



SAW Components

Data Sheet B3884

Data Sheet

A large, stylized, 3D 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 pattern.



SAW Components

B3884

Low-Loss Filter

439,25 MHz

Data Sheet

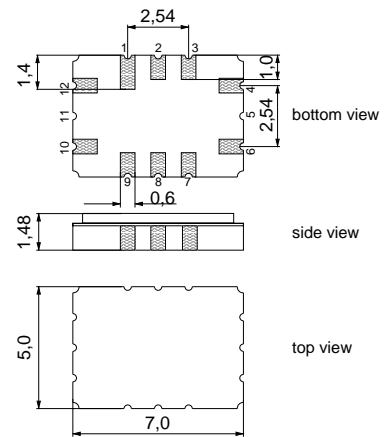
Features

- Low-loss filter
- Temperature stable
- Ceramic SMD package

Terminals

- Gold-plated

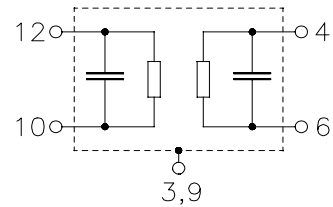
Ceramic package QCC12C



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
B3884	B39441-B3884-H310	C61157-A7-A95	F61074-V8170-Z000

Electrostatic Sensitive Device (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	



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Characteristics

Operating temperature:

$T = -25 \dots +85 \text{ }^{\circ}\text{C}$

Terminating source impedance:

$Z_S = 75 \text{ } \Omega$ and matching network

Terminating load impedance:

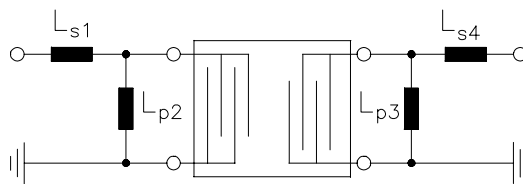
$Z_L = 75 \text{ } \Omega$ and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	439,25	—	MHz
Insertion attenuation at f_N ($T=25 \text{ }^{\circ}\text{C}$)	α_N	6,5	8,3	9,5	dB
Variation of insertion att. (rel. to α_N)	α_{rel}	—	$\pm 0,7$	$\pm 0,9$	dB
Frequency response					
3 dB Lower frequency	$f_{L \text{ 3dB}}$	—	438,3	438,75	MHz
3 dB Upper frequency	$f_{U \text{ 3dB}}$	439,75	440,3	—	MHz
35 dB Lower frequency	$f_{L \text{ 35dB}}$	436,25	436,8	—	MHz
35 dB Upper frequency	$f_{U \text{ 35dB}}$	—	441,8	442,25	MHz
Amplitude ripple (peak to adjacent valley) $f_N \pm 100 \text{ kHz}$		—	0,1	0,5	dB
Relative attenuation	α_{rel}				
$f_N - 200,0 \text{ MHz} \dots f_N - 10,0 \text{ MHz}$		40	50	—	dB
$f_N - 10,0 \text{ MHz} \dots f_N - 3,0 \text{ MHz}$		35	50	—	dB
$f_N + 3,0 \text{ MHz} \dots f_N + 10,0 \text{ MHz}$		35	48	—	dB
$f_N + 10,0 \text{ MHz} \dots f_N + 200,0 \text{ MHz}$		40	45	—	dB
Temperature coefficient of frequency ¹⁾	TC_f	—	$-0,036$	—	ppm/K ²
Turnover temperature	T_0	—	45	—	$^{\circ}\text{C}$

