EPCOS

SAW Components

Data Sheet B3839

Data Sheet

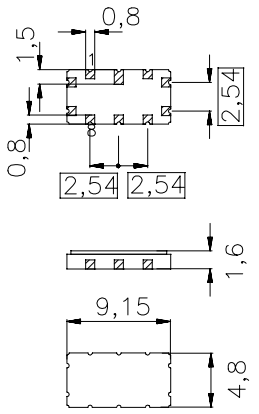
Ceramic package **QCC10B**

Features

- Low-loss IF-filter for WLL
- Usable bandwidth 0,8 MHz
- Temperature stable
- Ceramic SMD package

Terminals

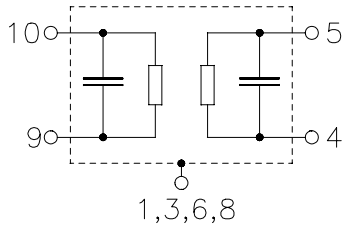
- Gold plated



Dimensions in mm, approx. weight 0,2 g

Pin configuration

10	Input
9	Input ground
5	Output
4	Output ground
2, 7	Ground
1, 3, 6, 8	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3839	B39331-B3839-Z710	C61157-A7-A49	F61074-V8035-Z000

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

Maximum ratings

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

Characteristics

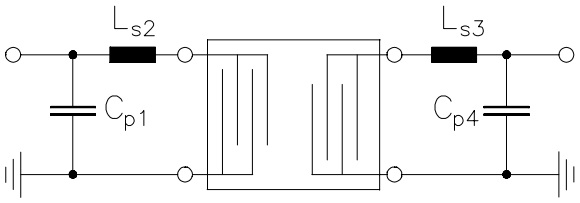
Operating temperature range: T_A = -40 ... 85 °C
Terminating source impedance: Z_S = 50 Ω and external matching network
Terminating load impedance: Z_L = 50 Ω and external matching network

		min.	typ.	max.	
Center frequency	f_c				
α_{rel} = 3,0 dB		332,88	333,0	333,12	MHz
Minimum insertion attenuation	α_{min}	—	6,5	8	dB
Passband width					
$\alpha_{rel} \le$ 3,0 dB	$B_{3,0dB}$	900	1010	1045	kHz
$\alpha_{rel} \le$ 20,0 dB	B_{20dB}	—	1840	2000	kHz
$\alpha_{rel} \le$ 30,0 dB	B_{30dB}	—	2080	2250	kHz
$\alpha_{rel} \le$ 40,0 dB	B_{40dB}	—	2250	2500	kHz
$\alpha_{rel} \le$ 50,0 dB	B_{50dB}	—	4500	—	kHz
Relative attenuation (relative to α_{min})	α_{rel}				
f_c – 50,0 MHz ... f_c – 3,0 MHz		48	50	—	dB
f_c + 3,0 MHz ... f_c + 20,0 MHz		47	50	—	dB
f_c + 20,0 MHz ... f_c + 40,0 MHz		44	48	—	dB
f_c + 40,0 MHz ... f_c + 50,0 MHz		48	50	—	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_c \pm$ 0,4 MHz		—	0,5	1,0	dB
Absolute group delay (at f_c)	τ	—	0,9	—	µs
Group delay ripple (p-p)	$\Delta\tau$				
$f_c \pm$ 0,4 MHz		—	430	500	ns
Reflected Wave Signal Suppression					
12 µs ... 20 µs after main pulse		70	80	—	dB
Temperature coefficient of frequency [1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	15	—	°C

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

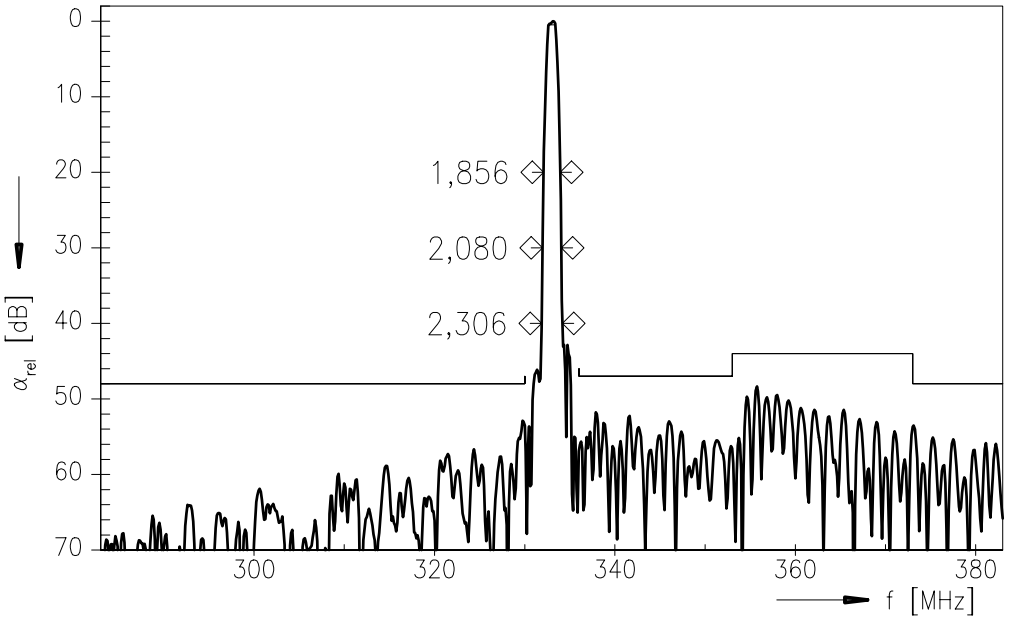
Matching network

(Element values depend upon PCB layout)

