



SAW Components

Data Sheet B3677





SAW Components

B3677

Low-Loss Filter

374,0 MHz

Data Sheet

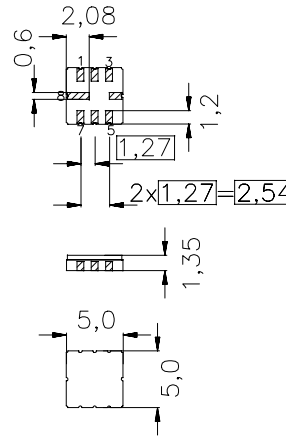
Ceramic package QCC8C

Features

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

Terminals

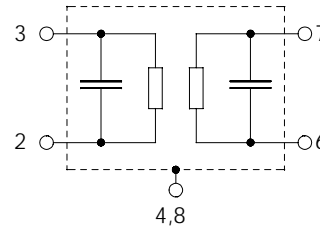
- Gold plated



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:

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

Terminating load impedance:

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

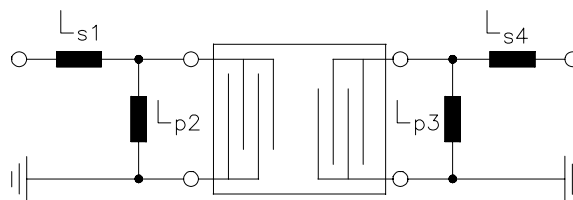
			min.	typ.	max.	
Nominal frequency	f_N		—	374,00	—	MHz
Minimum insertion attenuation (including matching network)	α_{\min}		—	8,5	10,0	dB
Bandwidth	$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	17	22	—	MHz
Amplitude ripple (p-p)	$f_N \pm 7 \text{ MHz}$	$\Delta\alpha$	—	0,5	1	dB
Group delay ripple (p-p)	$f_N \pm 7 \text{ MHz}$	$\Delta\tau$	—	40	100	ns
Triple transit suppression			30	40	—	dB
Relative attenuation (relative to α_{\min})		α_{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
Adjacent channel suppression						
average attenuation relative to α_{\min}		α_{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
Temperature coefficient of frequency	TC_f		—	- 87	—	ppm/K



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Matching network (element values may depend on pcb layout)

50 Ω unbalanced:



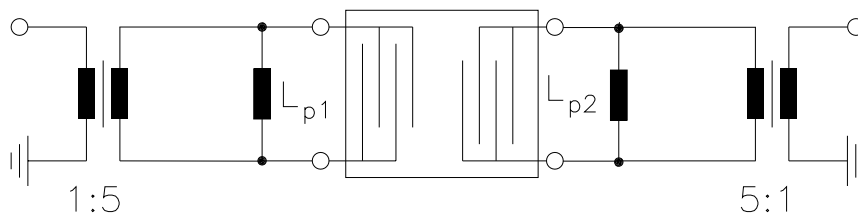
$$L_{s1} = 27 \text{ nH}$$

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

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

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

250 Ω balanced:



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

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



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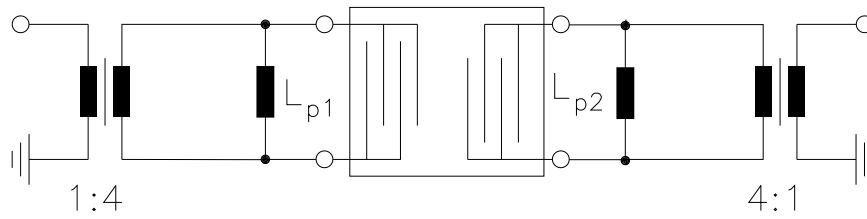
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200 Ω balanced:



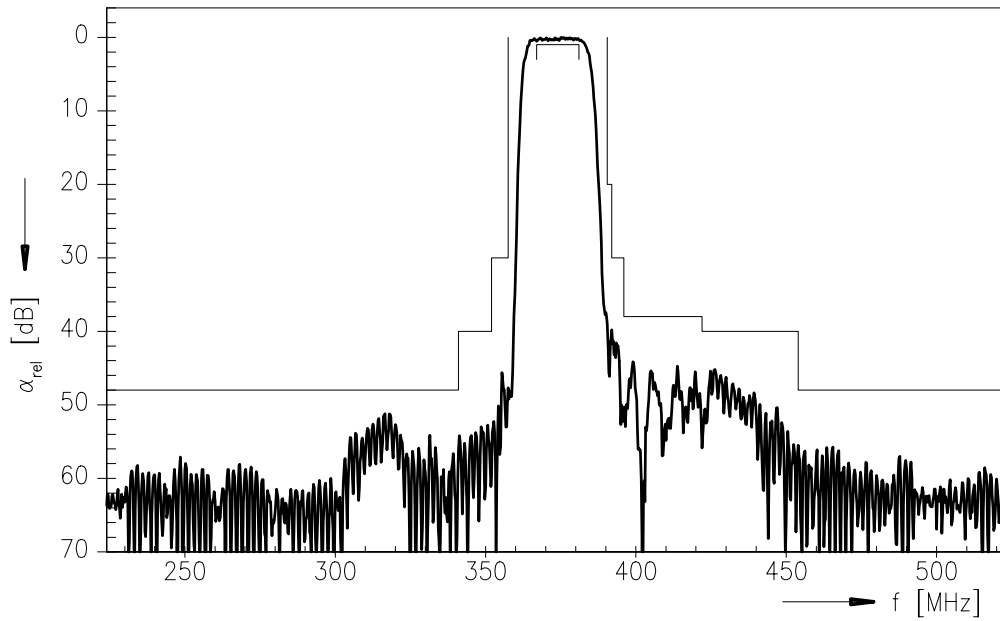
$$L_{p1} = 27 \text{ nH}$$

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

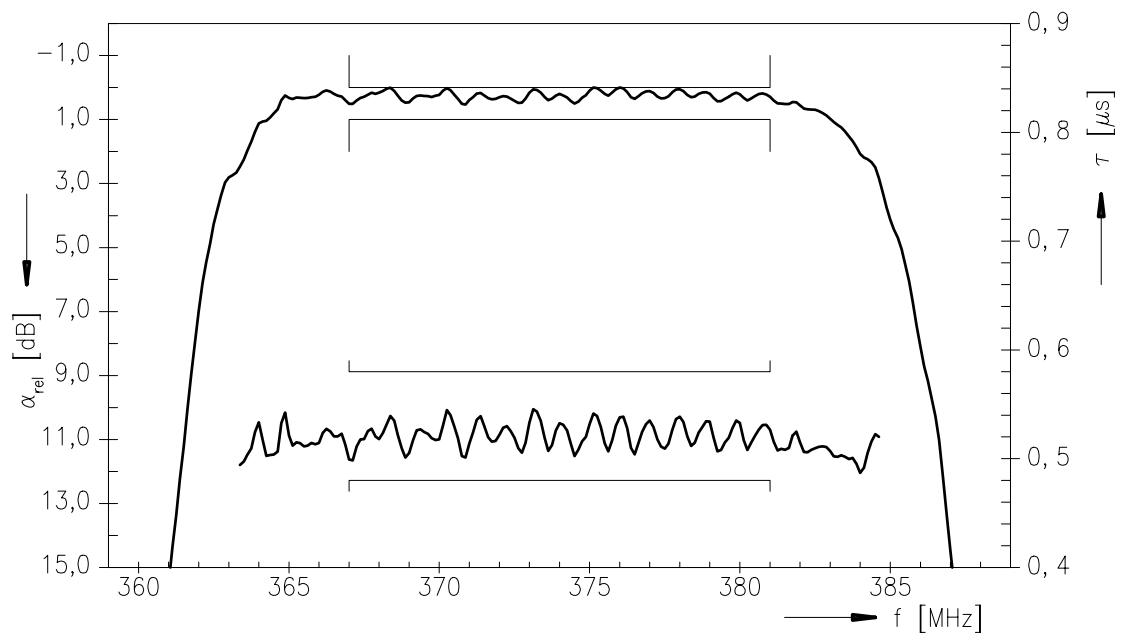


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Transfer function:



Transfer function (pass band):





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