

SAW Tx Filter

Series/Type: B3836

Ordering code: B39821-B3836-U410

Date: Nov 10, 2005

Version:

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B3836

Low-Loss Filter for Mobile Communication

815.50 MHz

Data Sheet



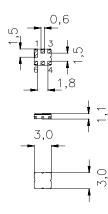
Application

- Low-loss RF filter for iDEN systems, transmit path (TX)
- \blacksquare No matching required for operation at 50 Ω
- Usable passband 19 MHz



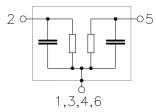
Features

- Package size 3.0 x1.1 x 3.0 mm³
- RoHS compliant
- Approx. weight 0.037 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals



Pin configuration

- 2 Input, unbalanced
- 5 Output, unbalanced
- 1,3,4,6 To be grounded





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SMD

Characteristics

Operating temperature range: -30 to +85 °C

Terminating source impedance: 50Ω Terminating load impedance: 50Ω

| | | B3836 ¹⁾ | | | |
|--------------------------------|-----------------------|---------------------|----------------|--------|-----|
| | | min. | typ. @ 25°C | max. | |
| Center frequency | f_{C} | _ | 815.5 | _ | MHz |
| Maximum insertion attenuation | α_{max} | | | | |
| 806.0 825.0 MHz | <u>.</u> | _ | 2.7 | 3.7 2) | dB |
| Group Delay ripple (p-p) | $\Delta 	au$ | | | | |
| 806.0 825.0 MHz | <u>.</u> | _ | 25 | 50 | ns |
| Return loss (Input and Output) | | | | | |
| 806.0 825.0 MHz | <u>.</u> | 10.0 | 11.0 | _ | dB |
| Attenuation | α | | | | |
| 851.0 870.0 MHz | <u>.</u> | 45 | 52 | _ | dB |
| 935.0 940.0 MHz | <u>.</u> | 45 | 48 | _ | dB |
| 960.65 979.65 MHz | <u>'</u> | 42 | 46 | _ | dB |
| 1115.30 1134.30 MHz | <u>.</u> | 40 | 45 | _ | dB |
| 1269.95 1288.95 MHz | <u>.</u> | 35 | 45 | _ | dB |
| 1612.00 1650.00 MHz | <u>:</u> | 25 | 32 | _ | dB |
| 1650.00 2600.00 MHz | <u>:</u> | 25 | 27 | _ | dB |

 $^{^{1)}}$ Values in columns min, typ and max indicate the development status of the current version. $^{2)}$ 3,0 dB max. at 25 $^{\circ}\text{C}.$



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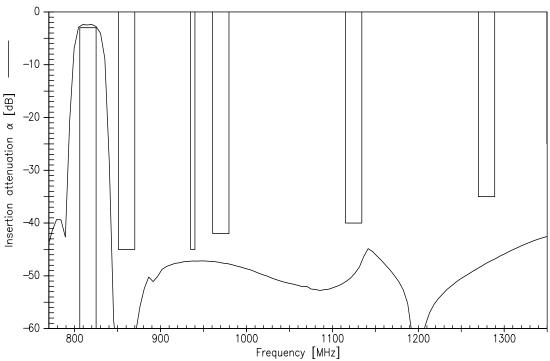
Maximum ratings

| Operable temperature range | Т | -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, 10 pulses |
| Input Power at iDEN Tx bands | P_{IN} | 7 | dBm | continuous wave |

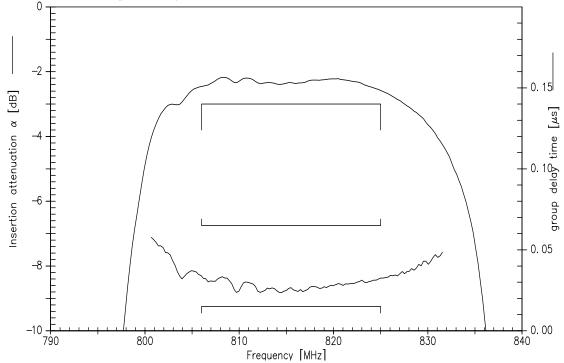
 $^{^{1)}}$ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



SAW Components Low-Loss Filter for Mobile Communication Data Sheet Transfer function



Transfer function (passband)





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Low-Loss Filter for Mobile Communication

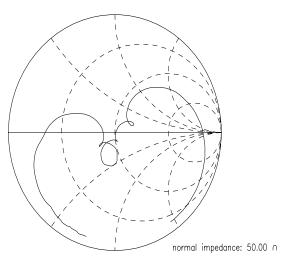
815.50 MHz

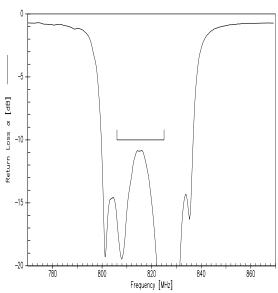
Data Sheet



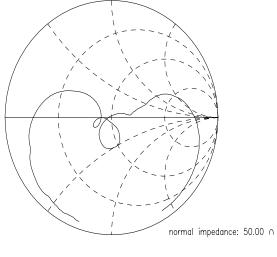
Smith chart

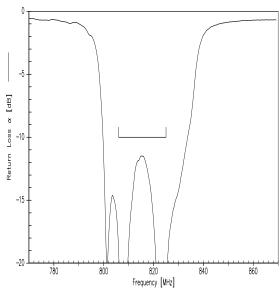
S₁₁ function





S₂₂ function







SAW Components B3836 Low-Loss Filter for Mobile Communication 815.50 MHz

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Data Sheet



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