



SAW Components

Data Sheet B3839

Data Sheet

A large, stylized, 3D-rendered graphic of the word "EPCOS" in a light gray, sans-serif font. The letters are tilted and appear to be floating or emerging from a dark, textured background that resembles a globe or a complex circuit board. The overall effect is futuristic and high-tech.



SAW Components

B3839

Low-Loss Filter

333,0 MHz

Data Sheet

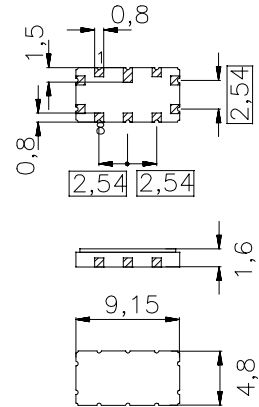
Ceramic package QCC10B

Features

- Low-loss IF-filter for WLL
- Usable bandwidth 0,8 MHz
- Temperature stable
- Ceramic SMD package

Terminals

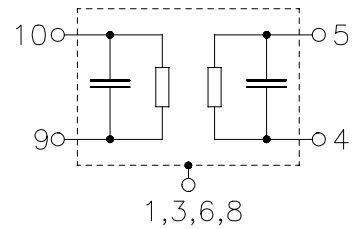
- Gold plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

10	Input
9	Input ground
5	Output
4	Output ground
2, 7	Ground
1, 3, 6, 8	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3839	B39331-B3839-Z710	C61157-A7-A49	F61074-V8035-Z000

Electrostatic Sensitive Device (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



SAW Components	B3839
Low-Loss Filter	333,0 MHz

Data Sheet

Characteristics

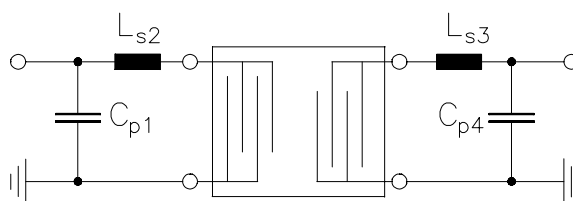
Operating temperature range:	$T_A = -40 \dots 85 \text{ }^{\circ}\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega$ and external matching network
Terminating load impedance:	$Z_L = 50 \text{ } \Omega$ and external matching network

		min.	typ.	max.	
Center frequency	f_c				
$\alpha_{\text{rel}} = 3,0 \text{ dB}$		332,88	333,0	333,12	MHz
Minimum insertion attenuation	α_{min}	—	6,5	8	dB
Passband width					
$\alpha_{\text{rel}} \leq 3,0 \text{ dB}$	$B_{3,0\text{dB}}$	900	1010	1045	kHz
$\alpha_{\text{rel}} \leq 20,0 \text{ dB}$	$B_{20\text{dB}}$	—	1840	2000	kHz
$\alpha_{\text{rel}} \leq 30,0 \text{ dB}$	$B_{30\text{dB}}$	—	2080	2250	kHz
$\alpha_{\text{rel}} \leq 40,0 \text{ dB}$	$B_{40\text{dB}}$	—	2250	2500	kHz
$\alpha_{\text{rel}} \leq 50,0 \text{ dB}$	$B_{50\text{dB}}$	—	4500	—	kHz
Relative attenuation (relative to α_{min})	α_{rel}				
$f_c - 50,0 \text{ MHz} \dots f_c - 3,0 \text{ MHz}$		48	50	—	dB
$f_c + 3,0 \text{ MHz} \dots f_c + 20,0 \text{ MHz}$		47	50	—	dB
$f_c + 20,0 \text{ MHz} \dots f_c + 40,0 \text{ MHz}$		44	48	—	dB
$f_c + 40,0 \text{ MHz} \dots f_c + 50,0 \text{ MHz}$		48	50	—	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_c \pm 0,4 \text{ MHz}$		—	0,5	1,0	dB
Absolute group delay (at f_c)	τ	—	0,9	—	μs
Group delay ripple (p-p)	$\Delta\tau$				
$f_c \pm 0,4 \text{ MHz}$		—	430	500	ns
Reflected Wave Signal Suppression					
12 μs ... 20 μs after main pulse		70	80	—	dB
Temperature coefficient of frequency ¹⁾	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	15	—	$^{\circ}\text{C}$

