



SAW Components

Data Sheet B3807





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B3807

Low-Loss Filter

326,4 MHz

Data Sheet

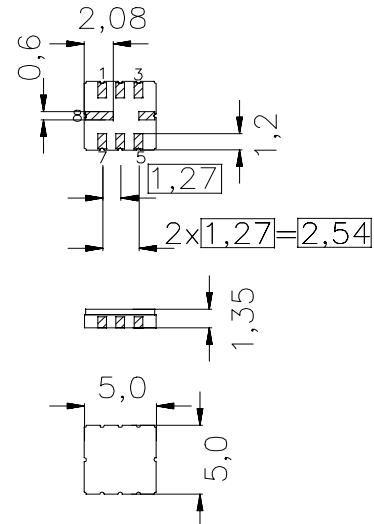
Ceramic package **QCC8C**

Features

- Low-loss IF filter for W-CDMA base station
- Usable bandwidth 15 MHz
- Ceramic SMD package

Terminals

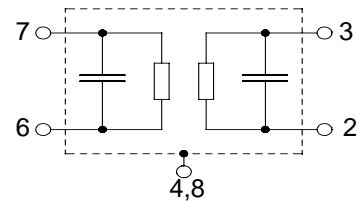
- Gold plated



Dimensions in mm, approx. weight 0,10 g

Pin configuration

- 7 Input
- 6 Input Ground
- 3 Output
- 2 Output Ground
- 1, 4, 5, 8 Ground



Type	Ordering code	Marking and Package according to	Packing according to
B3807	B39331-B3807-U310	C61157-A7-A56	F61074-V8070-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-40/ +85	°C
Storage temperature range	T_{stg}	-40/ +85	°C
DC voltage	V_{DC}	0	V
Source power	P_s	15	dBm


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Characteristics

Operating temperature:	$T = -10 \dots +80 \text{ }^\circ\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega$ and matching network
Terminating load impedance:	$Z_S = 50 \text{ } \Omega$ and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	326,4	—	MHz
Minimum insertion attenuation	α_{\min}	—	2,0	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N - 2,5 \text{ MHz} \dots f_N + 2,5 \text{ MHz}$	—	0,3	0,5	dB
	$f_N - 7,5 \text{ MHz} \dots f_N + 7,5 \text{ MHz}$	—	1,0	3,0	dB
Pass bandwidth	$B_{1,0\text{dB}}$				
	$\alpha_{\text{rel}} \leq 1,0 \text{ dB}$	—	15	—	MHz
	$B_{10\text{dB}}$				
	$\alpha_{\text{rel}} \leq 10 \text{ dB}$	—	20	—	MHz
Relative attenuation (relative to α_{\min})	α_{rel}				
	10,0 MHz ... $f_N - 18,0 \text{ MHz}$	40	50	—	dB
	$f_N - 38,395 \text{ MHz} \dots f_N - 38,405 \text{ MHz}$	43	50	—	dB
	$f_N - 19,195 \text{ MHz} \dots f_N - 19,205 \text{ MHz}$	43	50	—	dB
	$f_N - 18,0 \text{ MHz} \dots f_N - 12,5 \text{ MHz}$	13	15	—	dB
	$f_N + 12,5 \text{ MHz} \dots f_N + 30,0 \text{ MHz}$	11	13	—	dB
	$f_N + 30,0 \text{ MHz} \dots f_N + 450,0 \text{ MHz}$	25	30	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N - 7,5 \text{ MHz} \dots f_N - 2,5 \text{ MHz}$	—	90	110	ns
	$f_N - 2,5 \text{ MHz} \dots f_N + 2,5 \text{ MHz}$	—	15	25	ns
	$f_N + 2,5 \text{ MHz} \dots f_N + 7,5 \text{ MHz}$	—	50	65	ns
Return Loss					
	$f_N - 2,5 \text{ MHz} \dots f_N + 2,5 \text{ MHz}$	10	11	—	dB
	$f_N - 7,0 \text{ MHz} \dots f_N + 7,0 \text{ MHz}$	8	10	—	dB
	$f_N - 7,5 \text{ MHz} \dots f_N + 7,5 \text{ MHz}$	5	8	—	dB
Impedance at f_N (without matching)¹					
	Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$	—	72 0,4	—	$\Omega \parallel \text{pF}$
	Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$	—	73 0,2	—	$\Omega \parallel \text{pF}$
Temperature coefficient of frequency	TC_f	—	- 70	—	ppm/K

¹(port extensions directly at filter)



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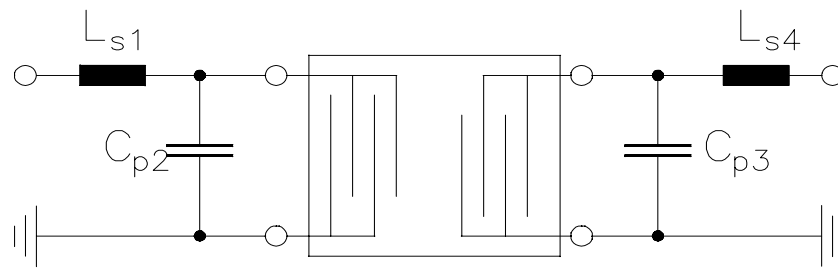
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Matching network to 50 Ω

