



RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW Filter

LTE / WCDMA Band 12

| | |
|----------------|-------------------|
| Series/type: | B8811 |
| Ordering code: | B39731B8811P810 |
| Date: | November 12, 2015 |
| Version: | 2.3 |

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Data sheet



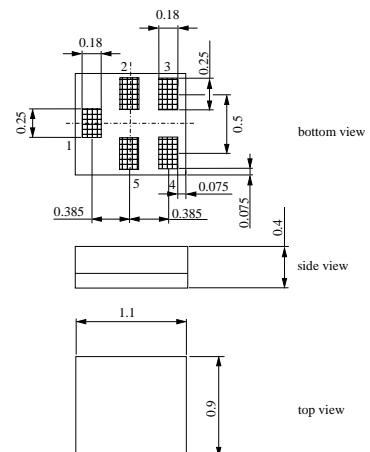
Application

- Low-loss RF filter for mobile telephone LTE and WCDMA Band 12 receive path (RX)
- Usable passband: 17 MHz
- Impedance at input and output 50 Ω
- Unbalanced to unbalanced operation



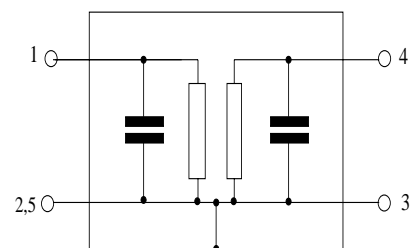
Features

- Package size 1.1 x 0.9 x 0.4 mm³
- RoHS compatible
- Approx. weight 0.001g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**



Pin configuration

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





SAW Components

B8811

SAW Filter

737.5 MHz

Data sheet



Characteristics

Temperature range for specification: $T = -30\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

| | | min. | typ. @ 25 °C | max. | |
|--------------------------------------|----------------|------|-----------------|------|-----|
| Center frequency | f_C | — | 737.5 | — | MHz |
| Maximum insertion attenuation | α_{max} | — | 1.8 | 2.6 | dB |
| 729.0 ... 746.0 MHz | | | | | |
| Amplitude ripple (p-p) | $\Delta\alpha$ | — | 0.7 | 1.5 | dB |
| 729.0 ... 746.0 MHz | | | | | |
| Input VSWR | | — | 2.0 | 2.5 | |
| 729.0 ... 746.0 MHz | | | | | |
| Output VSWR | | — | 2.0 | 2.5 | |
| 729.0 ... 746.0 MHz | | | | | |
| Attenuation | α | | | | |
| 10.00 ... 699.00 MHz | | 46 | 55 | — | dB |
| 699.00 ... 716.00 MHz | | 46 | 48 | — | dB |
| 716.00 ... 722.00 MHz | | 14 | 21 | — | dB |
| 722.00 ... 727.00 MHz | | 1.6 | 2.1 | — | dB |
| 776.00 ... 793.00 MHz | | 27 | 37 | — | dB |
| 793.00 ... 805.00 MHz | | 35 | 47 | — | dB |
| 805.00 ... 1710.0 MHz | | 30 | 47 | — | dB |
| 1710.0 ... 1755.0 MHz | | 41 | 46 | — | dB |
| 1755.0 ... 1850.0 MHz | | 30 | 46 | — | dB |
| 1850.0 ... 1910.0 MHz | | 41 | 45 | — | dB |
| 1910.0 ... 2187.0 MHz | | 30 | 43 | — | dB |
| 2187.0 ... 2238.0 MHz | | 36 | 42 | — | dB |
| 2238.0 ... 2400.0 MHz | | 30 | 42 | — | dB |
| 2400.0 ... 2500.0 MHz | | 35 | 41 | — | dB |
| 2500.0 ... 4900.0 MHz | | 30 | 37 | — | dB |
| 4900.0 ... 5950.0 MHz | | 24 | 34 | — | dB |
| 5950.0 ... 6000.0 MHz | | 21 | 33 | — | dB |



Data sheet



AMaximum ratings

| | | | | |
|---------------------------|-----------|-----------------------|-----|----------------------|
| Storage temperature range | T_{stg} | -40/+85 ¹⁾ | °C | |
| DC voltage | V_{DC} | 5 ²⁾ | V | |
| ESD voltage | V_{ESD} | 100 ³⁾ | V | Machine Model |
| | V_{ESD} | 275 ⁴⁾ | V | Human Body Model |
| | V_{ESD} | 600 ⁵⁾ | V | Charged Device Model |
| Input power | | | | |
| 729.0 ...746.0 MHz | P_{IN} | 10 | dBm | continuous wave |

1) extended upper limit: 168h @ 125°C acc. to IEC 60068-2-2 Bb

2) 168h Damp Heat Steady State acc. to IEC 60068-2-67 Cy.

3) acc. to JESD22-A115B (MM - Machine Model), 10 negative & 10 positive pulses.

