



SAW Components

SAW Rx filter

TETRA

| | |
|-----------------------|------------------------|
| Series/type: | B5052 |
| Ordering code: | B39471B5052Z810 |
| Date: | March 14, 2008 |
| Version: | 2.0 |



Data sheet



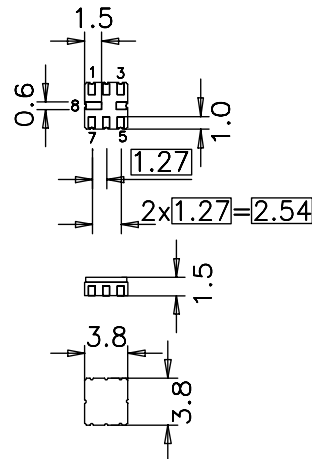
Application

- Low-loss IF filter for base station TETRA systems, receive path (Rx)
- Unbalanced to unbalanced or unbalanced to balanced operation
- Low amplitude ripple
- No external matching required
- Usable passband 10 MHz



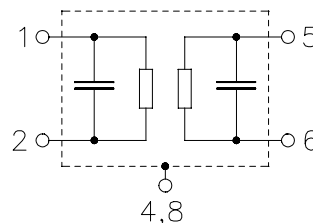
Features

- Package size 3.8 x 3.8 x 1.35 mm³
- Package code QCC8B
- RoHS compatible
- Approximate weight 0.07 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

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





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465.00 MHz

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Characteristics

Temperature range for specification: T = -30 °C to +70 °C
 Terminating source impedance: Z_S = 50 Ω
 Terminating load impedance: Z_L = 50 Ω

| | | min. | typ. @ 25 °C | max. | |
|--------------------------------------|------------------|------|-----------------|-------------------|-----|
| Center frequency | f _C | — | 465.00 | — | MHz |
| Maximum insertion attenuation | α _{max} | | | | |
| 460.0 ... 470.0 MHz | | — | 2.3 | 3.0 ¹⁾ | dB |
| Amplitude ripple (p-p) | Δα | | | | |
| 460.0 ... 470.0 MHz | | — | 0.9 | 2.0 ²⁾ | dB |
| Return Loss (VSWR) | | | | | |
| 460.0 ... 470.0 MHz | | — | 2.0 | 2.2 | |
| Attenuation | α | | | | |
| 50.0 ... 82.0 MHz | | 31 | 73 | — | dB |
| 82.0 ... 352.0 MHz | | 27 | 54 | — | dB |
| 352.0 ... 455.0 MHz | | 10 | 17 | — | dB |
| 478.0 ... 500.0 MHz | | 10 | 21 | — | dB |
| 500.0 ... 622.0 MHz | | 27 | 50 | — | dB |
| 622.0 ... 633.0 MHz | | 45 | 47 | — | dB |
| 633.0 ... 1001.0 MHz | | 19 | 36 | — | dB |
| 1001.0 ... 1542.0 MHz | | 26 | 31 | — | dB |
| 1542.0 ... 1736.0 MHz | | 34 | 37 | — | dB |
| 1736.0 ... 2100.0 MHz | | 24 | 27 | — | dB |

¹⁾ 2.5dB max at +15°C to +35°
²⁾ 1.5dB max at +15°C to +35°



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Maximum ratings

| | | | | |
|--------------------------------------|------------------|-------------------|-----|------------------------|
| Operable temperature range | T | -40/+85 | °C | |
| Storage temperature range | T _{stg} | -40/+85 | °C | |
| DC voltage | V _{DC} | 5 | V | |
| ESD voltage | V _{ESD} | 100 ¹⁾ | V | machine model, 1 pulse |
| Input power at 460.0 ... 470.0MHz | P _{IN} | 15 | dBm | Continuous Wave |

¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



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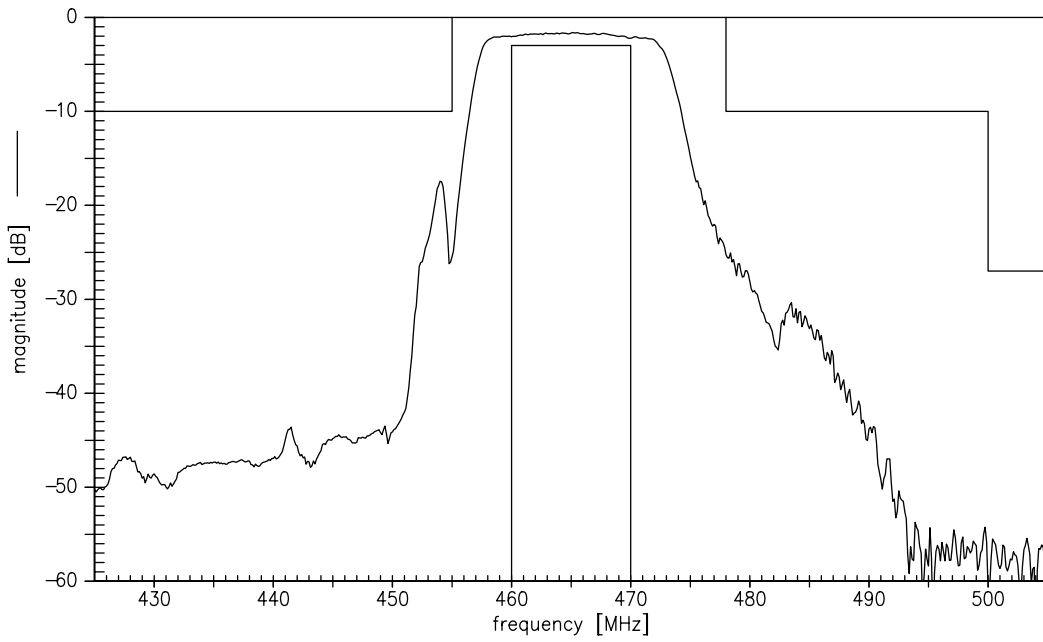
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465.00 MHz

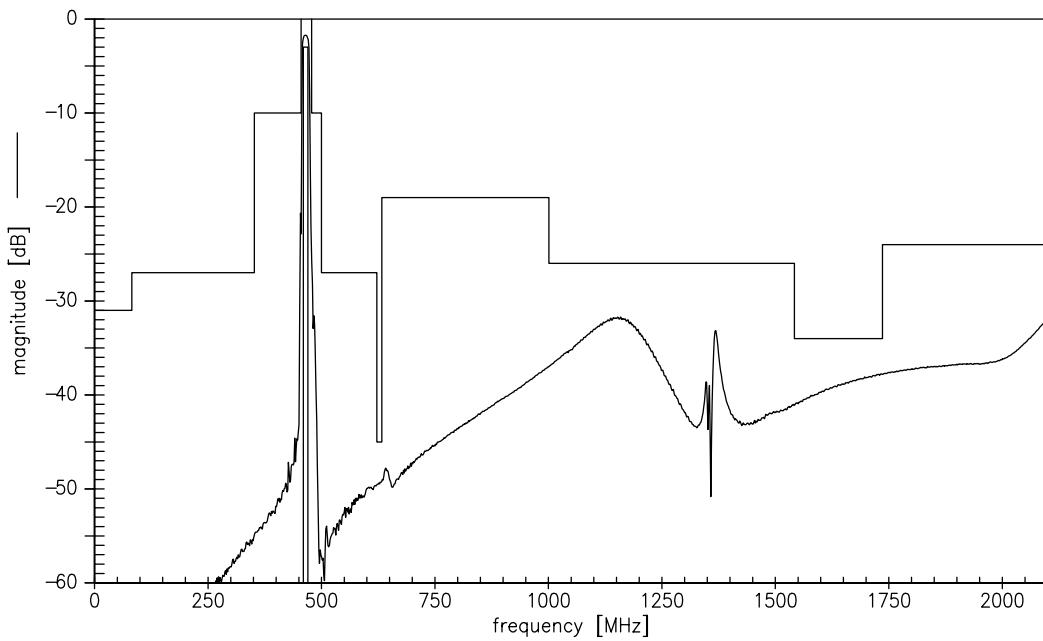
Data sheet



Transfer function



Transfer function (wideband)



