



SAW Components

SAW IF filter

WCDMA/CDMA2000

| | |
|-----------------------|------------------------|
| Series/type: | B5043 |
| Ordering code: | B39241B5043Z710 |
| Date: | Mar 31, 2006 |
| Version: | 2.0 |



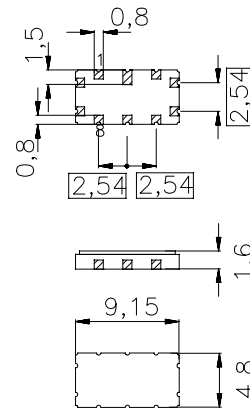
Application

- Low-loss IF filter for WCDMA and CDMA2000
- Usable passband 5.0 MHz



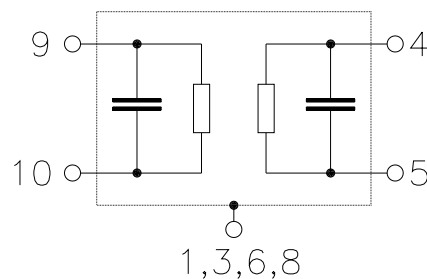
Features

- Package size 9.15 x 4.8 x 1.6 mm³
- Package code QCC10B
- RoHS compatible
- Approx. weight 0.23 g
- Ceramic package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- Filter surface passivated



Pin configuration

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





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238.5 MHz

Data Sheet

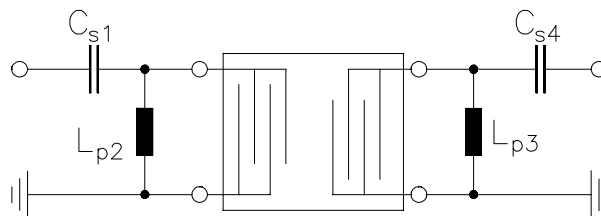


Characteristics

Operating temperature range: $T = -20$ to 85 °C
 Terminating source impedance: $Z_S = 50 \Omega$ and matching network
 Terminating load impedance: $Z_L = 50 \Omega$ and matching network

| | | min. | typ. @ 25 °C | max. | |
|--|----------------|------|-----------------|------|-------|
| Nominal frequency | f_N | — | 238.5 | — | MHz |
| Minimum insertion attenuation (including matching network) | α_{min} | — | 10.0 | 12.0 | dB |
| 1.0 dB bandwidth | $B_{1.0dB}$ | | | | |
| $\alpha_{rel} \leq 1.0$ dB | | 5.0 | 6.6 | — | MHz |
| Amplitude ripple (p-p) | $\Delta\alpha$ | | | | |
| $f_N \pm 2.50$ MHz | | — | 0.5 | 1.0 | dB |
| Phase linearity (rms) | $\Delta\phi$ | | | | |
| $f_N \pm 2.50$ MHz | | — | 0.9 | 2.0 | ° |
| Relative attenuation (relative to α_{min}) | α_{rel} | | | | |
| $f_N \pm 5.0$... $f_N \pm 9.0$ MHz | | 13 | 30 | — | dB |
| $f_N \pm 9.0$... $f_N \pm 100.0$ MHz | | 47 | 55 | — | dB |
| Temperature coefficient of frequency | TC_f | — | -18 | — | ppm/K |

Matching network to 50 Ω



$C_{s1} = 10.0$ pF
 $L_{p2} = 18.0$ nH
 $L_{p3} = 39.0$ nH
 $C_{s4} = 3.3$ pF

(Element values depend on pcb layout)



