EPCOS

SAW Components

Data Sheet B5002

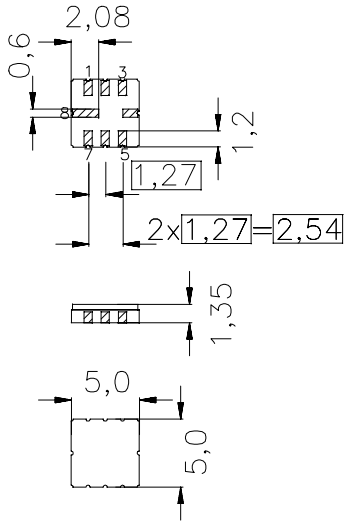
Ceramic package **QCC8C**

Features

- Low-loss IF filter for W-CDMA base station, Tx
- 20 MHz usable bandwidth
- Very low passband ripple
- Ceramic SMD package

Terminals

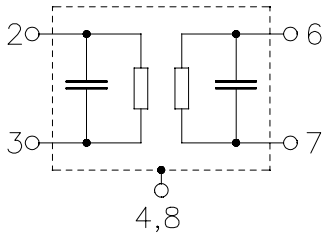
- Gold plated



Dim. in mm, approx. weight 0,1 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B5002	B39401-B5002-U310	C61157-A7-A56	F61074-V8169-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

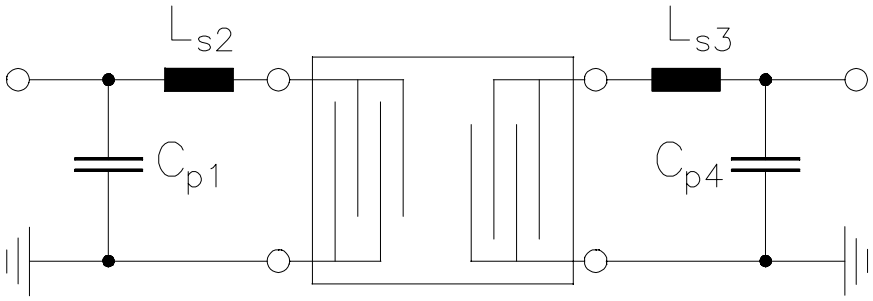
Operable temperature range	T	–40 / +85	˚C
Storage temperature range	T_{stg}	–40 / +85	˚C
DC voltage	V_{DC}	5	V
Source power	P_s	10	dBm

Characteristics

Operating temperature range: T = -40 .. +85 ˚C
Terminating source impedance: Z_S = 50 Ω unbalanced and matching network
Terminating load impedance: Z_L = 50 Ω unbalanced and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	398,0	—	MHz
Minimum insertion attenuation	α_{min}				
f_N - 7,50 MHz ... f_N + 7,50 MHz		—	3,3	4,0	dB
Maximum insertion attenuation (in passband)	α_{max}				
f_N - 7,50 MHz ... f_N + 7,50 MHz		—	3,8	5,0	dB
Pass bandwidth					
α_{rel} ≤ 1,0 dB	$B_{1,0dB}$	20	26	—	MHz
Amplitude ripple (p-p)	Δα				
f_N - 1,92 MHz ... f_N + 1,92 MHz		—	0,2	0,5	dB
f_N - 7,50 MHz ... f_N + 7,50 MHz		—	0,4	1,0	dB
Deviation from linear phase (rms)	Δφ				
f_N - 1,92 MHz ... f_N + 1,92 MHz		—	0,1	0,5	°
f_N - 7,50 MHz ... f_N + 7,50 MHz		—	1,0	3,0	°
Relative attenuation (relative to α_{min})	α_{rel}				
100 MHz ... 335 MHz		15	60	—	dB
335 MHz ... 338 MHz		38	60	—	dB
338 MHz ... 365 MHz		15	60	—	dB
365 MHz ... 368 MHz		35	45	—	dB
448 MHz ... 3 GHz		15	45	—	dB
Input return loss (in passband)					
f_N - 7,50 MHz ... f_N + 7,50 MHz		6	8	—	dB
Output return loss (in passband)					
f_N - 7,50 MHz ... f_N + 7,50 MHz		8	10	—	dB
Temperature coefficient of frequency	TC_f	—	– 70	—	ppm/K