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

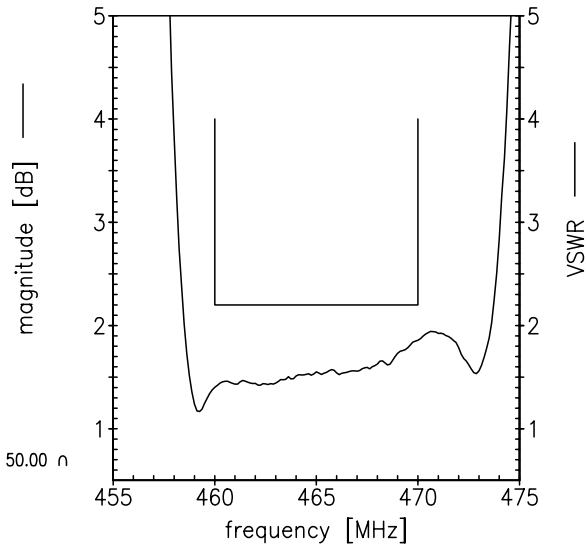
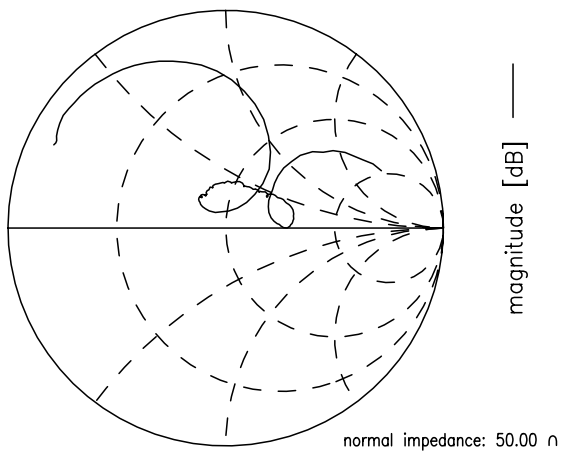


Data sheet

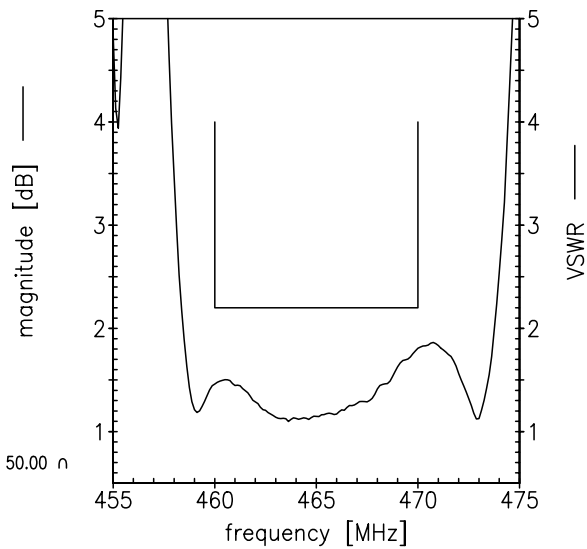
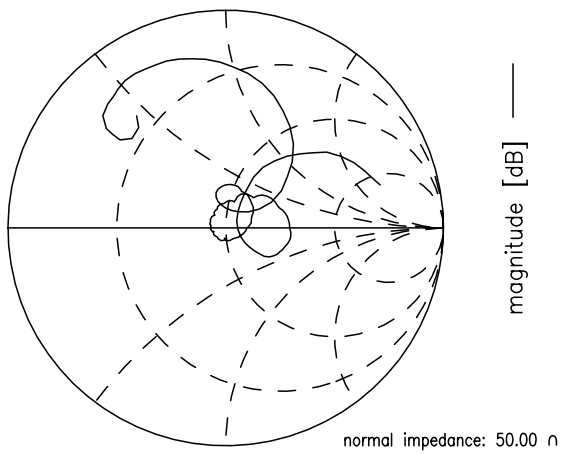


Smith charts

S₁₁ function



S₂₂ function





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References

| | |
|----------------------------|--|
| Type | B5052 |
| Ordering code | B39471B5052Z810 |
| Marking and package | C61157-A7-A46 |
| Packaging | F61074-V8167-Z000 |
| Date codes | L_1126 |
| S-parameters | B5052_NB.s2p B5052_WB.s2p |
| 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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