EPCOS

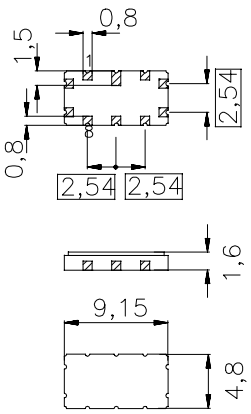
# *SAW Components*

*Data Sheet B3643*

Ceramic package **QCC10B**

### Features

- IF low-loss filter for wireless LAN systems
- Channel selection according to IEEE 802.11
- Temperature stable
- Ceramic SMD package



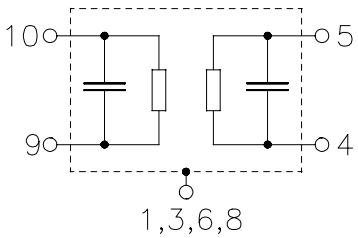

Dimensions in mm, approx. weight 0,23

### Terminals

- Gold plated

### Pin configuration

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




| Type | Ordering code | Marking and Package according to | Packing according to |
|---|---|---|---|
| B3643 | B39371-B3643-Z710 | C61157-A7-A49 | F61074-V8035-Z000 |

**E**lectrostatic **S**ensitive **D**evice (**ESD**)

### Maximum ratings

| | | | | |
|---|---|---|---|---|
| Operable temperature range | $T_A$ | -25 / +70 | ˚C | |
| Storage temperature range | $T_{stg}$ | -40 / +85 | ˚C | |
| DC voltage | $V_{DC}$ | 0 | V | |
| Source power | $P_s$ | 10 | dBm | source impedance 50 Ω |

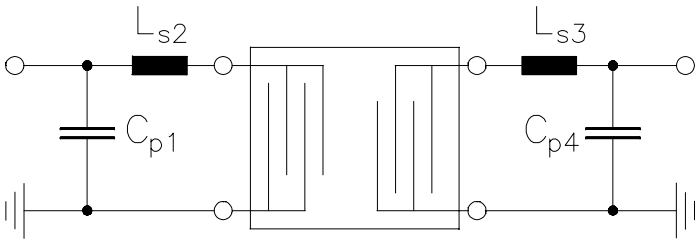
## Characteristics

Operating temperature range: $T_A$ = -20 .. +60 °C
Terminating source impedance: $Z_S$ = 50 Ω and matching network
Terminating load impedance: $Z_L$ = 50 Ω and matching network

| | | min. | typ. | max. | |
|---|---|---|---|---|---|
| **Nominal frequency** | $f_N$ | — | 371,0 | — | MHz |
| **Insertion attenuation at $f_N$** | $\alpha_N$ | — | 10 | 11,5 | dB |
| **Pass bandwidth** | | | | | |
| $\alpha_{rel}$ < 1 dB | $B_{1dB}$ | 1,3 | 1,6 | — | MHz |
| $\alpha_{rel}$ < 3 dB | $B_{3dB}$ | — | 2,0 | 2,5 | MHz |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| $f_N$ - 0,5 MHz ... $f_N$ + 0,5 MHz | | — | 0,3 | 1,0 | dB |
| **Amplitude slope in passband** | | — | 0,0 | ±0,5 | dB |
| **Group delay ripple** (p-p) | $\Delta\tau$ | | | | |
| $f_N$ - 0,65 MHz ... $f_N$ + 0,65 MHz | | — | 80 | 120 | ns |
| $f_N$ - 1,00 MHz ... $f_N$ + 1,00 MHz | | — | 90 | — | ns |
| **Relative attenuation** (relative to $\alpha_N$) | $\alpha_{rel}$ | | | | |
| $f_N$ - 50 MHz ... $f_N$ - 15 MHz | | 45 | 60 | — | dB |
| $f_N$ - 15 MHz ... $f_N$ - 5 MHz | | 40 | 55 | — | dB |
| $f_N$ + 5 MHz ... $f_N$ + 25 MHz | | 40 | 45 | — | dB |
| $f_N$ + 25 MHz ... $f_N$ + 50 MHz | | 45 | 50 | — | dB |
| **Temperature coefficient of frequency** [1] | $TC_f$ | — | -0,036 | — | ppm/K² |
| **Turnover temperature** | $T_0$ | — | 16 | — | °C |

