EPCOS

SAW Components

Data Sheet B3666

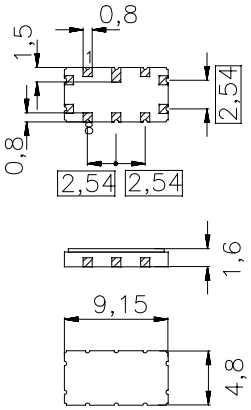
Ceramic SMD package QCC10B

Features

- Low-loss IF filter
- Ceramic SMD package
- Balanced or unbalanced operation possible
- Low insertion attenuation, high selectivity

Terminals

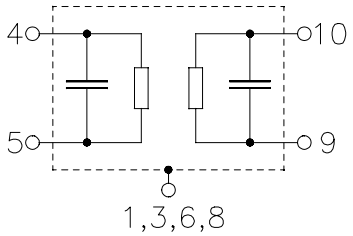
- Gold-plated



Dimensions in mm, approx. weight 0,23 g

Pin configuration

4, 5	Input
9,10	Output
1,3,6,8	Case ground
2,7	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B3666	B39820-B3666-Z710	C61157-A7-A49	F61064-V8035-Z000

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

Maximum ratings

Operable temperature range	T	– 30/+ 80	˚C
Storage temperature range	T_{stg}	– 40/+ 85	˚C
DC voltage	V_{DC}	0	V
Source power	P_s	10	dBm

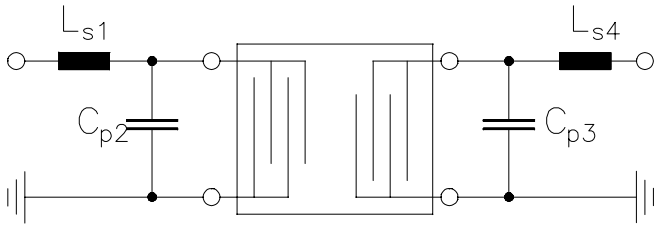
Characteristics

Reference temperature: T = -10 ... +80 °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	—	82,2	—	MHz
Minimum insertion loss	α_{min}	—	3,7	5,0	dB
3dB bandwidth		30	50	—	kHz
Amplitude variation (p-p)	$\Delta\alpha$				
f_N - 15 kHz ... f_N + 15 kHz		—	0,9	3,0	dB
Amplitude ripple (peak to adjacent valley)	$\Delta\alpha$				
f_N - 15 kHz ... f_N + 15 kHz		—	0,0	1,5	dB
Absolute group delay (at f_N)	τ	—	16	—	µs
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 11 kHz ... f_N + 11 kHz		—	1,6	10	µs
Relative attenuation (relative to α_{min})	α_{rel}				
f_N – 1000 kHz ... f_N – 925 kHz		40	70	—	dB
f_N – 925 kHz ... f_N – 885 kHz		70	75	—	dB
f_N – 885 kHz ... f_N – 700 kHz		40	70	—	dB
f_N – 700 kHz ... f_N – 400 kHz		30	65	—	dB
f_N – 400 kHz ... f_N – 120 kHz		40	60	—	dB
f_N – 120 kHz ... f_N – 60 kHz		20	34	—	dB
f_N + 60 kHz ... f_N + 120 kHz		20	29	—	dB
f_N + 120 kHz ... f_N + 150 kHz		40	57	—	dB
f_N + 150 kHz ... f_N + 400 kHz		30	55	—	dB
f_N + 400 kHz ... f_N + 1000 kHz		40	55	—	dB
Intermodulation distortion					
Intermodulation in the composit signal by $f_N \pm 60$ kHz and $f_N \pm 120$ kHz, each of -20 dBm			—	-90	dB
Temperature coefficient of frequency [1]	TC_f	—	– 0,036	—	ppm/K²
Turnover temperature	T_0	—	30	—	°C