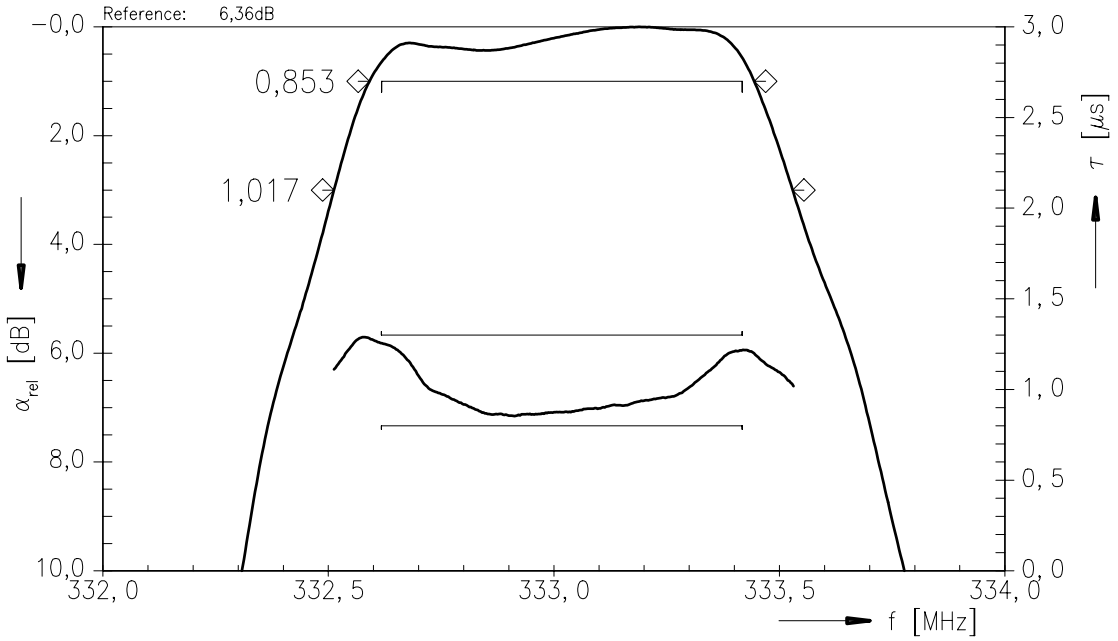


C_{p1} = 18 pF
L_{s2} = 22 nH
L_{s3} = 33 nH
C_{p4} = 15 pF

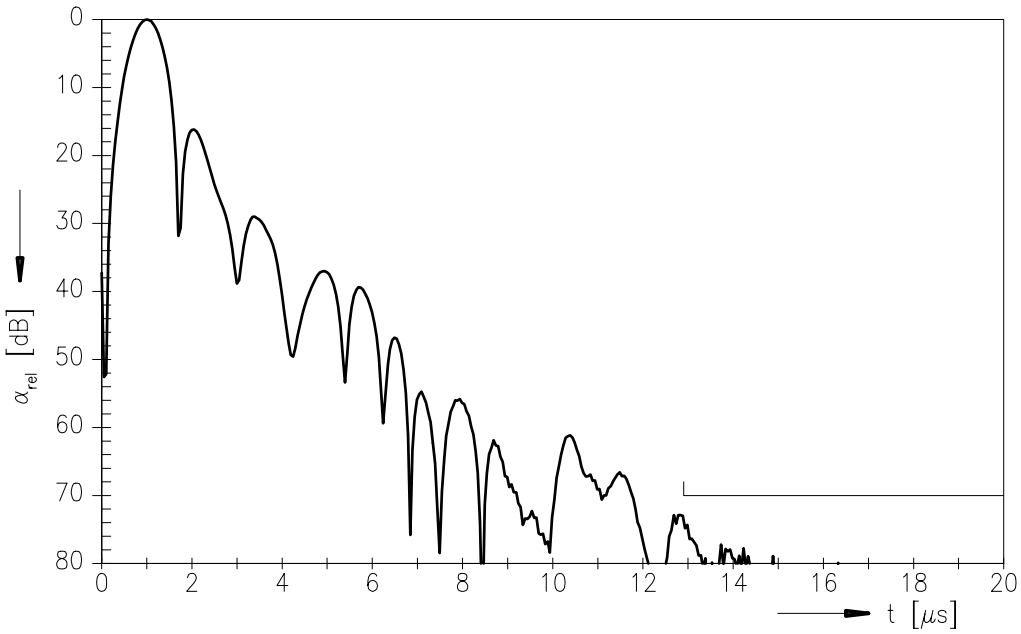
Transfer function



Transfer function (pass band)



Impulse response



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