EPCOS

SAW Components

Data Sheet B3876

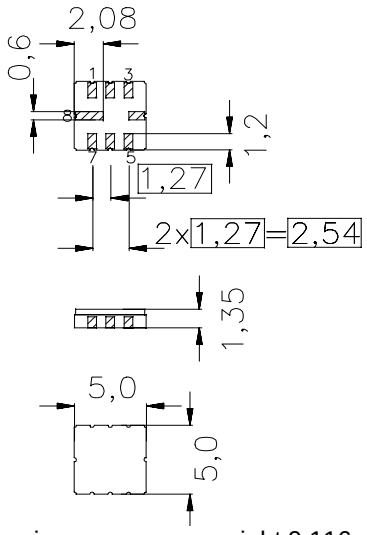
Ceramic package **QCC8C**

Features

- Low-loss IF filter for GSM base station
- Usable passband 200 kHz
- Ceramic SMD package

Terminals

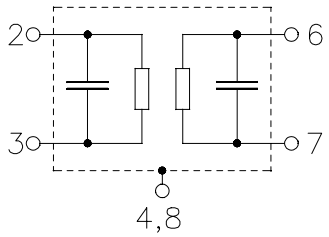
- Gold plated



Dimensions in mm, approx. weight 0,116 g

Pin configuration

3	Input
2	Input or input ground
7	Output
6	Output ground
4, 8	Case ground
1, 5	to be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B3876	B39171-B3876-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}	0	V
Source power	P_s	10	dBm

Characteristics

Operating temperature: T = 25 ± 2 °C
Terminating source impedance: Z_S = 200 Ω and matching network
Terminating load impedance: Z_L = 50 Ω

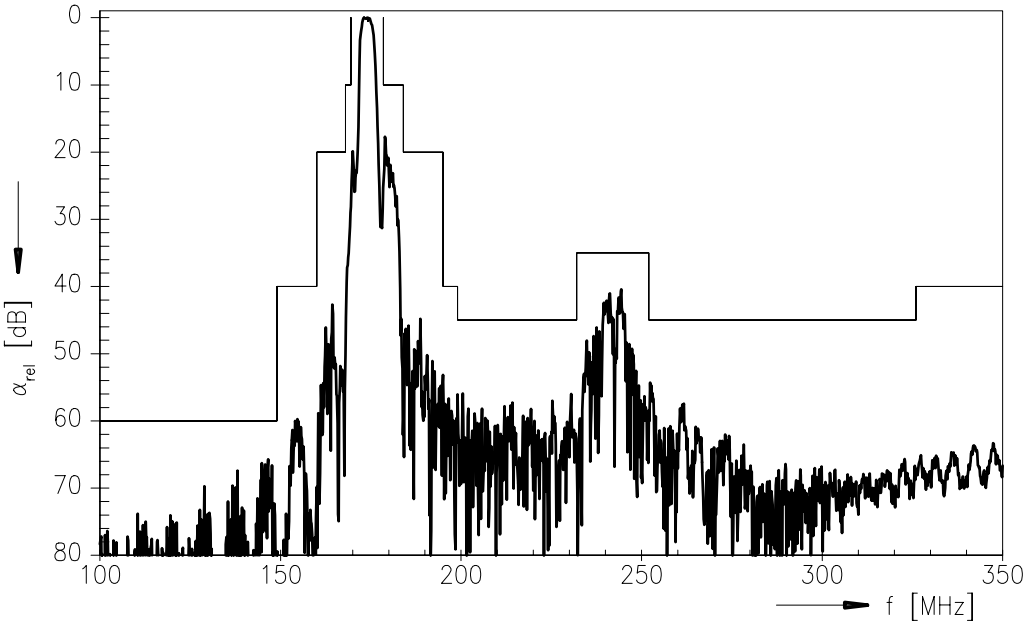
			min.	typ.	max.	
Nominal frequency		f_N	—	174,2	—	MHz
Insertion attenuation	@f_N	α_N	—	1,5	2,0	dB
Pass bandwidth		$B_{0,3dB}$				
	$\alpha_{rel} \leq$ 0,3 dB		0,2	1,9	—	MHz
Amplitude ripple (p-p)		$\Delta\alpha$				
	f_N-0,1 MHz...f_N+0,1 MHz		—	0,1	0,3	dB
Group delay	@f_N	τ	—	220	—	ns
Group delay ripple (p-p)		$\Delta\tau$				
	f_N-0,1 MHz...f_N+0,1 MHz		—	30	100	ns
Return Loss	@f_N					
			9	12	—	dB
Relative attenuation (relative to α_N)		α_{rel}				
23,00 MHz	... 149,00 MHz		60	70	—	dB
149,00 MHz	... 160,00 MHz		40	55	—	dB
160,00 MHz	... 168,00 MHz		20	40	—	dB
168,00 MHz	... 169,50 MHz		10	20	—	dB
178,50 MHz	... 184,00 MHz		10	18	—	dB
184,00 MHz	... 195,00 MHz		20	45	—	dB
195,00 MHz	... 199,00 MHz		40	55	—	dB
199,00 MHz	... 232,00 MHz		45	55	—	dB
232,00 MHz	... 252,00 MHz		35	40	—	dB
252,00 MHz	... 326,00 MHz		45	60	—	dB
326,00 MHz	... 500,00 MHz		40	65	—	dB
Temperature coefficient of frequency		TC_f	—	– 27	—	ppm/K

