



# SAW Components

Data Sheet B3677

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are rendered in a bold, sans-serif font, appearing to be part of a larger, curved structure that resembles a stylized globe or a series of overlapping planes. The graphic is rendered in shades of gray and white, giving it a metallic or high-tech appearance.



## SAW Components

B3677

## Low-Loss Filter

374,0 MHz

### Data Sheet

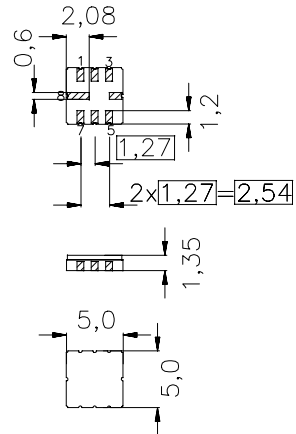
Ceramic package QCC8C

#### Features

- Low-loss IF filter
- Ceramic SMD package
- Balanced or unbalanced operation

#### Terminals

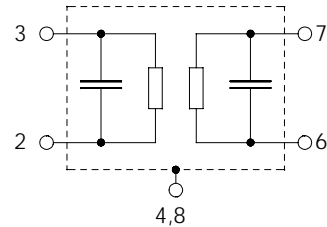
- Gold plated



typ. Dimensions in mm, approx. weight 0,1 g

#### Pin configuration

3	Input
2	Input or input ground
7	Output
6	Output or output ground
4, 8	Case ground
1, 5	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B3677	B39371-B3677-U310	C61157-A7-A56	F61074-V8070-Z000

Electrostatic Sensitive Device (ESD)

#### Maximum ratings

Operable temperature range	$T_A$	-45 / +85	°C	
Storage temperature range	$T_{stg}$	-45 / +85	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_s$	10	dBm	



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#### Characteristics

Operating temperature:

$$T_A = -10 \dots 80 \text{ }^{\circ}\text{C}$$

Terminating source impedance:

$$Z_S = 50 \text{ } \Omega \text{ unbalanced and matching network}$$

Terminating load impedance:

$$Z_L = 50 \text{ } \Omega \text{ unbalanced and matching network}$$

			min.	typ.	max.	
<b>Nominal frequency</b>	$f_N$		—	374,00	—	MHz
<b>Minimum insertion attenuation</b> (including matching network)	$\alpha_{\min}$		—	8,5	10,0	dB
<b>Bandwidth</b>	$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	17	22	—	MHz
<b>Amplitude ripple (p-p)</b>	$f_N \pm 7 \text{ MHz}$	$\Delta\alpha$	—	0,5	1	dB
<b>Group delay ripple (p-p)</b>	$f_N \pm 7 \text{ MHz}$	$\Delta\tau$	—	40	100	ns
<b>Triple transit suppression</b>			30	40	—	dB
<b>Relative attenuation</b> (relative to $\alpha_{\min}$ )		$\alpha_{\text{rel}}$				
$f_N - 16,5 \text{ MHz} \dots f_N - 22 \text{ MHz}$			30	42	—	dB
$f_N - 22 \text{ MHz} \dots f_N - 33 \text{ MHz}$			40	45	—	dB
$f_N - 33 \text{ MHz} \dots f_N - 150 \text{ MHz}$			48	52	—	dB
$f_N + 16,5 \text{ MHz} \dots f_N + 18 \text{ MHz}$			20	38	—	dB
$f_N + 18 \text{ MHz} \dots f_N + 22 \text{ MHz}$			30	42	—	dB
$f_N + 22 \text{ MHz} \dots f_N + 48 \text{ MHz}$			38	44	—	dB
$f_N + 48 \text{ MHz} \dots f_N + 80 \text{ MHz}$			40	45	—	dB
$f_N + 80 \text{ MHz} \dots f_N + 150 \text{ MHz}$			48	55	—	dB
<b>Adjacent channel suppression</b>						
average attenuation relative to $\alpha_{\min}$		$\alpha_{\text{rel}}$				
$f_N - 16,5 \dots f_N - 33,5 \text{ MHz}$			40	64	—	dB
$f_N + 16,5 \dots f_N + 33,5 \text{ MHz}$			40	56	—	dB
<b>Temperature coefficient of frequency</b>	$TC_f$		—	- 87	—	ppm/K



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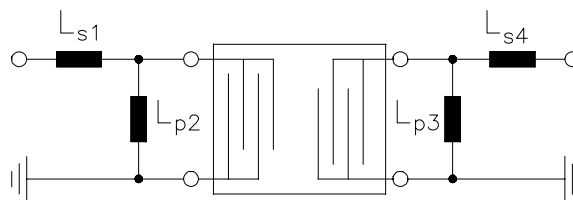
## Low-Loss Filter

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**Matching network** (element values may depend on pcb layout)

**50  $\Omega$  unbalanced:**



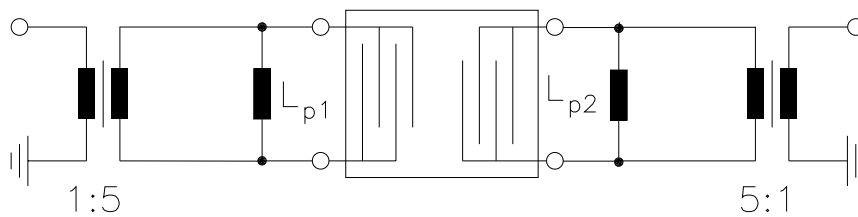
$$L_{s1} = 27 \text{ nH}$$

$$L_{p2} = 47 \text{ nH}$$

$$L_{p3} = 47 \text{ nH}$$

$$L_{s4} = 27 \text{ nH}$$

**250  $\Omega$  balanced:**



$$L_{p1} = 24 \text{ nH} \quad (\text{e.g. Coilcraft 0603CS-24NX\_BC})$$

$$L_{p2} = 24 \text{ nH}$$



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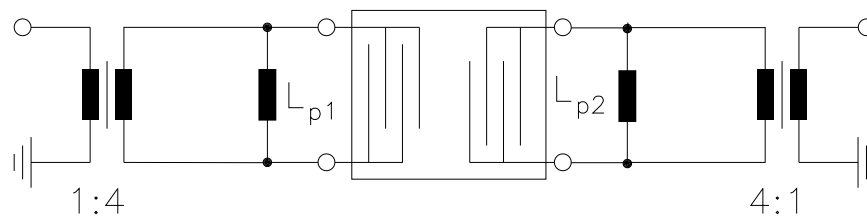
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Low-Loss Filter

