EPCOS

SAW Components

Data Sheet B3807

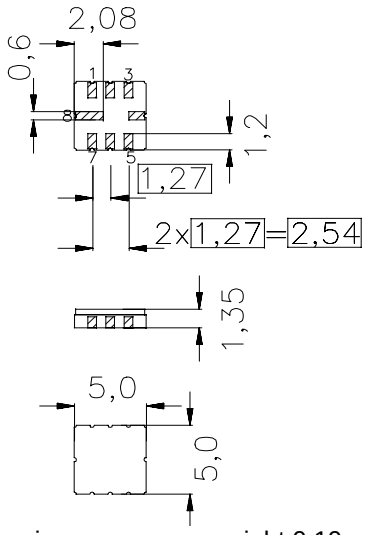
Ceramic package **QCC8C**

Features

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

Terminals

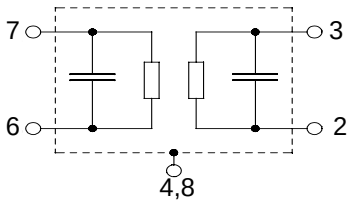
- Gold plated



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 **S**ensitive **D**evice (**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	

Data Sheet

Characteristics

Operating temperature: T = -10 .. +80 °C

Terminating source impedance: Z_S=50 Ω and matching network

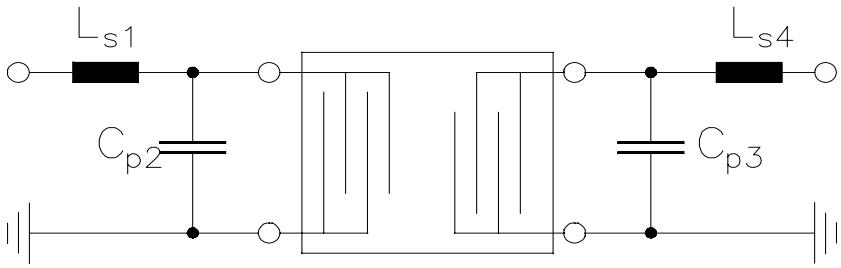
Terminating load impedance: Z_S=50 Ω and matching network

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

[1](port extensions directly at filter)

Matching network to 50 Ω

(Element values depend upon PCB layout)



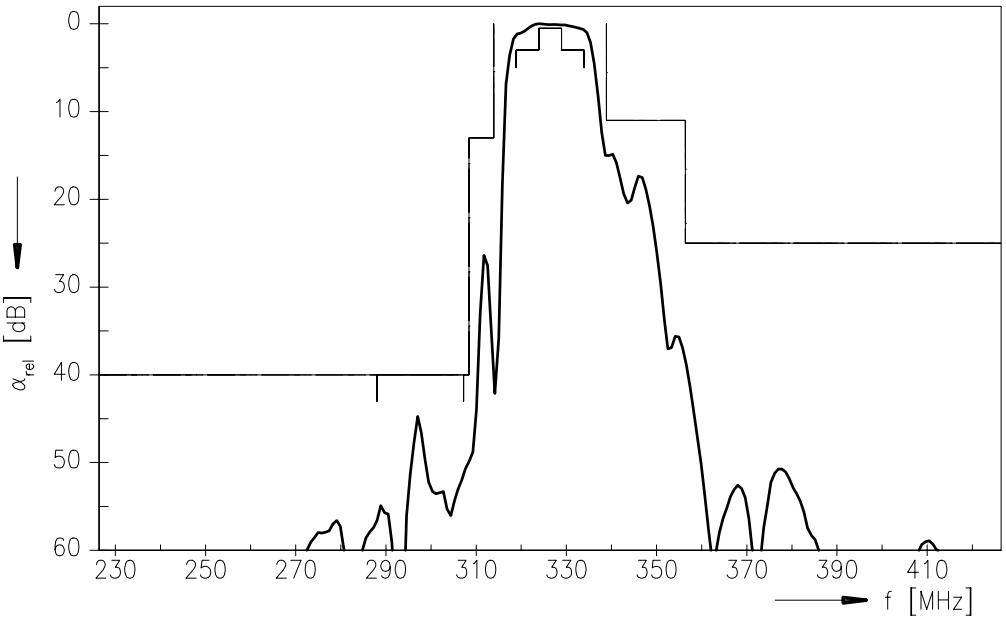
L_{s1} = 22 nH

C_{p2} = 2,7 pF

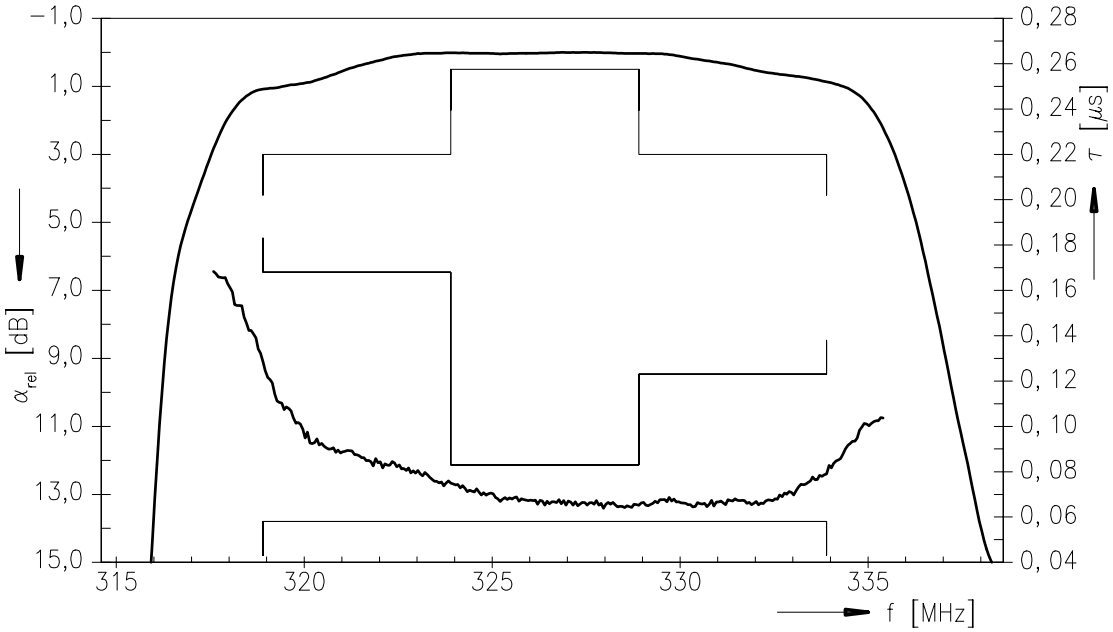
C_{p3} = 2,7 pF

L_{s4} = 22 nH

Normalized frequency response



Normalized frequency response (pass band)



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