



SAW filters for infrastructure systems

Series/Type: **B3688**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39501B3688H310		2012-01-13	2012-12-31	2013-03-30

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.



SAW Components

B3688

Low-Loss Filter

499,25 MHz

Data Sheet

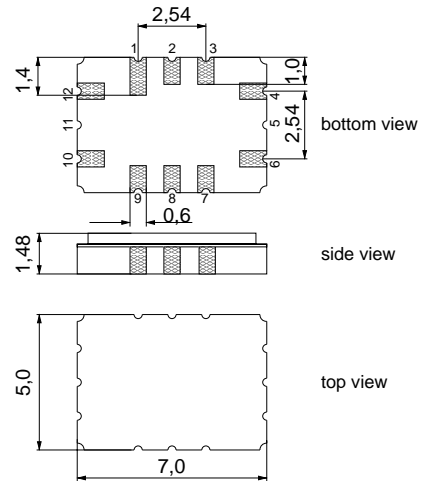
Ceramic package QCC12C

Features

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

Terminals

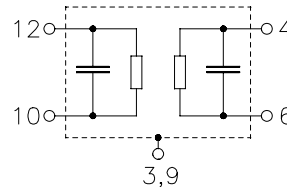
- Gold-plated



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 Sensitive Device (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



SAW Components

B3688

Low-Loss Filter

499,25 MHz

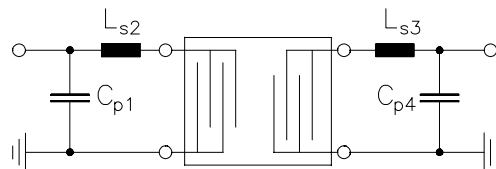
Data Sheet

Characteristics

Operating temperature: $T = -25 \dots +75 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ and matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	499,25	—	MHz
Insertion attenuation at f_N ($T=25 \text{ }^\circ\text{C}$)	α_N	6,0	8,0	9,0	dB
Variation of insertion att. (rel. to α_N)	α_{rel}	—	—	$\pm 0,9$	dB
Frequency response					
3 dB Lower frequency	$f_{L \text{ 3dB}}$	—	498,27	498,75	MHz
3 dB Upper frequency	$f_{U \text{ 3dB}}$	499,75	500,23	—	MHz
35 dB Lower frequency	$f_{L \text{ 35dB}}$	496,25	496,75	—	MHz
35 dB Upper frequency	$f_{U \text{ 35dB}}$	—	501,85	502,25	MHz
Amplitude ripple (peak to adjacent valley)					
$f_N \pm 100 \text{ kHz}$		—	—	0,5	dB
Relative attenuation					
$f_N - 200,0 \text{ MHz} \dots f_N - 10,0 \text{ MHz}$	α_{rel}	40	55	—	dB
$f_N - 10,0 \text{ MHz} \dots f_N - 3,0 \text{ MHz}$		35	48	—	dB
$f_N + 3,0 \text{ MHz} \dots f_N + 10,0 \text{ MHz}$		35	43	—	dB
$f_N + 10,0 \text{ MHz} \dots f_N + 200,0 \text{ MHz}$		40	51	—	dB
Temperature coefficient of frequency ¹⁾	TC_f	—	- 0,036	—	ppm/K ²
Turnover temperature	T_0	—	25	—	$^\circ\text{C}$

Matching circuit:



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

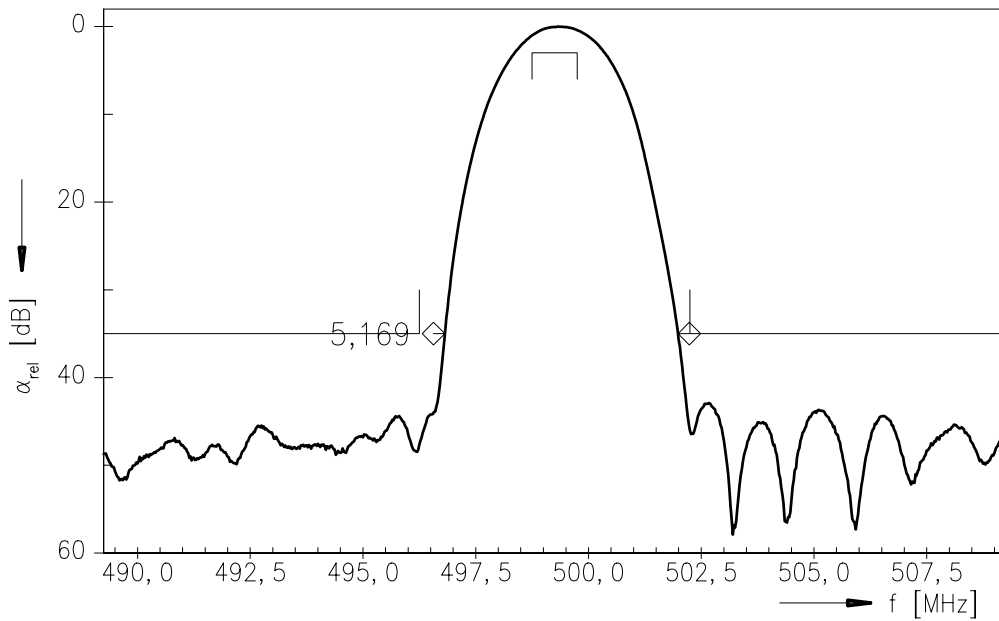
¹⁾ Temperature dependance of f_c : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

²⁾ Element values depend on PCB layout

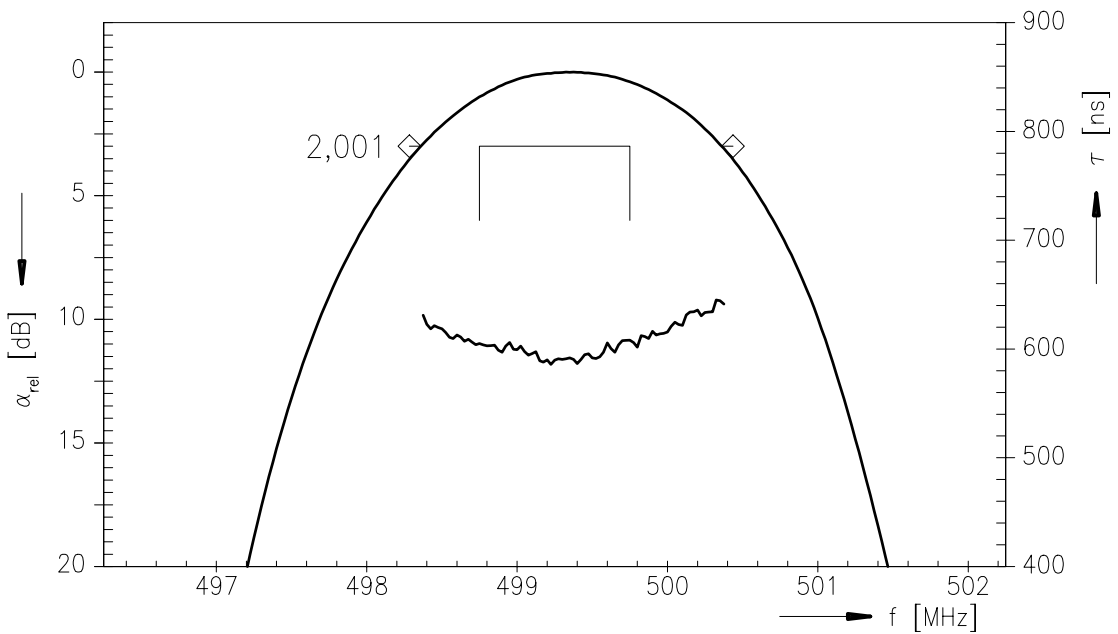


Data Sheet

Normalized frequency response



Normalized frequency response (pass band)





SAW Components

B3688

Low-Loss Filter

499,25 MHz

Data Sheet

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC IS

P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2003. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Qualcomm RF360:](#)

[B39501B3688H310](#)