



SAW Components

Data Sheet B3666

Data Sheet

A large, stylized, 3D-rendered graphic of the EPCOS logo. The letters "EPCOS" are rendered in a white, glowing, sans-serif font, appearing to be part of a larger, curved structure that resembles the company's logo symbol. The background is dark and textured, with a faint map of the world visible.



SAW Components

B3666

Low-Loss Filter

82,20 MHz

Data Sheet

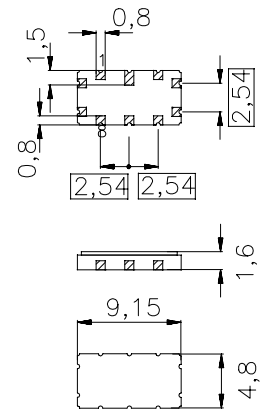
Ceramic SMD package QCC10B

Features

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

Terminals

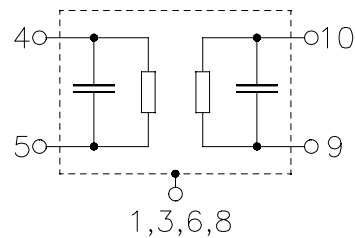
- Gold-plated



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 Sensitive Device (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



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Characteristics

Reference temperature: $T = -10 \dots +80 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ unbalanced and matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ unbalanced and matching network

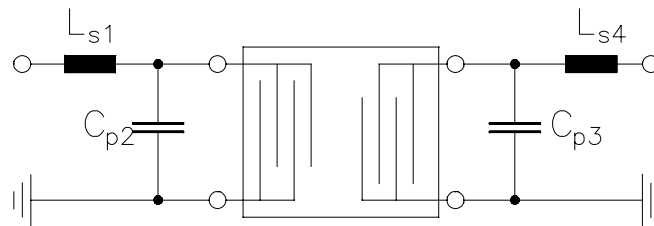
		min.	typ.	max.	
Nominal frequency	f_N	—	82,2	—	MHz
Minimum insertion loss	α_{\min}	—	3,7	5,0	dB
3dB bandwidth		30	50	—	kHz
Amplitude variation (p-p) $f_N - 15 \text{ kHz} \dots f_N + 15 \text{ kHz}$	$\Delta\alpha$	—	0,9	3,0	dB
Amplitude ripple (peak to adjacent valley) $f_N - 15 \text{ kHz} \dots f_N + 15 \text{ kHz}$	$\Delta\alpha$	—	0,0	1,5	dB
Absolute group delay (at f_N)	τ	—	16	—	μs
Group delay ripple (p-p) $f_N - 11 \text{ kHz} \dots f_N + 11 \text{ kHz}$	$\Delta\tau$	—	1,6	10	μs
Relative attenuation (relative to α_{\min})	α_{rel}				
$f_N - 1000 \text{ kHz} \dots f_N - 925 \text{ kHz}$		40	70	—	dB
$f_N - 925 \text{ kHz} \dots f_N - 885 \text{ kHz}$		70	75	—	dB
$f_N - 885 \text{ kHz} \dots f_N - 700 \text{ kHz}$		40	70	—	dB
$f_N - 700 \text{ kHz} \dots f_N - 400 \text{ kHz}$		30	65	—	dB
$f_N - 400 \text{ kHz} \dots f_N - 120 \text{ kHz}$		40	60	—	dB
$f_N - 120 \text{ kHz} \dots f_N - 60 \text{ kHz}$		20	34	—	dB
$f_N + 60 \text{ kHz} \dots f_N + 120 \text{ kHz}$		20	29	—	dB
$f_N + 120 \text{ kHz} \dots f_N + 150 \text{ kHz}$		40	57	—	dB
$f_N + 150 \text{ kHz} \dots f_N + 400 \text{ kHz}$		30	55	—	dB
$f_N + 400 \text{ kHz} \dots f_N + 1000 \text{ kHz}$		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/K ²
Turnover temperature	T_0	—	30	—	$^\circ\text{C}$

