



SAW Components

Data Sheet B3665





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B3665

Low-Loss Filter

380,00 MHz

Data Sheet

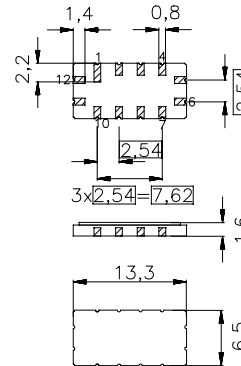
Ceramic package QCC12

Features

- IF filter for WCDMA
- Low insertion loss
- Ceramic SMD package
- Temperature stable

Terminals

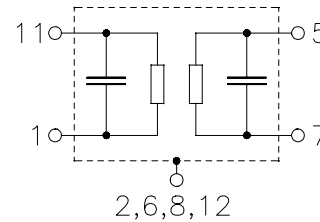
- Gold plated



Dimensions in mm, appr. weight 0,4 g

Pin configuration

- | | |
|-------------|----------------|
| 11 | Input |
| 1 | Input ground |
| 5 | Output |
| 7 | Output ground |
| 2, 6, 8, 12 | Case ground |
| 3 | To be grounded |
| 4, 9, 10 | Not connected |



Type	Ordering code	Marking and Package according to	Packing according to
B3665	B39381-B3665-Z510	C61157-A7-A55	F61074-V8026-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T_A	-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:	$T_A = -10 \dots +85 \text{ }^\circ\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega$ and matching network
Terminating load impedance:	$Z_L = 50 \text{ } \Omega$ and matching network
Group delay aperture:	50 kHz

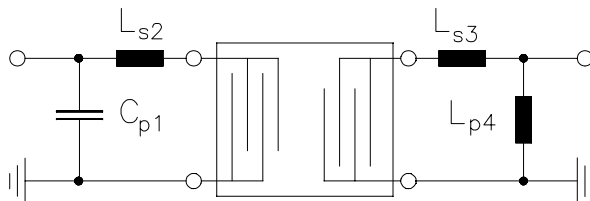
		min.	typ.	max.		
Nominal frequency	f_N	—	380,00	—	MHz	
Minimum insertion attenuation (including matching network)	α_{\min}	15,0	16,0	17,0	dB	
Passband width						
	$\alpha_{\text{rel}} \leq 1 \text{ dB}$	$B_{1\text{dB}}$	4,2	4,5	—	MHz
	$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	5,0	5,2	—	MHz
	$\alpha_{\text{rel}} \leq 10 \text{ dB}$	$B_{10\text{dB}}$	—	6,3	6,5	MHz
	$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	7,8	8,0	MHz
Amplitude ripple (p-p)	$\Delta\alpha$					
	$f_N \pm 2,05 \text{ MHz}$	—	0,6	1,0	dB	
Phase ripple (p-p)	$\Delta\varphi$					
	$f_N \pm 2,05 \text{ MHz}$	—	2,5	4	$^\circ$	
Group delay ripple (p-p)	$\Delta\tau$					
	$f_N \pm 2,05 \text{ MHz}$	—	50	100	ns	
Absolute group delay mean value within $f_N \pm 2,05 \text{ MHz}$ at $25 \text{ }^\circ\text{C}$ 1)	τ	938	943	948	ns	
Relative attenuation (relative to α_{\min})	α_{rel}					
	346 MHz ... 350 MHz	50	60	—	dB	
	362 MHz ... 366 MHz	55	60	—	dB	
	$f_N \pm 3,5 \text{ MHz}$... $f_N \pm 4,5 \text{ MHz}$	10	15	—	dB	
	$f_N \pm 4,5 \text{ MHz}$... $f_N \pm 5,5 \text{ MHz}$	30	35	—	dB	
	$f_N \pm 5,5 \text{ MHz}$... $f_N \pm 50,00 \text{ MHz}$	40	45	—	dB	
Temperature coefficient of frequency²⁾	TC_f	—	- 0,036	—	ppm/K ²	
Turnover temperature	T_0	—	25	—	$^\circ\text{C}$	

1) At other temperatures the variation from filter to filter is also restricted to +/- 5 ns.