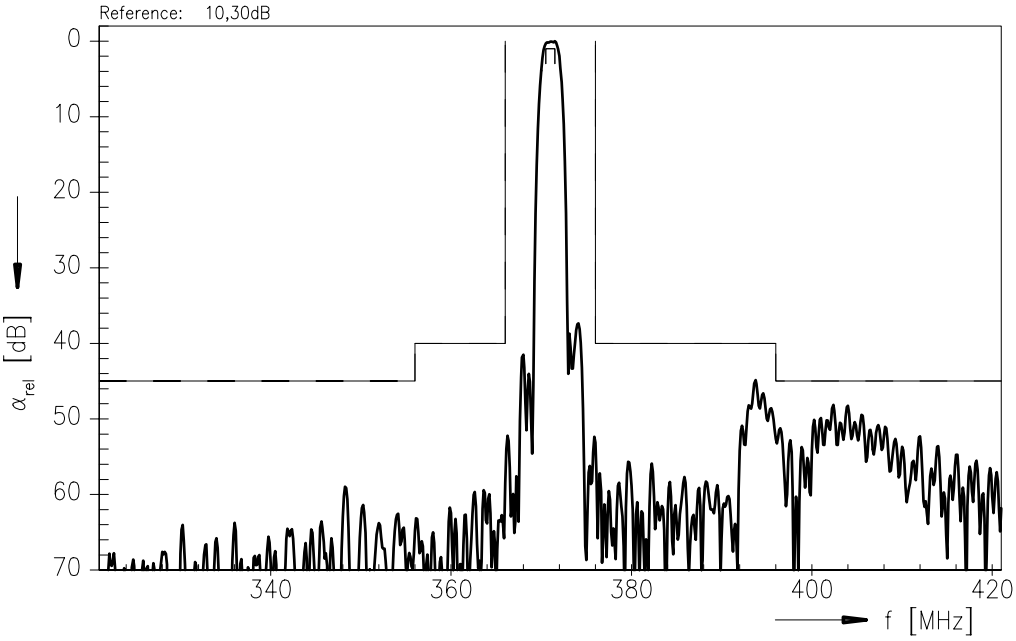
[1] Temperature dependance of $f_C$: $f_C(T_A) = f_C(T_0)(1 + TC_f(T_A - T_0)^2)$

**Matching network** (Element values depend upon PCB layout)

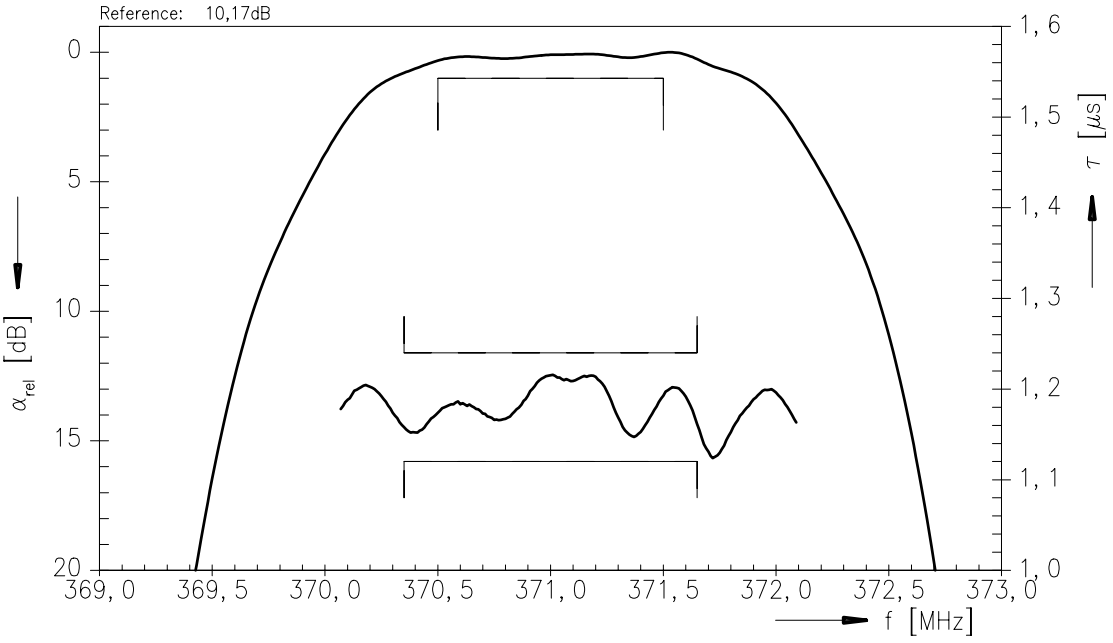



$C_{p1}$ = 15 pF
$L_{s2}$ = 27 nH
$L_{s3}$ = 22 nH
$C_{p4}$ = 15 pF

**Transfer function**




**Transfer function (pass band)**



**Published by EPCOS AG**
**Surface Acoustic Wave Components Division, SAW MC IS**
**P.O. Box 80 17 09, D-81617 München**



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