



SAW Components

Preliminary Data Sheet B3844





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B3844

Low-Loss Filter

423,25 MHz

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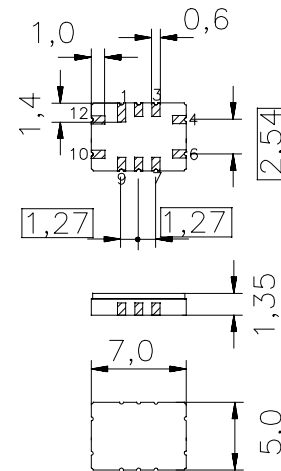
Ceramic package QCC12B

Features

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

Terminals

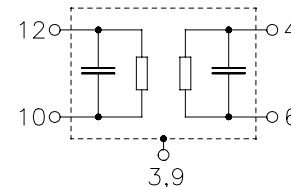
- Gold-plated



Dimensions in mm, approx.

Pin configuration

- 10 Input
- 12 Input ground or bal. input
- 4 Output
- 6 Output ground or bal. output
- 1, 2, 3, 7, 8, 9 To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B3844	B39421B3844Z910	C61157A0007A052	F61074V8038Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 45/+ 85	°C	source impedance 75 Ω
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	



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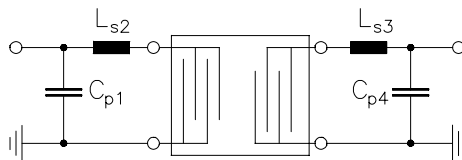
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Characteristics

Operating temperature: $T = -40 \dots +85 \text{ }^\circ\text{C}$
 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	—	423,25	—	MHz
Insertion attenuation at f_N ($T=25 \text{ }^\circ\text{C}$)	α_N	4,5	5,7	7,5	dB
Variation of insertion att. (rel. to α_N)	α_{rel}	—	—	$\pm 0,9$	dB
Frequency response					
3 dB Lower frequency	$f_{L \text{ 3dB}}$	—	422,27	422,75	MHz
3 dB Upper frequency	$f_{U \text{ 3dB}}$	423,75	424,23	—	MHz
35 dB Lower frequency	$f_{L \text{ 35dB}}$	420,25	420,75	—	MHz
35 dB Upper frequency	$f_{U \text{ 35dB}}$	—	425,85	426,25	MHz
Amplitude ripple (peak to adjacent valley)					
$f_N \pm 100 \text{ kHz}$		—	0,3	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	41	—	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	48	—	dB
Temperature coefficient of frequency ¹⁾	TC_f	—	- 0,036	—	ppm/K ²
Turnover temperature	T_0	—	25	—	$^\circ\text{C}$

Matching circuit:



$C_{p1} = 12 \text{ pF} \text{ }^2)$
 $L_{s2} = 22 \text{ nH} \text{ }^2)$
 $L_{s3} = 18 \text{ nH} \text{ }^2)$
 $C_{p4} = 10 \text{ pF} \text{ }^2)$

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



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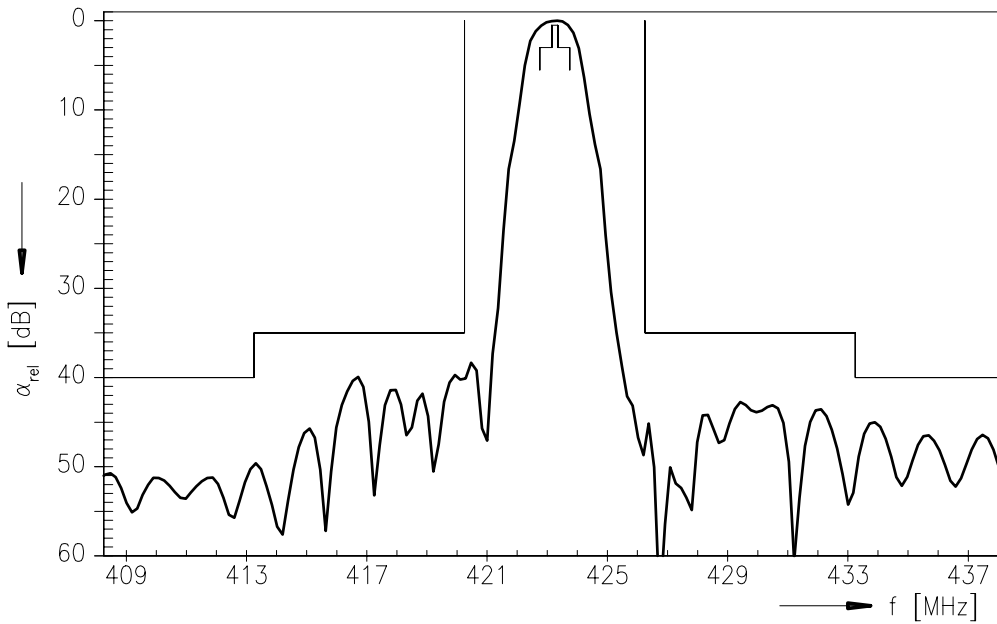
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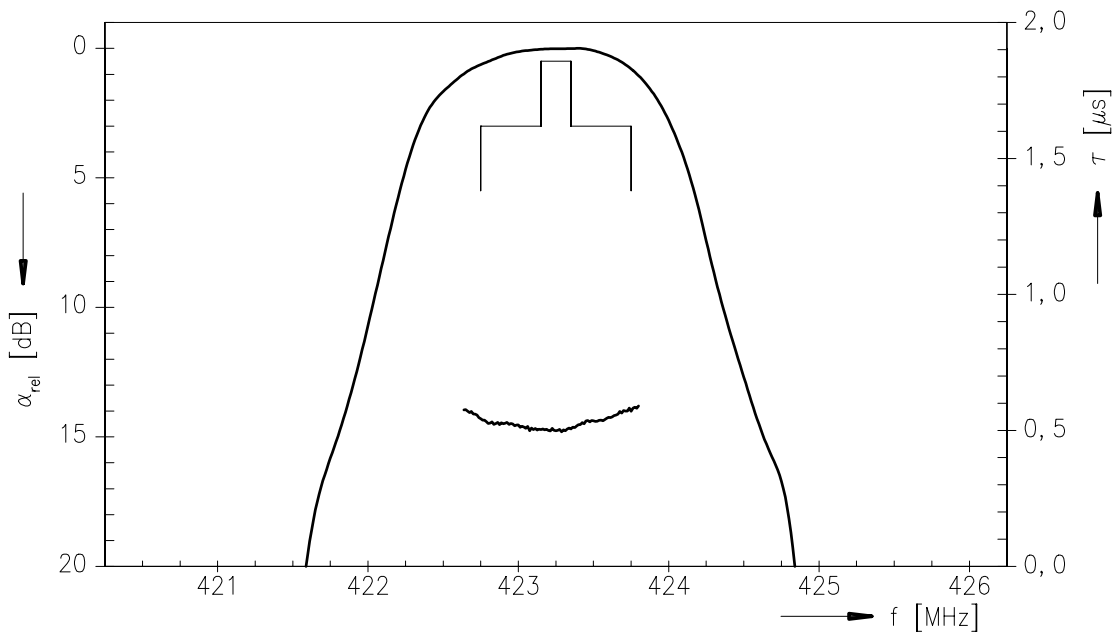
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Normalized frequency response



Normalized frequency response





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**Surface Acoustic Wave Components Division, SAW MC IS,
P.O. Box 80 17 09, 81617 Munich, GERMANY**

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