ceramic package QCC12C

Features

- Low-loss filter
- Temperature stable
- Package for Surface Mounted Technology (SMT)
- Hermetically sealed ceramic package

Terminals

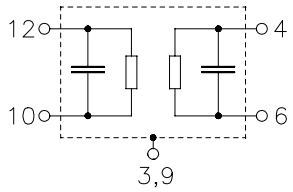
- Gold-plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B3688	B39501-B3688-H310	C61157-A7-A95	F61074-V8170-Z000

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

Maximum ratings

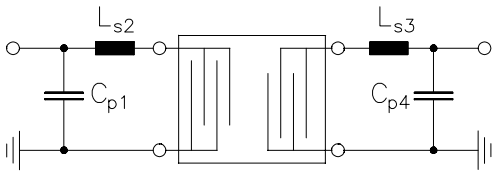
Operable temperature range	T	– 45/+ 85	˚C	
Storage temperature range	T_{stg}	– 40/+ 85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_S	10	dBm	source impedance 50 Ω

Characteristics

Operating temperature: T = -25 ... +75 ˚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	—	499,25	—	MHz
Insertion attenuation at f_N (T=25 ˚C)	α_N	6,0	8,0	9,0	dB
Variation of insertion att. (rel. to α_N)	α_{rel}	—	—	±0,9	dB
Frequency response					
3 dB Lower frequency	$f_{L\ 3dB}$	—	498,27	498,75	MHz
3 dB Upper frequency	$f_{U\ 3dB}$	499,75	500,23	—	MHz
35 dB Lower frequency	f_{L35dB}	496,25	496,75	—	MHz
35 dB Upper frequency	f_{U35dB}	—	501,85	502,25	MHz
Amplitude ripple (peak to adjacent valley)					
f_N ± 100 kHz		—	—	0,5	dB
Relative attenuation	α_{rel}				
f_N - 200,0 MHz ... f_N - 10,0 MHz		40	55	—	dB
f_N - 10,0 MHz ... f_N - 3,0 MHz		35	48	—	dB
f_N + 3,0 MHz ... f_N + 10,0 MHz		35	43	—	dB
f_N + 10,0 MHz ... f_N + 200,0 MHz		40	51	—	dB
Temperature coefficient of frequency 1)	TC_f	—	– 0,036	—	ppm/K²
Turnover temperature	T_0	—	25	—	˚C

Matching circuit:

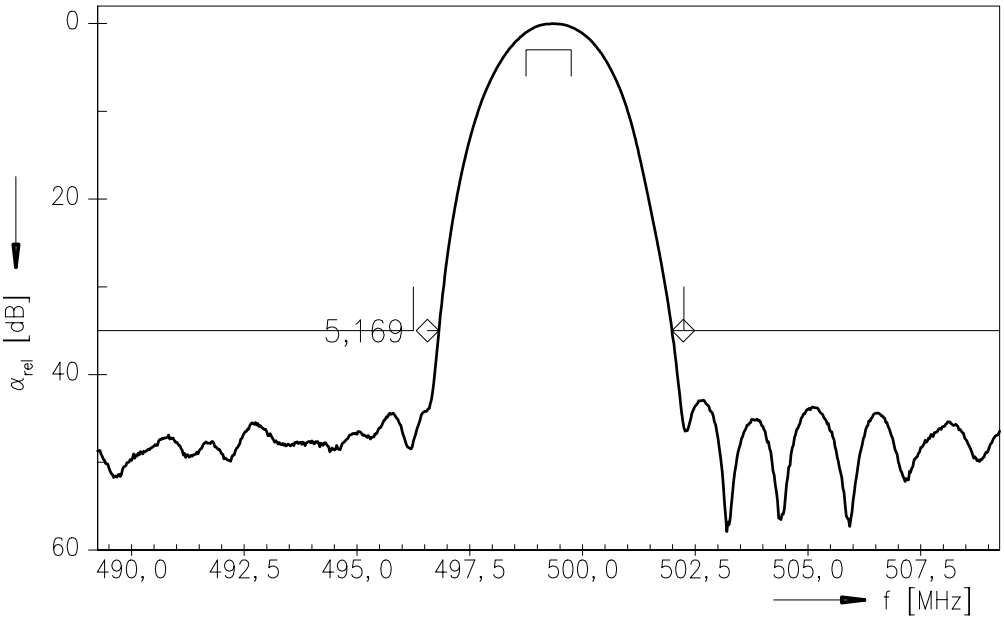


C_{p1} = 14pF 2)
L_{s2} = 21nH 2)
L_{s3} = 22nH 2)
C_{p4} = 13pF 2)

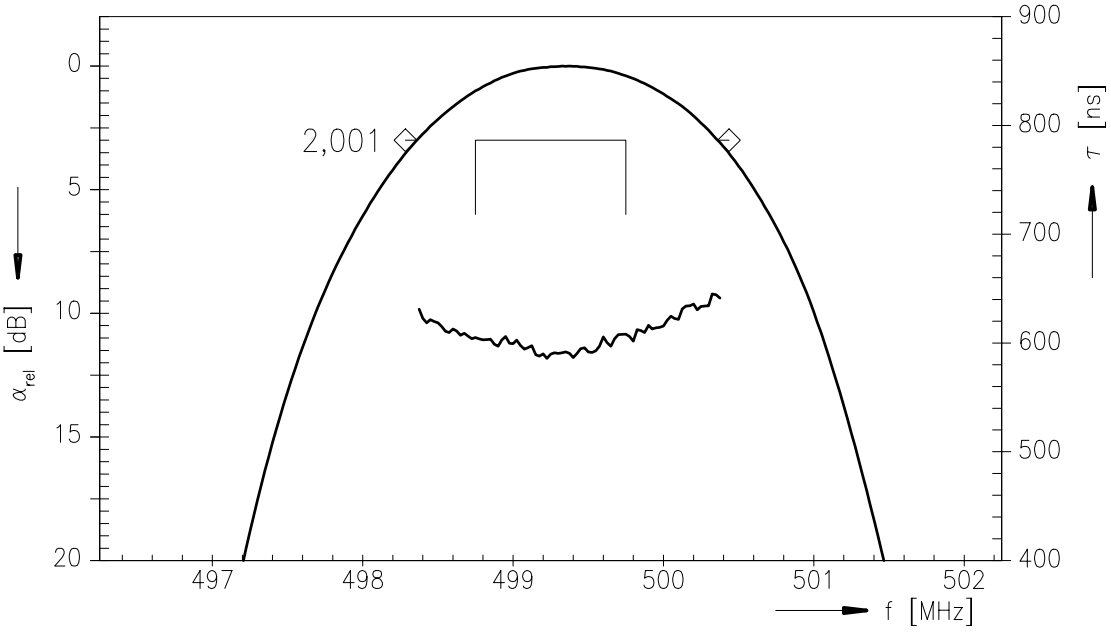
1) Temperature dependance of f_c: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

2) Element values depend on PCB layout

Normalized frequency response



Normalized frequency response (pass band)



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

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.