



SAW Components

Preliminary Data Sheet B3844

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background that includes a faint, glowing globe and circuitry patterns, suggesting a high-tech or electronic theme.



SAW Components

B3844

Low-Loss Filter

423,25 MHz

Preliminary Data Sheet

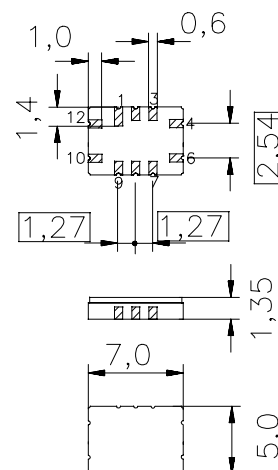
Features

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

Terminals

- Gold-plated

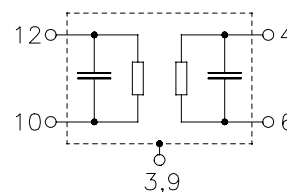
Ceramic package QCC12B



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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Characteristics

Operating temperature:

$T = -40 \dots +85 \text{ }^{\circ}\text{C}$

Terminating source impedance:

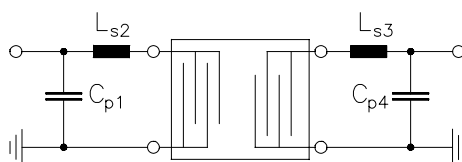
$Z_S = 75 \text{ } \Omega$ and matching network

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:



$C_{p1} = 12 \text{ pF}$ ²⁾

$L_{s2} = 22 \text{ nH}$ ²⁾

$L_{s3} = 18 \text{ nH}$ ²⁾

$C_{p4} = 10 \text{ pF}$ 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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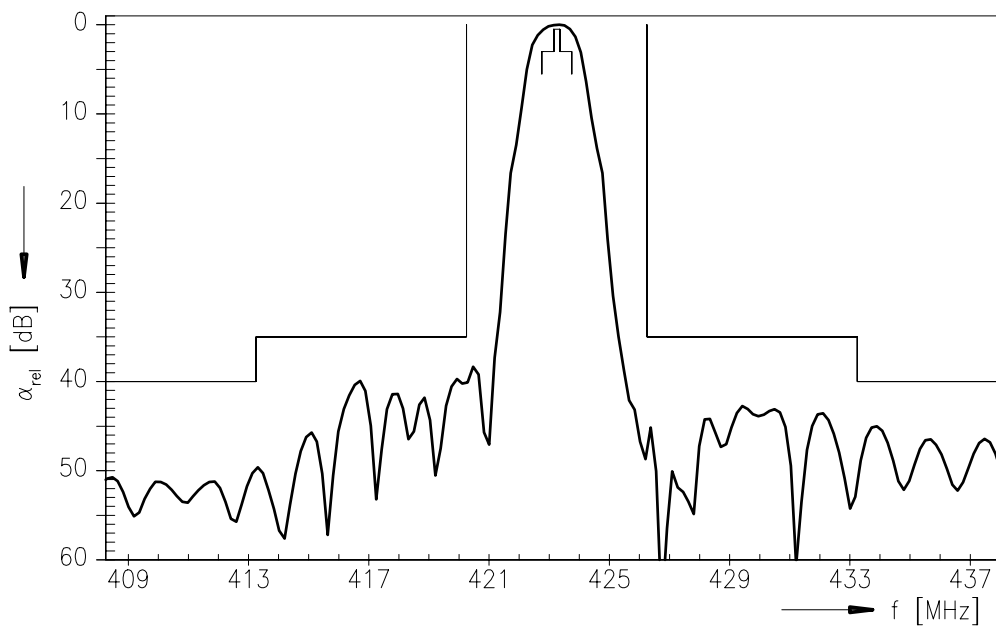
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Low-Loss Filter

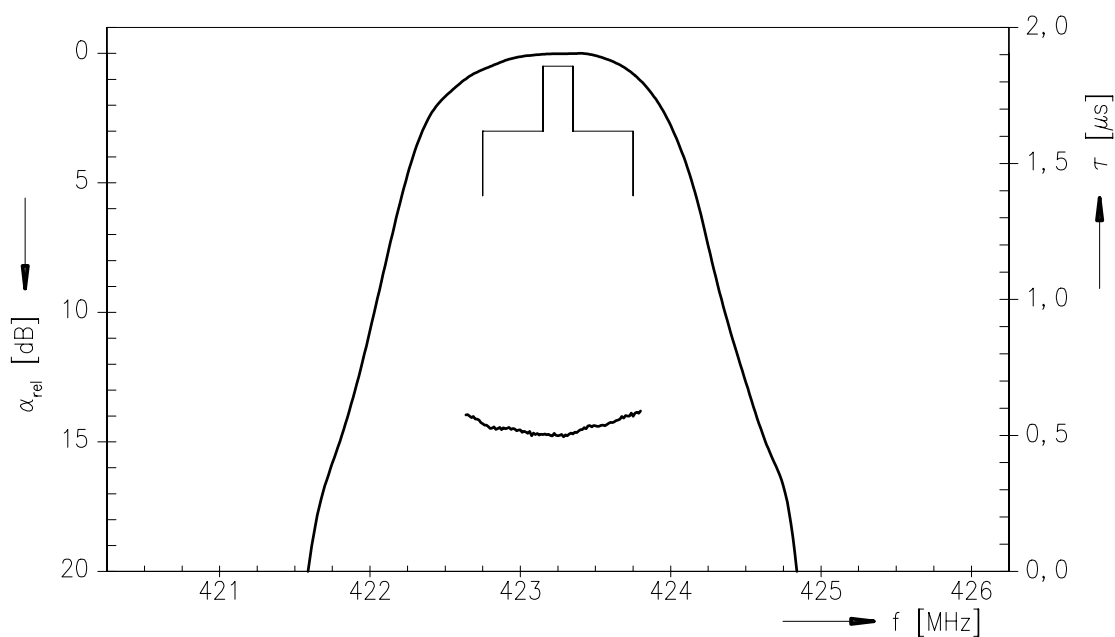
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Normalized frequency response



Normalized frequency response





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