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

**SAW Components****B3884****Low-Loss Filter****439,25 MHz****Data Sheet****Matching network to 75 Ω**

(Element values depend on PCB layout)



$$L_{s1} = 39 \text{ nH}$$

$$L_{p2} = 18 \text{ nH}$$

$$L_{p3} = 18 \text{ nH}$$

$$L_{s4} = 56 \text{ nH}$$



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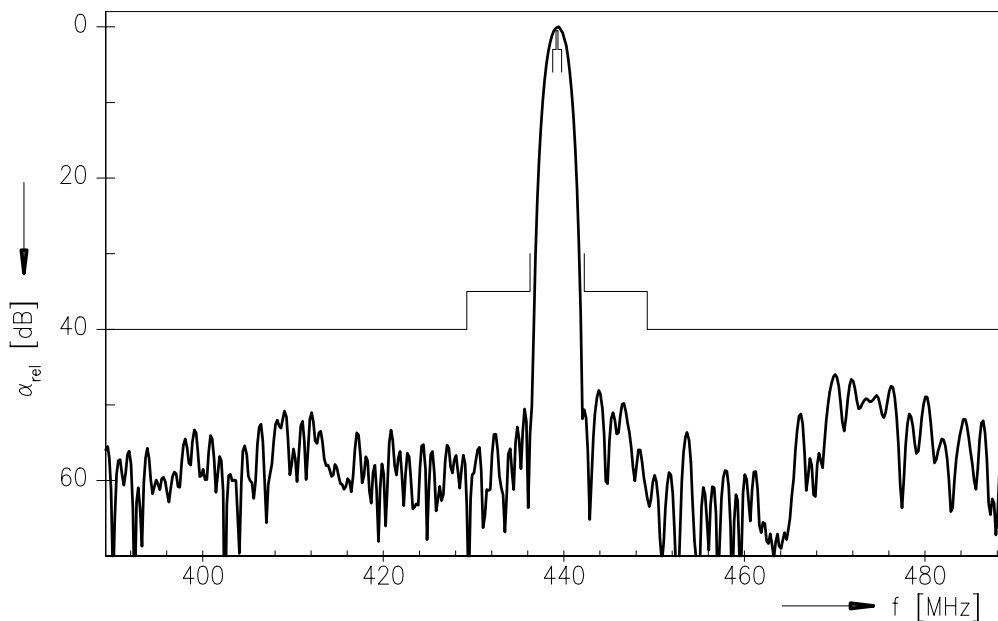
B3884

Low-Loss Filter

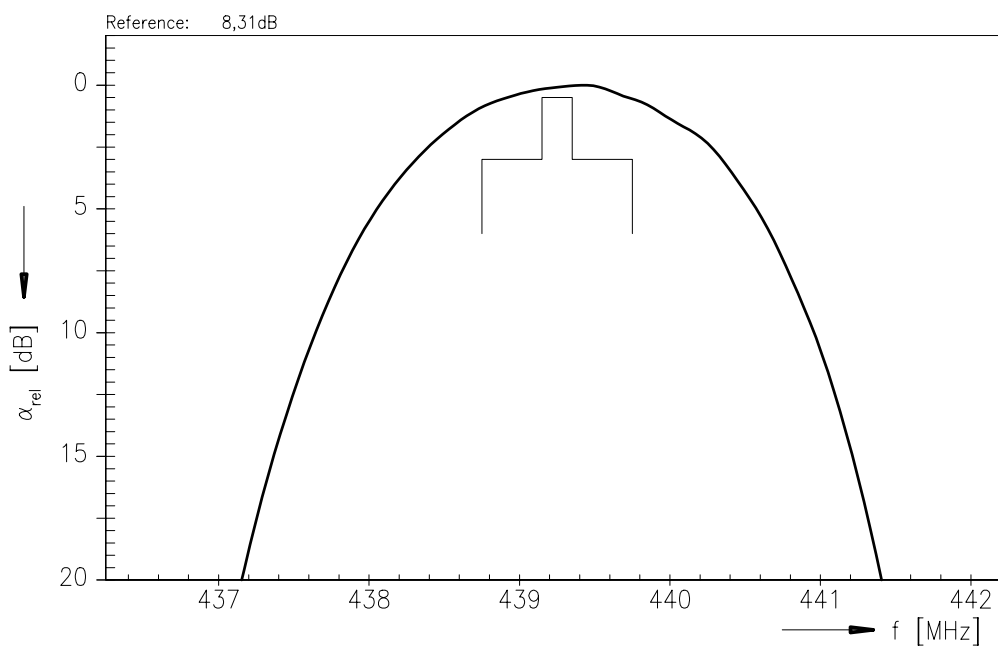
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Normalized frequency response



Normalized frequency response





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