374,0 MHz

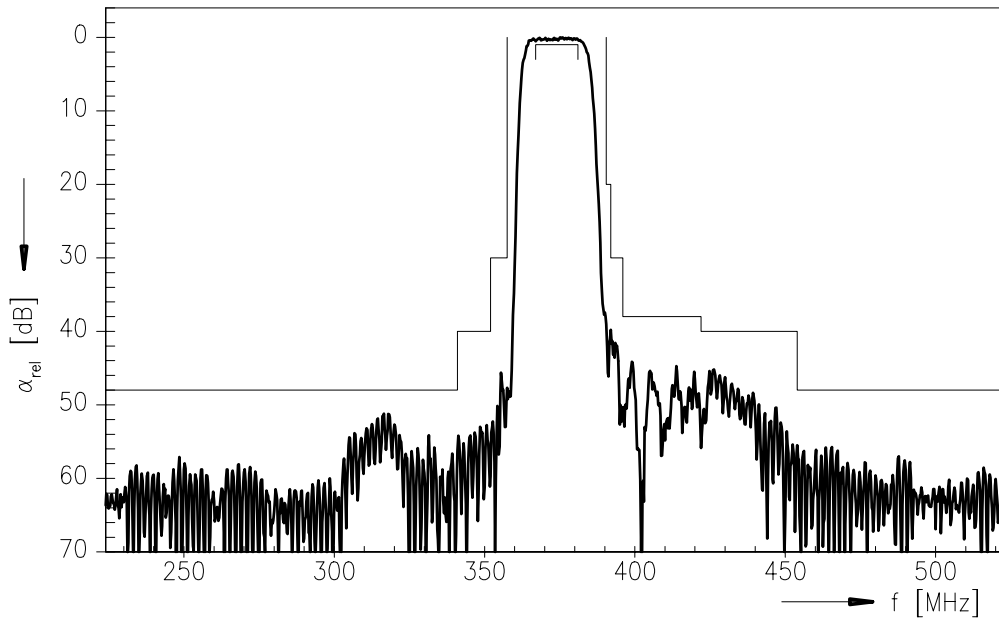
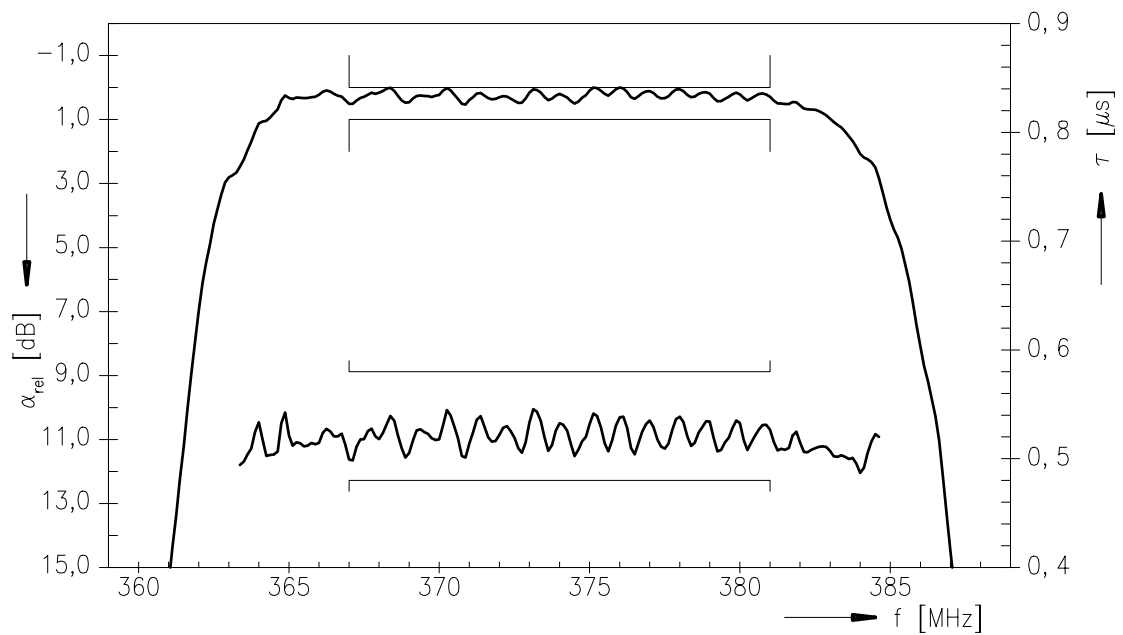
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200  $\Omega$  balanced:



$$L_{p1} = 27 \text{ nH}$$

$$L_{p2} = 22 \text{ nH}$$

**SAW Components****B3677****Low-Loss Filter****374,0 MHz****Data Sheet****Transfer function:****Transfer function (pass band):**



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<b>Low-Loss Filter</b>	<b>374,0 MHz</b>

## Data Sheet

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