2) Temperature dependence of f_c : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

Data Sheet

Matching network to 50 Ω (element values depend on pcb layout)



$$C_{p1} = 27 \text{ pF}$$

$$L_{s2} = 33 \text{ nH}$$

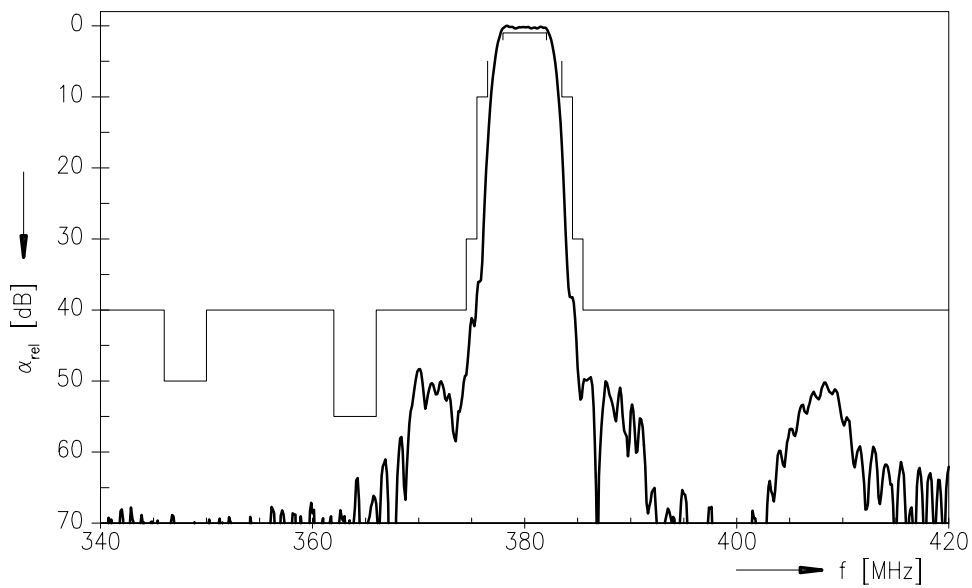
$$L_{s3} = 10 \text{ nH}$$

$$L_{p4} = 22 \text{ nH}$$

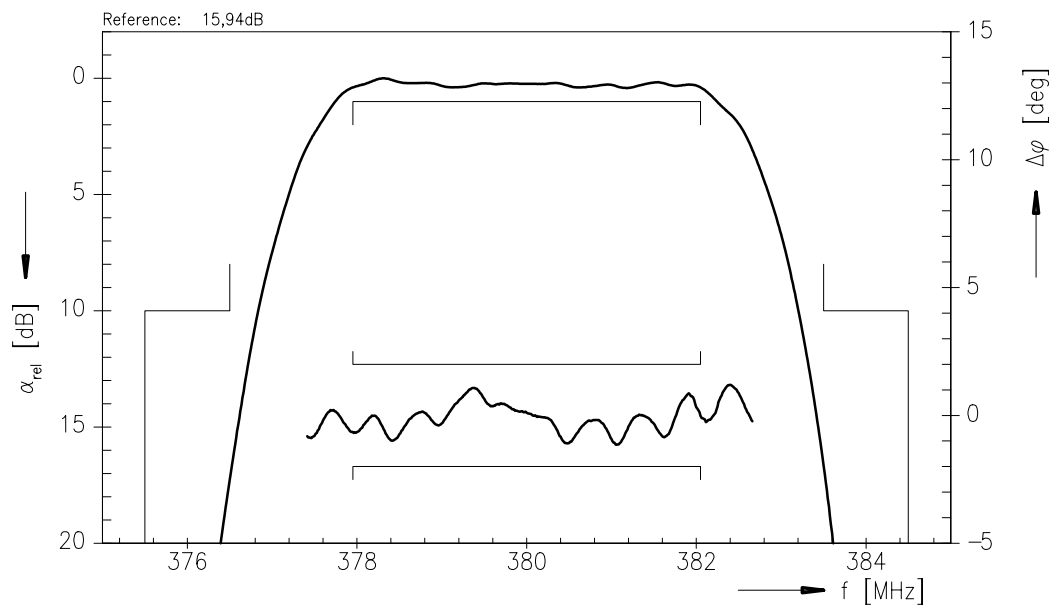


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Transfer function



Transfer function (pass band)





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