



# SAW Components

Data Sheet B3646





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B3646

Low-Loss Filter

208,0 MHz

Data Sheet

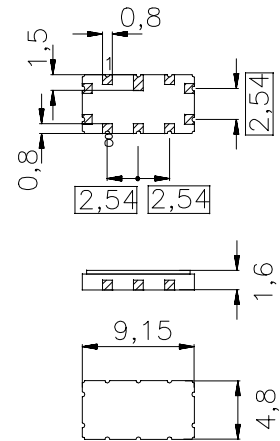
Ceramic package QCC10B

Features

- Low-loss wideband IF filter
- No matching required for operation at 50 Ω
- Package for Surface Mounted Technology (SMT)

Terminals

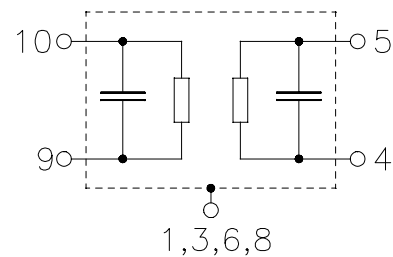
- Gold-plated



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 |
|-------|-------------------|----------------------------------|----------------------|
| B3646 | B39211-B3646-Z710 | C61157-A7-A49                    | F61074-V8172-Z000    |

Electrostatic Sensitive Device (ESD)

Maximum ratings

|                            |           |            |     |
|----------------------------|-----------|------------|-----|
| Operable temperature range | $T$       | - 25/+ 85  | °C  |
| Storage temperature range  | $T_{stg}$ | - 40/+ 125 | °C  |
| DC voltage                 | $V_{DC}$  | 0          | V   |
| Source power               | $P_s$     | 10         | dBm |


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**Characteristics**

Operating temperature:  $T_A = -10 \dots +85 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

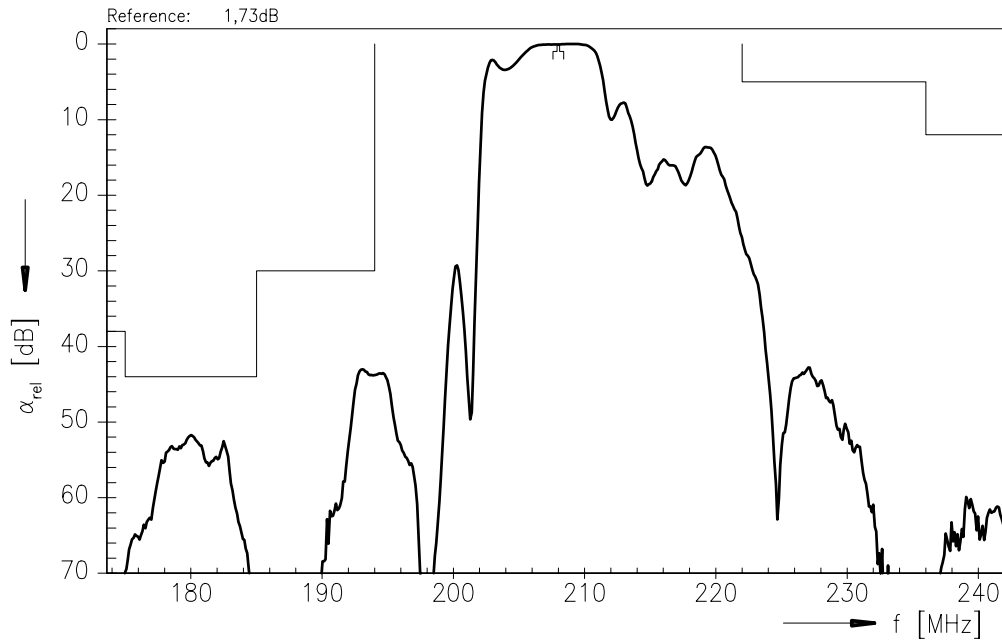
|  |  | min. | typ.  | max.  |       |
|--|--|------|-------|-------|-------|
| <b>Nominal frequency</b>   | $f_N$  | —    | 208,0 | —     | MHz   |
| <b>Maximum insertion attenuation</b>                                 | $f_N \pm 400 \text{ kHz}$ $\alpha_{\max}$                    | 1,5  | 2,0   | 3,5   | dB    |
| <b>Passband width</b>  | $\alpha_{\text{rel}} \leq 1,0 \text{ dB}$ $B_{1,0\text{dB}}$ | —    | 5,08  | —     | MHz   |
| <b>Amplitude ripple (p-p)</b>  | $f_N \pm 100 \text{ kHz}$ $\Delta\alpha$                     | —    | 0,03  | 0,2   | dB    |
| <b>Amplitude ripple (p-p)</b>  | $f_N \pm 400 \text{ kHz}$ $\Delta\alpha$                     | —    | 0,1   | 1,0   | dB    |
| <b>Absolute group delay (at <math>f_N</math>)</b>                    | $\tau$   | —    | 120   | 300   | ns    |
| <b>Group delay ripple (p-p)</b>                                      | $f_N \pm 400 \text{ kHz}$ $\Delta\tau$                       | —    | 8     | 30    | ns    |
| <b>Relative attenuation (relative to <math>\alpha_{\max}</math>)</b> | $\alpha_{\text{rel}}$  |      |       |       |       |
| 10,0 MHz ... $f_N - 33,0 \text{ MHz}$                                |  | 38,0 | 50,0  | —     | dB    |
| $f_N - 33,0 \text{ MHz}$ ... $f_N - 23,0 \text{ MHz}$                |  | 44,0 | 50,0  | —     | dB    |
| $f_N - 23,0 \text{ MHz}$ ... $f_N - 14,0 \text{ MHz}$                |  | 30,0 | 40,0  | —     | dB    |
| $f_N - 14,0 \text{ MHz}$ ... $f_N - 0,4 \text{ MHz}$                 |  | 0,0  | 2,0   | —     | dB    |
| $f_N + 0,4 \text{ MHz}$ ... $f_N + 14,0 \text{ MHz}$                 |  | 0,0  | 2,0   | —     | dB    |
| $f_N + 14,0 \text{ MHz}$ ... $f_N + 28,0 \text{ MHz}$                |  | 5,0  | 35,0  | —     | dB    |
| $f_N + 28,0 \text{ MHz}$ ... 450,0 MHz                               |  | 12,0 | 45,0  | —     | dB    |
| <b>Input IP3 (Third order intercept point)<sup>1)</sup></b>          |  | 45,0 | —     | —     | dBm   |
| <b>VSWR</b>  | $f_N \pm 400 \text{ kHz}$                                    | —    | 1,5:1 | 2,0:1 |       |
| <b>Temperature coefficient of frequency</b>                          | $TC_f$   | —    | -70   | —     | ppm/K |

