



SAW Components

SAW IF filter

CDMA

| | |
|-----------------------|--------------------------|
| Series/type: | B5076 |
| Ordering code: | B39141-B5076-Z510 |
| Date: | Dec 10, 2007 |
| Version: | 2.0 |



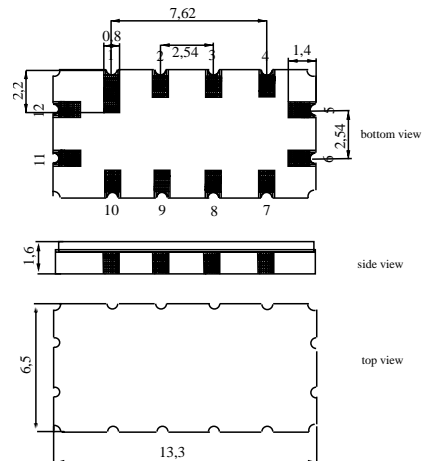
Application

- Low-loss IF filter for CDMA base station
- Usable passband 25 MHz



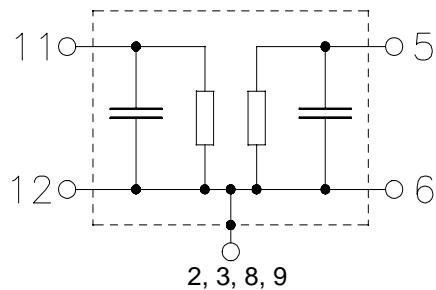
Features

- Package size 13.3 x 6.5 x 1.6 mm³
- Package code QCC12
- RoHS compatible
- Approx. weight 0.44 g
- Ceramic package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)
- Filter surface passivated



Pin configuration

- 11, 12 Input
- 5 Output
- 6 Output ground
- 1, 4, 7, 10 To be grounded
- 2, 3, 8, 9 Case ground





Data sheet



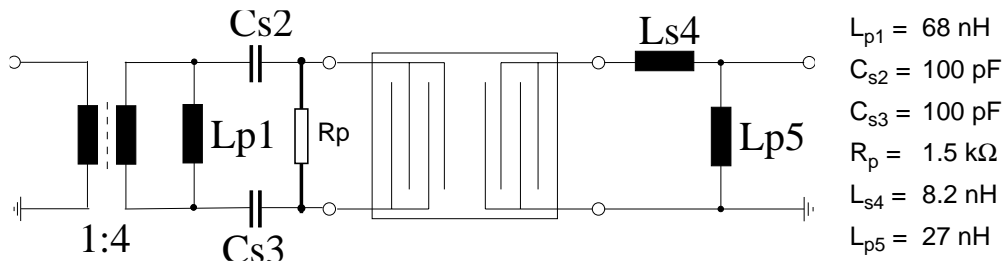
Characteristics

Operating temperature range: T = -40 to 85 °C
 Terminating source impedance: Z_S = 200 Ω bal. and matching network
 Terminating load impedance: Z_L = 50 Ω unbal. and matching network

| | | min. | typ. @ 25 °C | max. | |
|--|--------------------|------|-----------------|------|-------|
| Nominal frequency | f _N | — | 140 | — | MHz |
| Minimum insertion attenuation (including matching network) | α _{min} | — | 10.2 | 13 | dB |
| Passband width | B _{1.2dB} | | | | |
| α _{rel} ≤ 1.2 dB | | 25 | 27 | — | MHz |
| Amplitude ripple (p-p) | Δα | | | | |
| f _N ± 12.5 MHz | | — | 0.7 | 1.2 | dB |
| Phase ripple (p-p) | Δφ | | | | |
| f _N ± 12.5 MHz | | — | 8 | 10 | ° |
| Phase ripple (rms) | Δφ | | | | |
| f _N ± 12.5 MHz | | — | 2 | — | ° |
| Group delay ripple (p-p) | Δτ | | | | |
| f _N ± 12.5 MHz | | — | 40 | 100 | ns |
| Absolute group delay mean within | τ _{mean} | | | | |
| f _N ± 12.5 MHz | | — | 740 | — | ns |
| Relative attenuation (relative to α _{min}) | α _{rel} | | | | |
| 1 MHz ... 120 MHz | | 40 | 45 | — | dB |
| 162 MHz ... 201 MHz | | 40 | 45 | — | dB |
| 201 MHz ... 1 GHz | | 40 | 50 | — | dB |
| 1 GHz ... 2 GHz | | 30 | 40 | — | dB |
| VSWR (input and output) | | | | | |
| f _N ± 12.5 MHz | | — | 1.5:1 | 2:1 | |
| Temperature coefficient of frequency | TC _f | — | - 87 | — | ppm/K |



Matching network to 200/50 Ω



- Transformer is only required for measurement at 50 Ω balanced, it accounts for additional 0.8dB insertion loss.

- The parallel resistor can also be omitted. In this case maximum VSWR will be about 0.1 increased, the insertion attenuation will improve by 0.4dB.