Characteristics

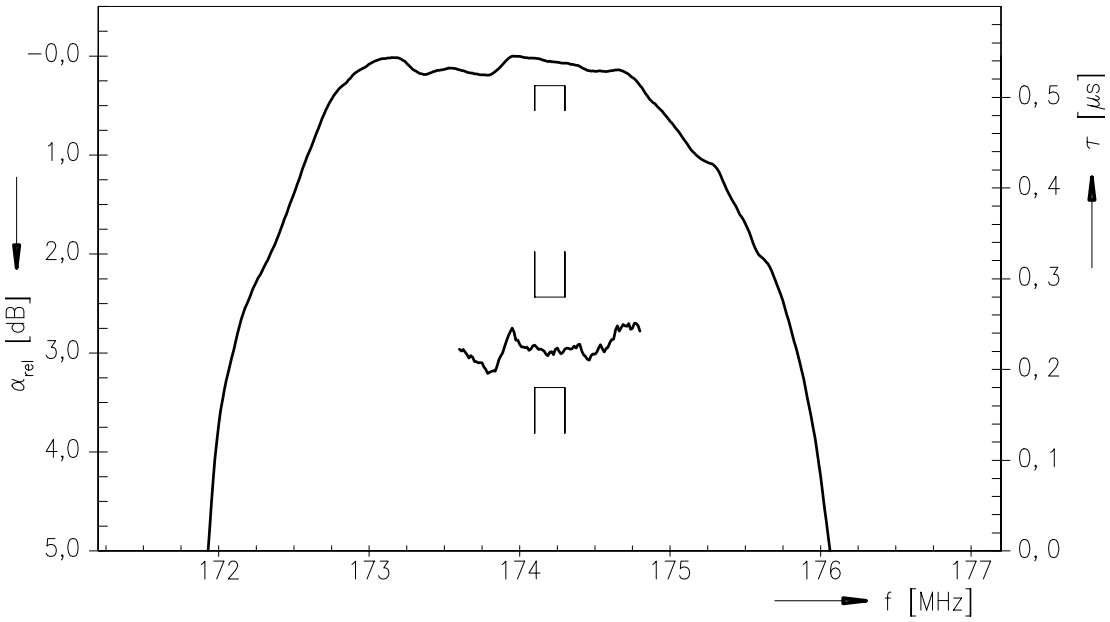
Operating temperature: T = -10 .. +85 °C
Terminating source impedance: Z_S= 200 Ω and matching network
Terminating load impedance: Z_L= 50 Ω

		min.	typ.	max.	
Nominal frequency	f_N	—	174,2	—	MHz
Insertion attenuation @f_N	α_N	—	1,5	2,5	dB
Pass bandwidth	$B_{0,3dB}$				
$\alpha_{rel} \leq$ 0,3 dB		0,2	1,9	—	MHz
Relative attenuation (relative to α_N)	α_{rel}				
23,00 MHz ... 149,00 MHz		60	70	—	dB
149,00 MHz ... 160,00 MHz		40	55	—	dB
160,00 MHz ... 168,00 MHz		20	40	—	dB
168,00 MHz ... 169,50 MHz		10	20	—	dB
178,50 MHz ... 184,00 MHz		10	18	—	dB
184,00 MHz ... 195,00 MHz		20	45	—	dB
195,00 MHz ... 199,00 MHz		40	55	—	dB
199,00 MHz ... 232,00 MHz		45	55	—	dB
232,00 MHz ... 252,00 MHz		35	40	—	dB
252,00 MHz ... 326,00 MHz		45	60	—	dB
326,00 MHz ... 500,00 MHz		40	65	—	dB
Temperature coefficient of frequency	TC_f	—	– 27	—	ppm/K

Normalized frequency response

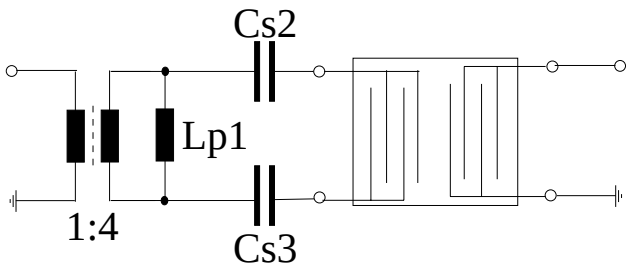


Normalized frequency response (pass band; +25 ± 2 °C)



Matching network (200 Ω balanced input, 50 Ω single ended output)

(Element values depend upon PCB layout)



L_{p1} = 390 nH

C_{s2} = 15 pF

C_{s3} = 15 pF

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