



SAW Components

Data Sheet B3884





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B3884

Low-Loss Filter

439,25 MHz

Data Sheet

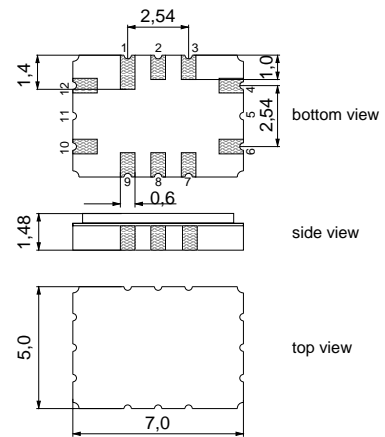
Ceramic package QCC12C

Features

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

Terminals

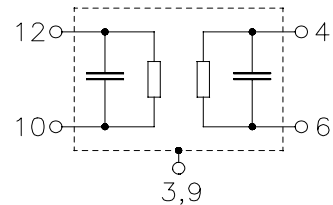
- Gold-plated



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 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					
$f_N - 200,0 \text{ MHz} \dots f_N - 10,0 \text{ MHz}$	α_{rel}	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 : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



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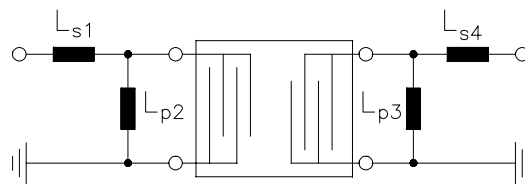
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Matching network to 75 Ω

(Element values depend on PCB layout)



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

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

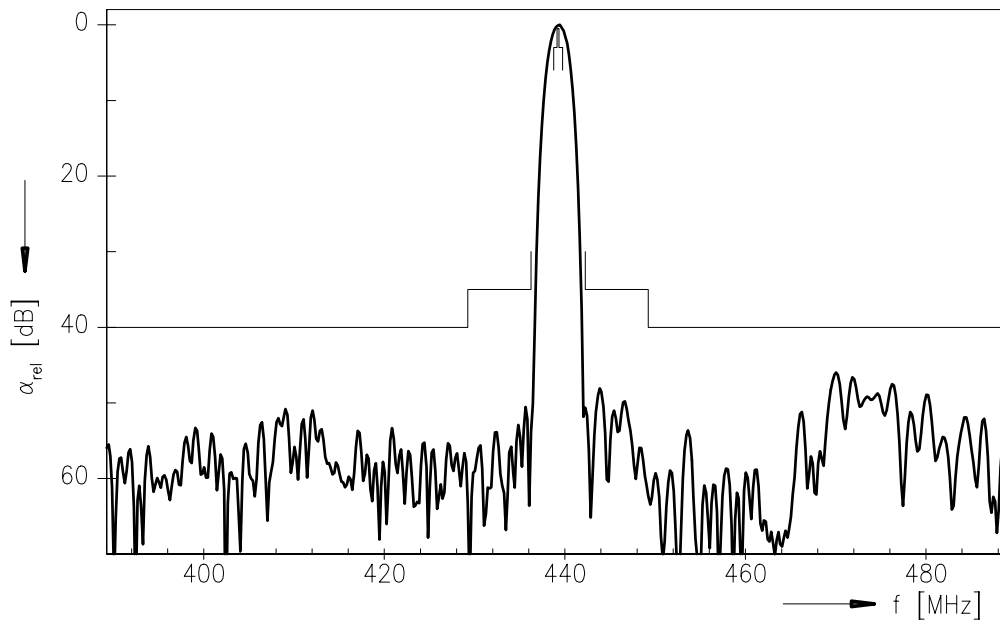
$$L_{p3} = 18 \text{ nH}$$

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

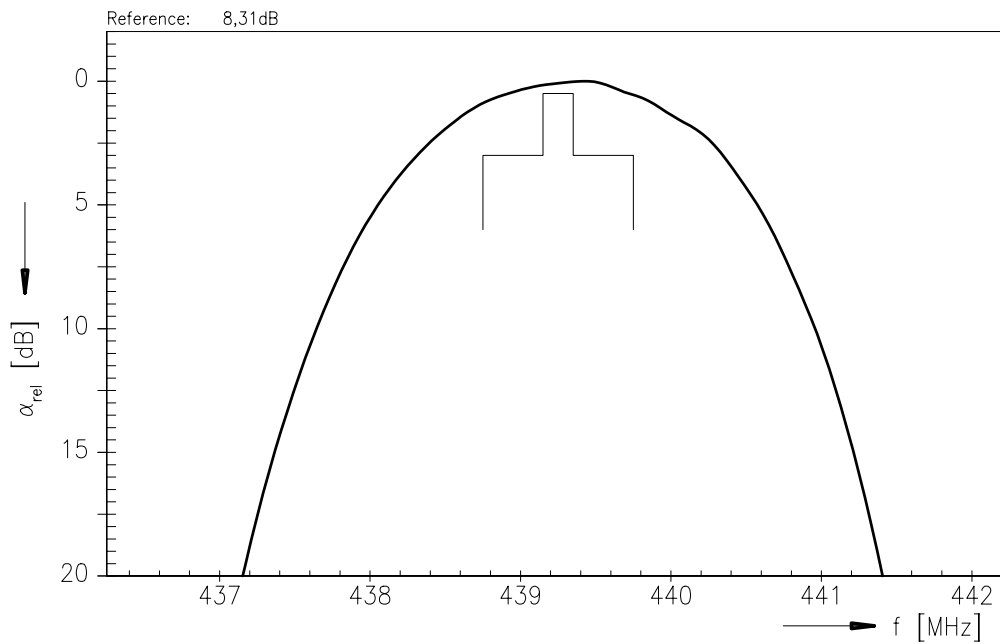


Data Sheet

Normalized frequency response



Normalized frequency response





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