- Element values depend upon PCB layout and board parasitics

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} | 15 | dBm | |

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



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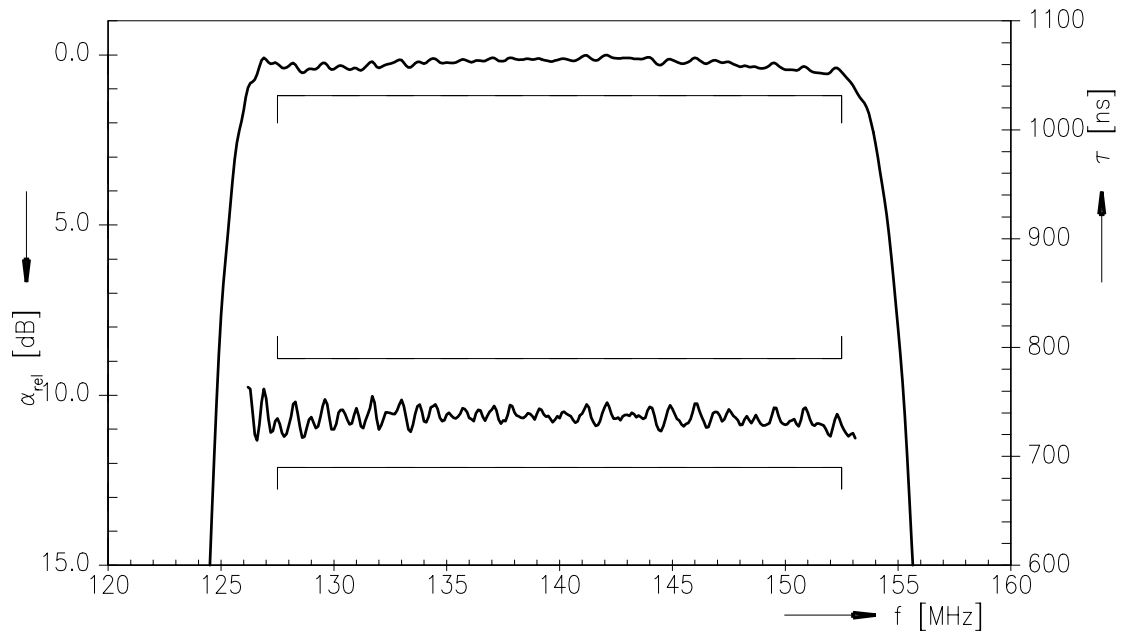
SAW IF filter

140.0 MHz

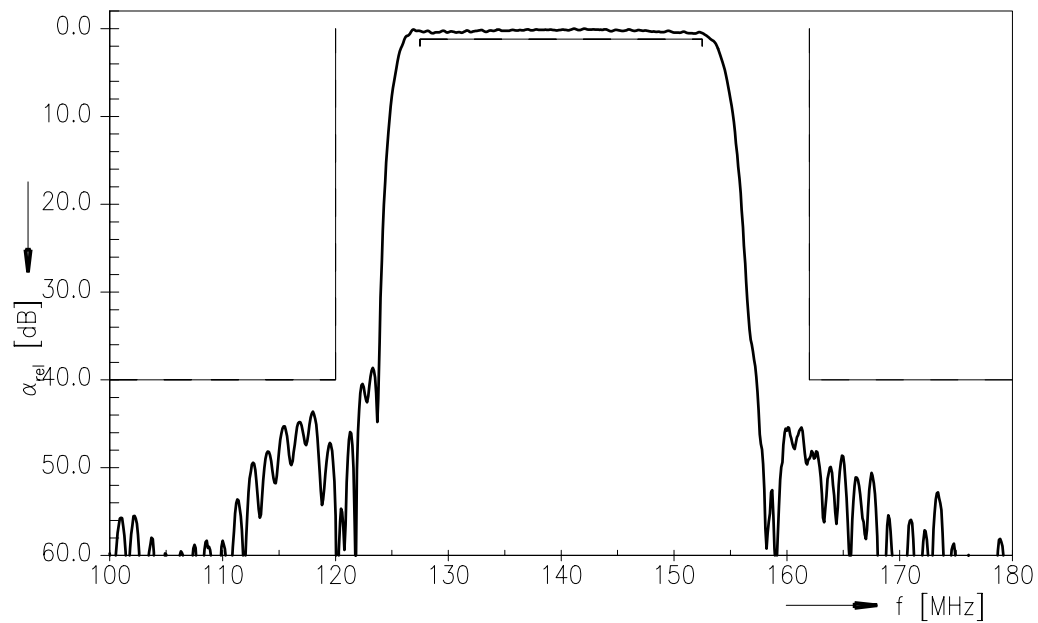
Data sheet



Transfer function (passband)



Transfer function



Please read *cautions and warnings* and *important notes* at the end of this document.



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B5076

SAW IF filter

140.0 MHz

Data sheet



References

| | |
|----------------------------|--|
| Type | B5076 |
| Ordering code | B39141-B5076-Z510 |
| Marking and package | C61157-A7-A55 |
| Packaging | F61074-V8163-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." |

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