1) With two 10 dbm fundamental signals at 180 MHz and 208 MHz applied the third order intermodulation product at the output at 236 MHz will have less than -64 dBm.

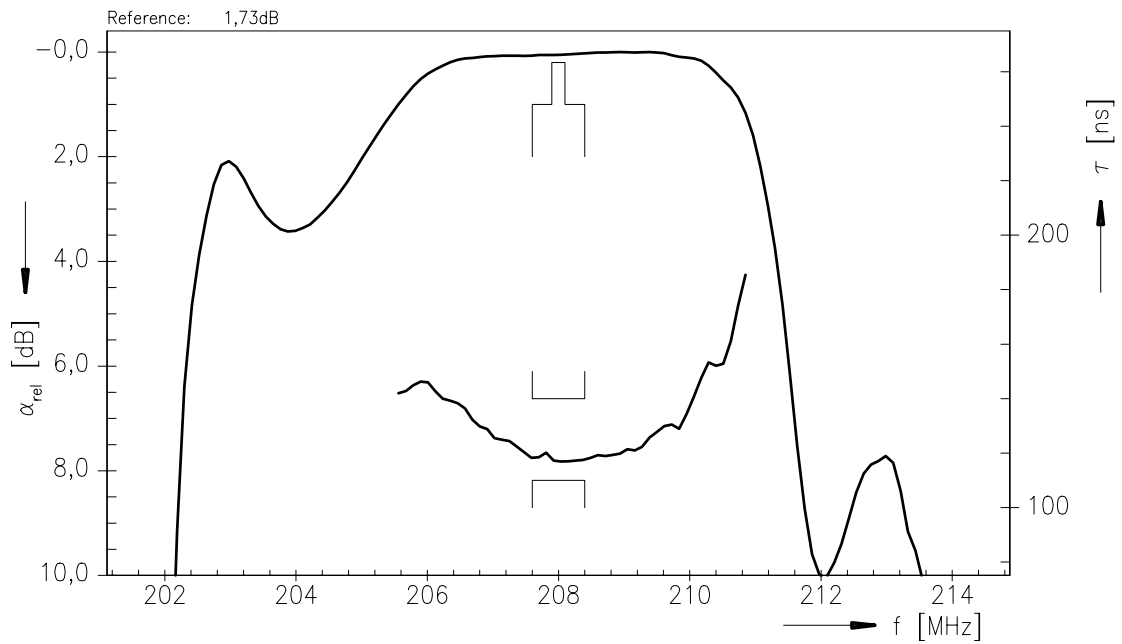


Data Sheet

Transfer function



Transfer function (pass band)





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