(Element values depend upon PCB layout)



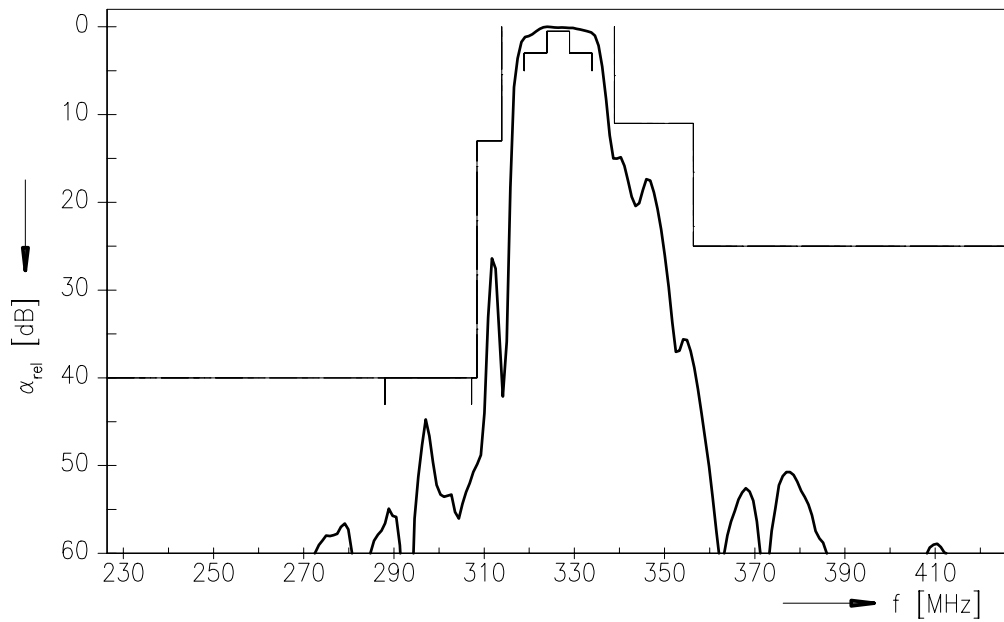
$L_{s1} = 22 \text{ nH}$
 $C_{p2} = 2,7 \text{ pF}$

$C_{p3} = 2,7 \text{ pF}$
 $L_{s4} = 22 \text{ nH}$

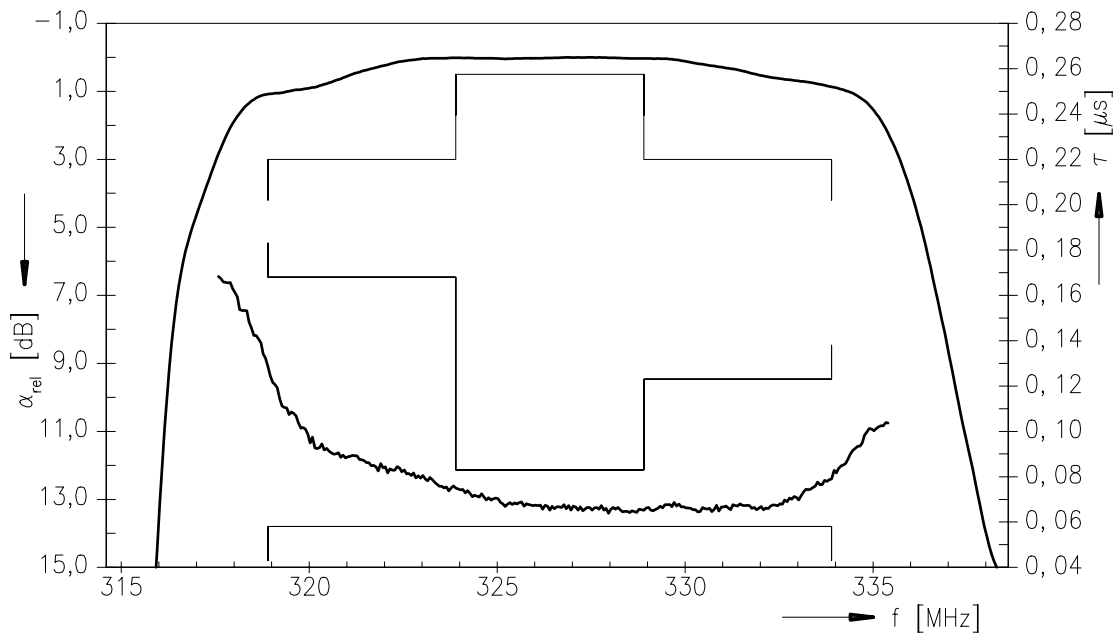


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Normalized frequency response



Normalized frequency response (pass band)





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