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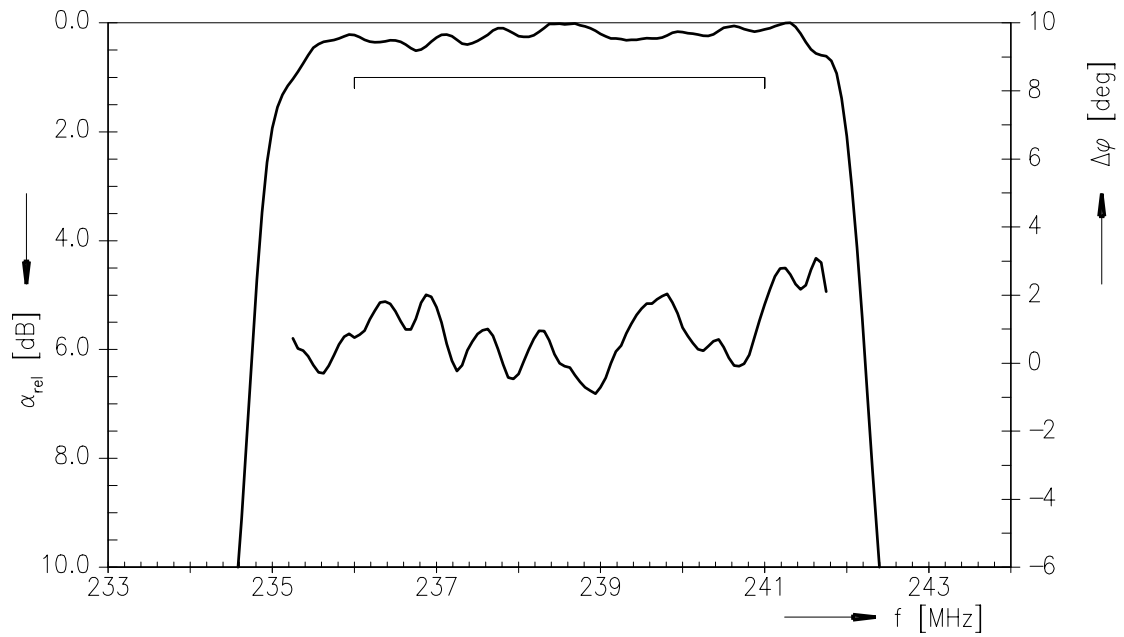
Maximum ratings

| | | | | |
|----------------------------|------------------|-------------------|-----|------------------------|
| Operable temperature range | T | -40/+85 | °C | |
| Storage temperature range | T _{sta} | -40/+85 | °C | |
| DC voltage | V _{DC} | 0 | V | |
| ESD voltage | V _{ESD} | 200 ¹⁾ | V | machine model, 1 pulse |
| Input power | P _{IN} | 10 | dBm | |

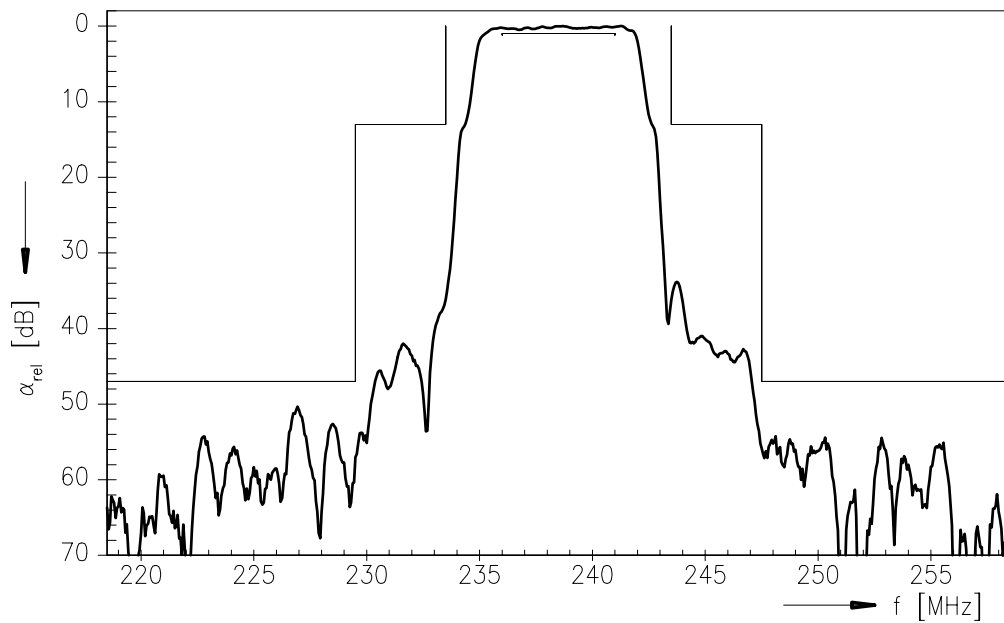
¹⁾ acc. to J-STD22A-0115A (machine model, 1 pulse +/-).



Transfer function



Transfer function (wideband)





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Data Sheet



References

| | |
|---------------------|--|
| Type | B5043 |
| Ordering code | B39241B5043Z710 |
| Marking and package | C61157-A7-A49 |
| Packaging | F61074-V8172-Z000 |
| Date codes | L_1126 |
| S-parameters | |
| Soldering profile | S_6001 |
| RoHS compatible | defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment." |

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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