Matching network to 50 Ω



C_{p1} = 3,3 pF

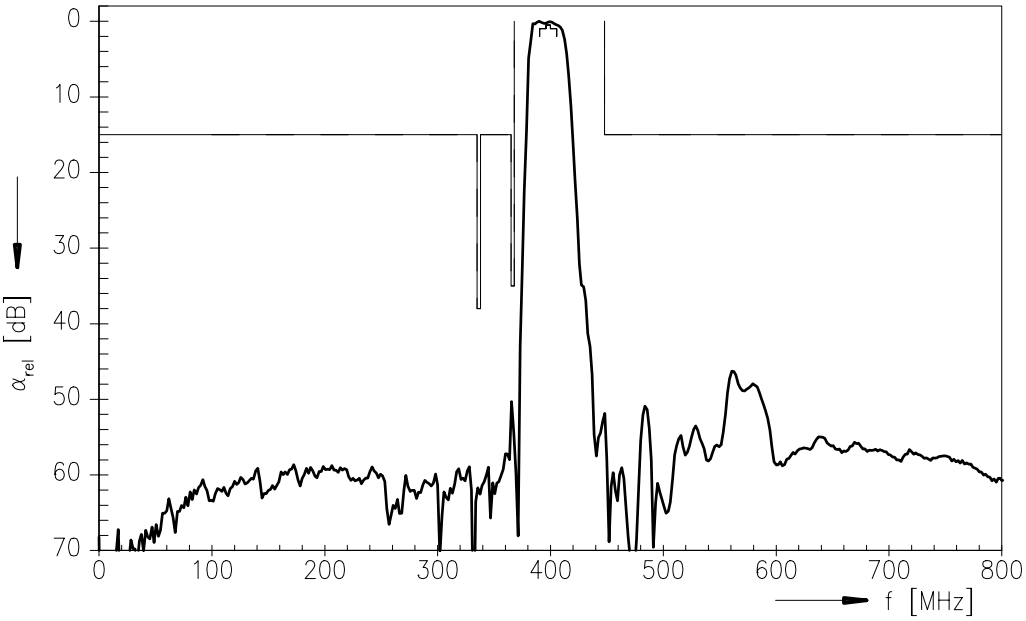
L_{s2} = 10 nH

L_{s3} = 12 nH

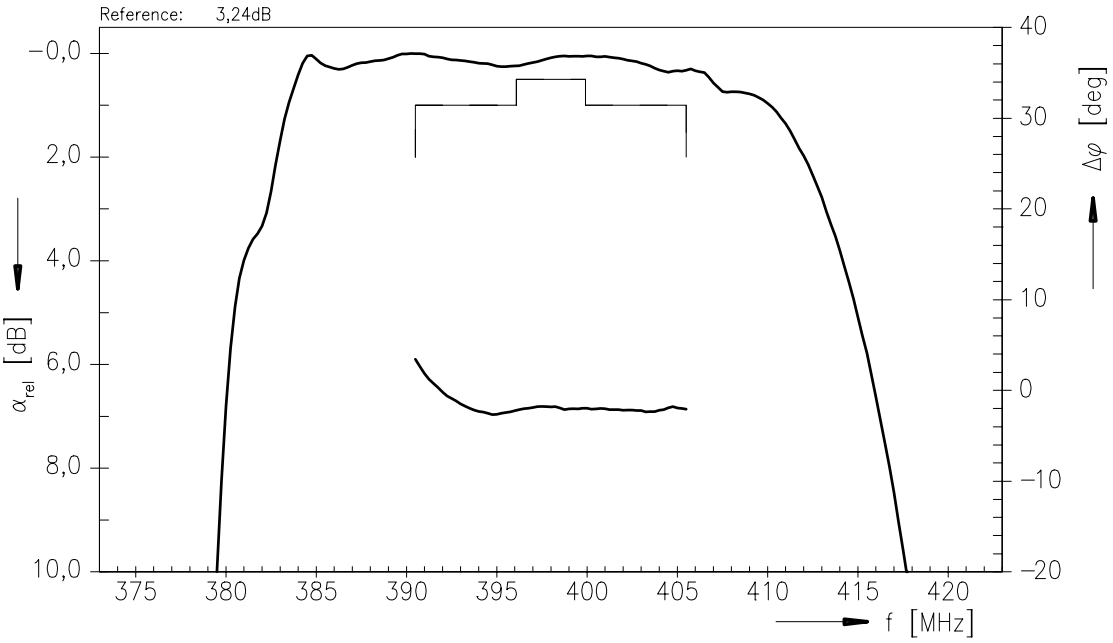
C_{p4} = 2,2 pF

Element values depend upon board layout

Transfer function



Transfer function (pass band)



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