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

**SAW Components****B3839****Low-Loss Filter****333,0 MHz****Data Sheet****Matching network**

(Element values depend upon PCB layout)



$$C_{p1} = 18 \text{ pF}$$

$$L_{s2} = 22 \text{ nH}$$

$$L_{s3} = 33 \text{ nH}$$

$$C_{p4} = 15 \text{ pF}$$



SAW Components

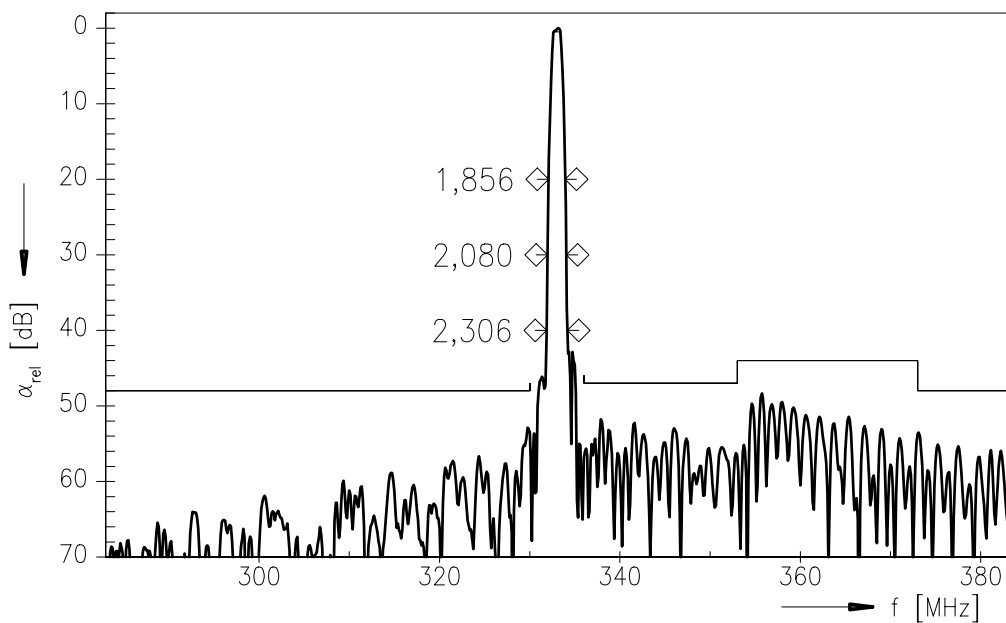
B3839

Low-Loss Filter

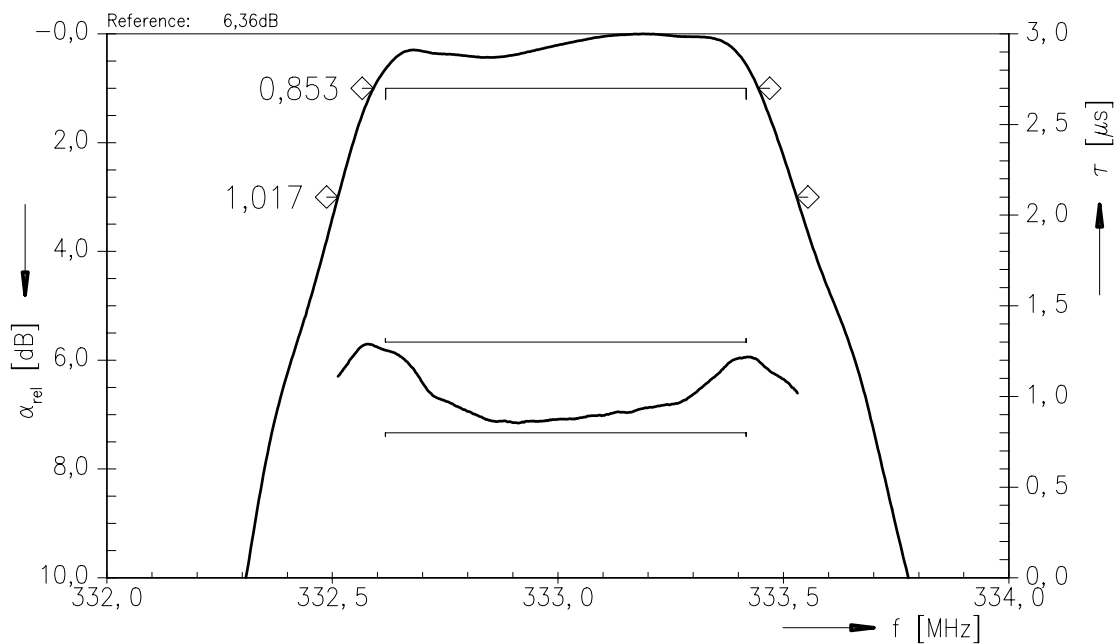
333,0 MHz

Data Sheet

Transfer function