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



Data Sheet

Matching network (element values depend on pcb layout)



$$L_{s1} = 470 \text{ nH}$$

$$C_{p2} = 3,9 \text{ pF}$$

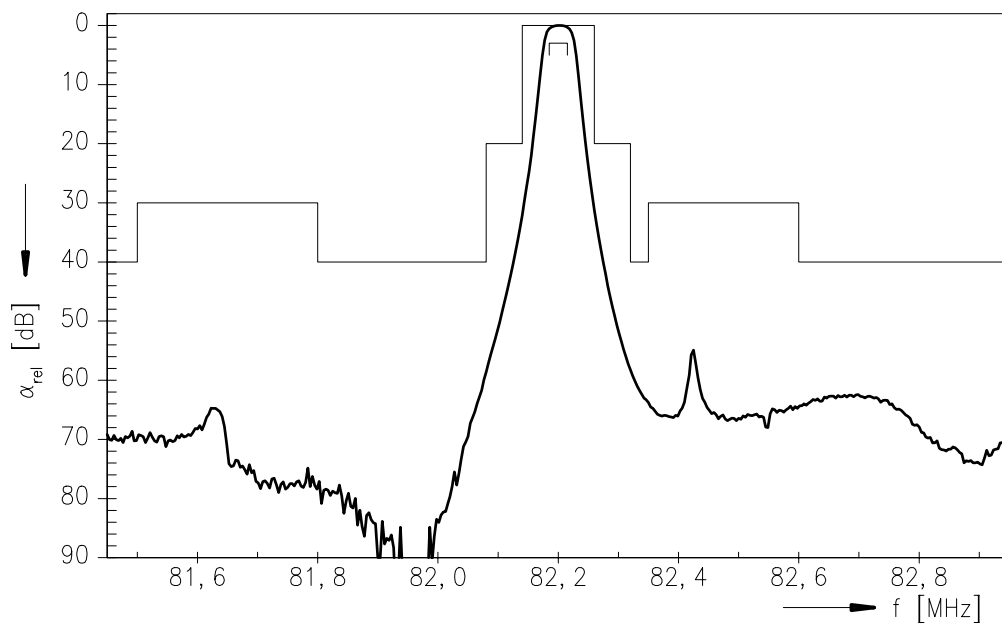
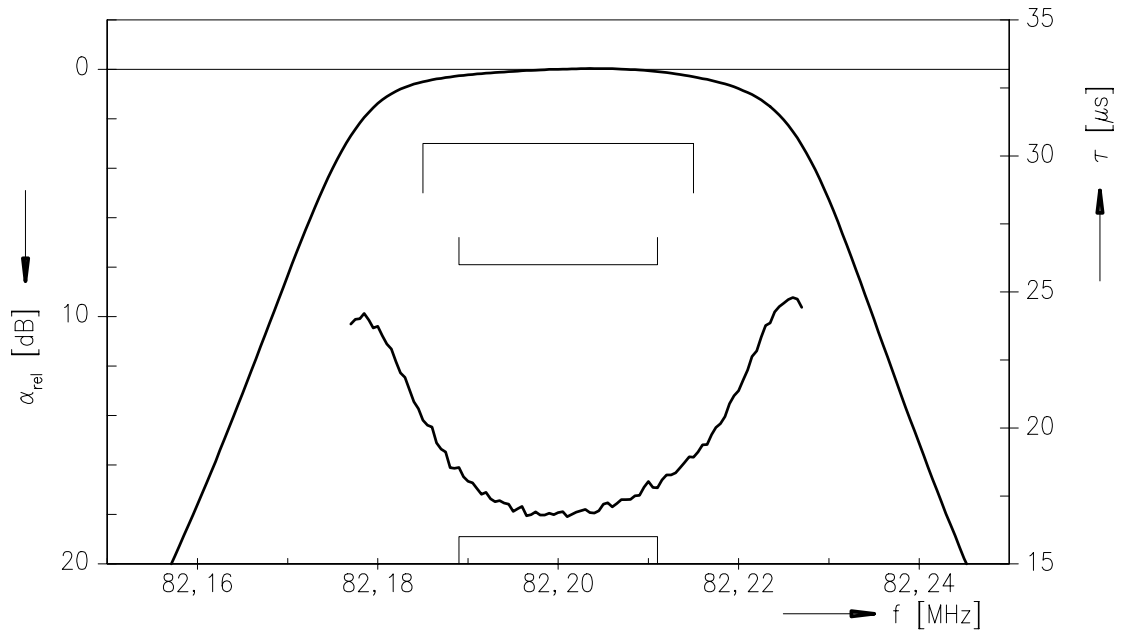
$$C_{p3} = 3,9 \text{ pF}$$

$$L_{s4} = 470 \text{ nH}$$



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Transfer function





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