EPCOS

SAW Components

Data Sheet B3884

Data Sheet

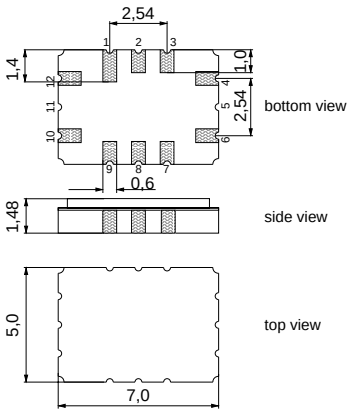
Ceramic package **QCC12C**

Features

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

Terminals

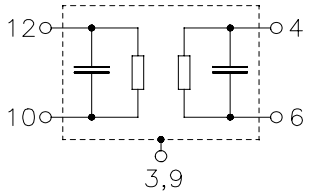
- Gold-plated



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

Electrostatic **S**ensitive **D**evice (**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	

Characteristics

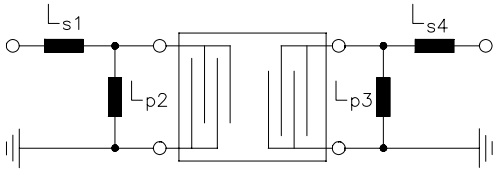
Operating temperature: T = -25 ... +85 ˚C
Terminating source impedance: Z_S = 75 Ω and matching network
Terminating load impedance: Z_L = 75 Ω and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	439,25	—	MHz
Insertion attenuation at f_N (T=25 ˚C)	α_N	6,5	8,3	9,5	dB
Variation of insertion att. (rel. to α_N)	α_{rel}	—	±0,7	±0,9	dB
Frequency response					
3 dB Lower frequency	$f_{L\ 3dB}$	—	438,3	438,75	MHz
3 dB Upper frequency	$f_{U\ 3dB}$	439,75	440,3	—	MHz
35 dB Lower frequency	f_{L35dB}	436,25	436,8	—	MHz
35 dB Upper frequency	f_{U35dB}	—	441,8	442,25	MHz
Amplitude ripple (peak to adjacent valley)					
f_N ± 100 kHz		—	0,1	0,5	dB
Relative attenuation	α_{rel}				
f_N - 200,0 MHz ... f_N - 10,0 MHz		40	50	—	dB
f_N - 10,0 MHz ... f_N - 3,0 MHz		35	50	—	dB
f_N + 3,0 MHz ... f_N + 10,0 MHz		35	48	—	dB
f_N + 10,0 MHz ... f_N + 200,0 MHz		40	45	—	dB
Temperature coefficient of frequency [1]	TC_f	—	– 0,036	—	ppm/K²
Turnover temperature	T_0	—	45	—	˚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 75 Ω

(Element values depend on PCB layout)



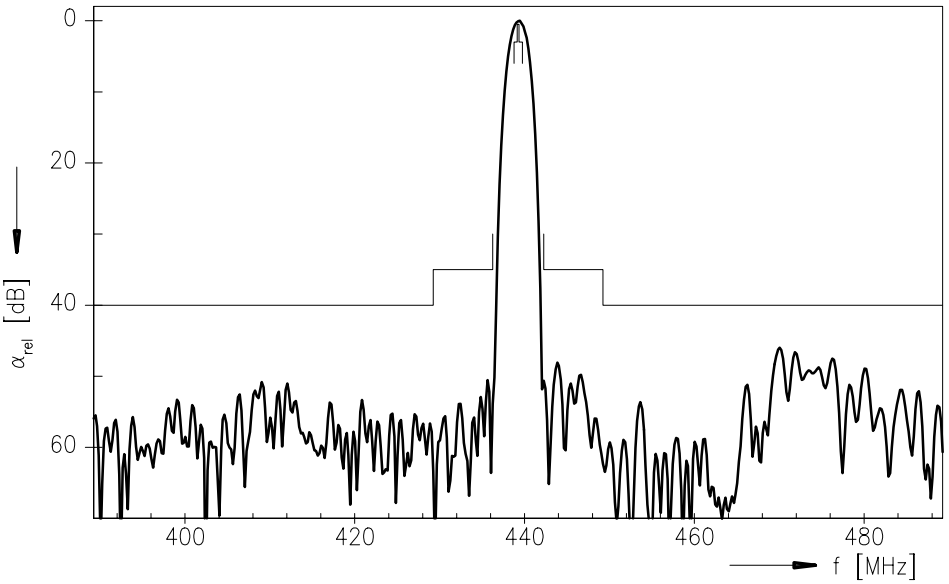
L_{s1} = 39 nH

L_{p2} = 18 nH

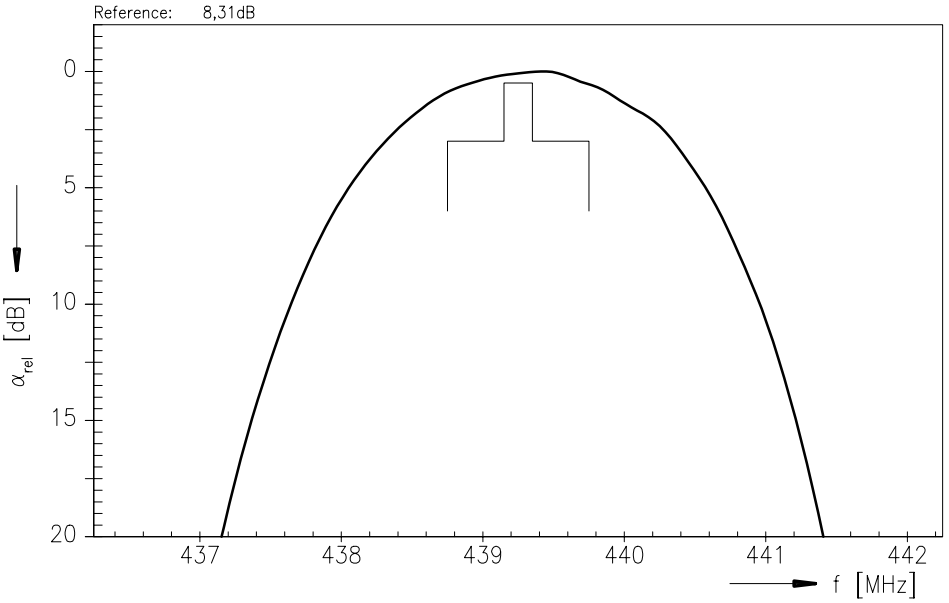
L_{p3} = 18 nH

L_{s4} = 56 nH

Normalized frequency response



Normalized frequency response



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

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