Transfer function (pass band)





SAW Components

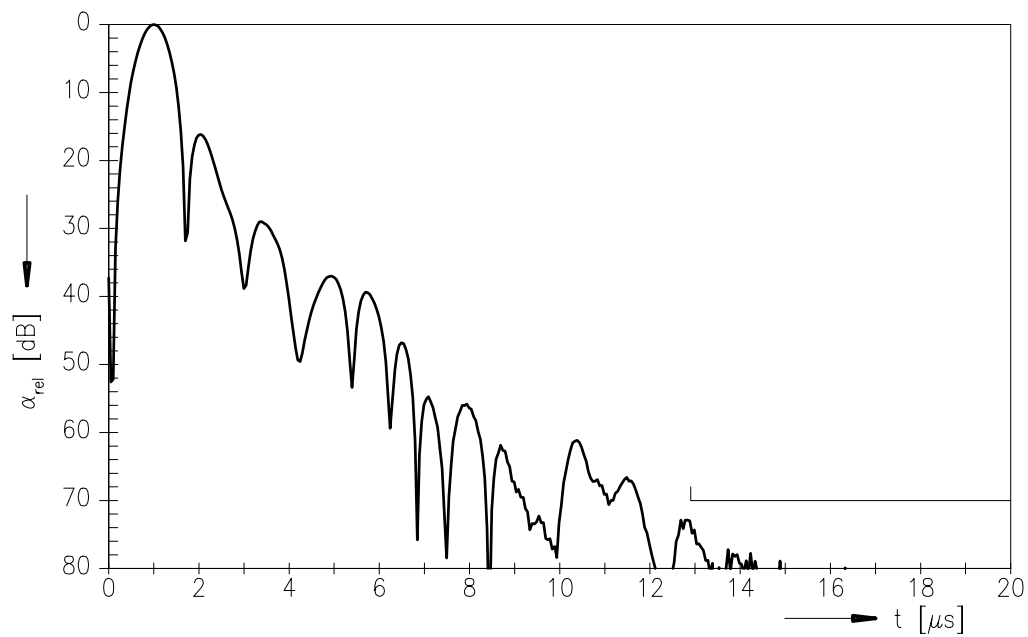
B3839

Low-Loss Filter

333,0 MHz

Data Sheet

Impulse response





SAW Components

B3839

Low-Loss Filter

333,0 MHz

Data Sheet

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC IS

P.O. Box 80 17 09, D-81617 München

© EPCOS AG 2001. All Rights Reserved. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. 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.