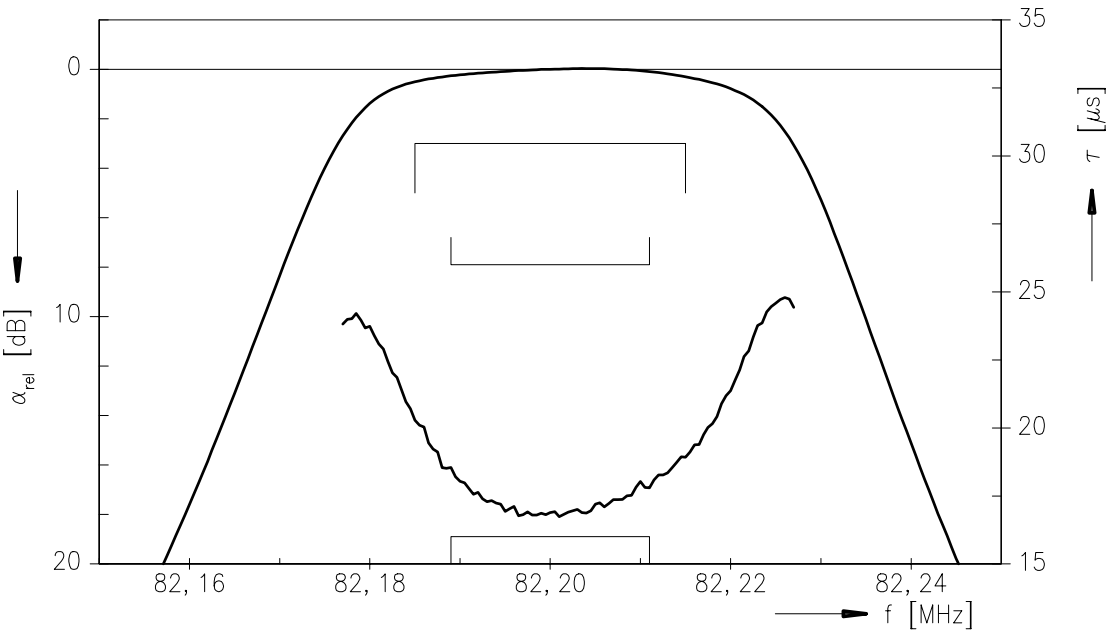
[1] Temperature dependance of f_c: $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2)$

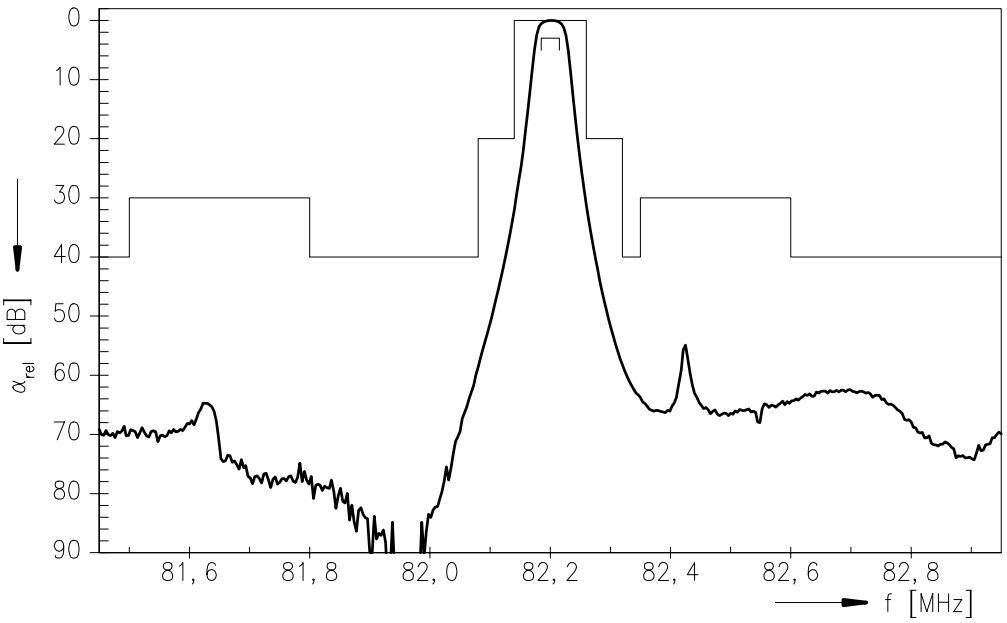
Matching network (element values depend on pcb layout)



L_{s1} = 470 nH
C_{p2} = 3,9 pF
C_{p3} = 3,9 pF
L_{s4} = 470 nH

Transfer function





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