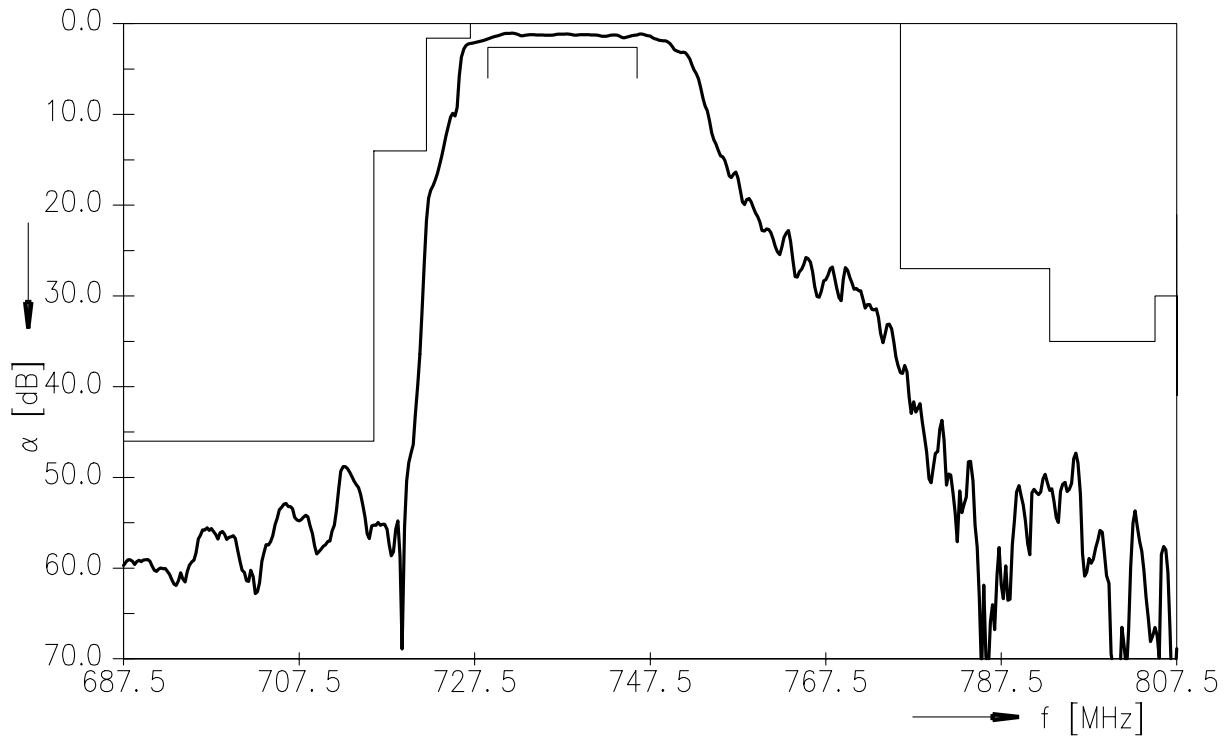
4) acc. to JESD22-A114F (HBM - Human Body Model), 1 negative & 1 positive pulse.

5) acc. to JESD22-C101C (CDM - Field Induced Charged Device Model), 3 negative & 3 positive pulses.

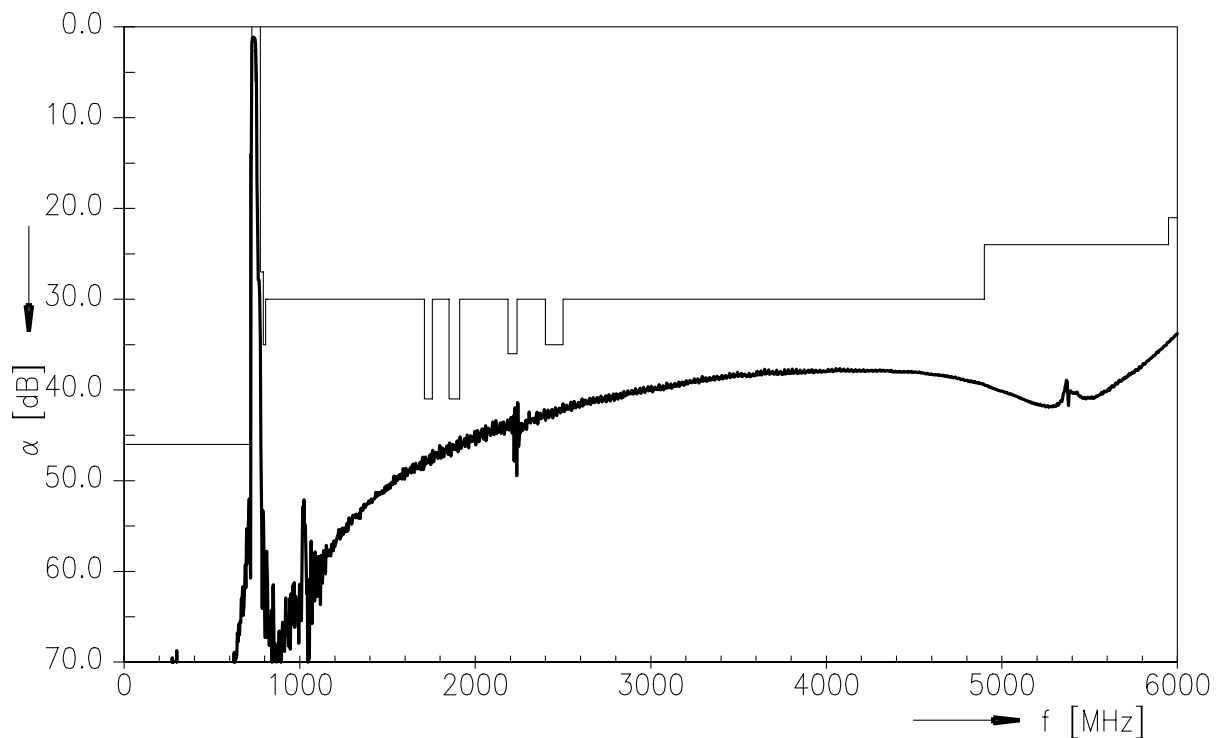
Data sheet



Frequency response (narrowband)



Frequency response (wideband)

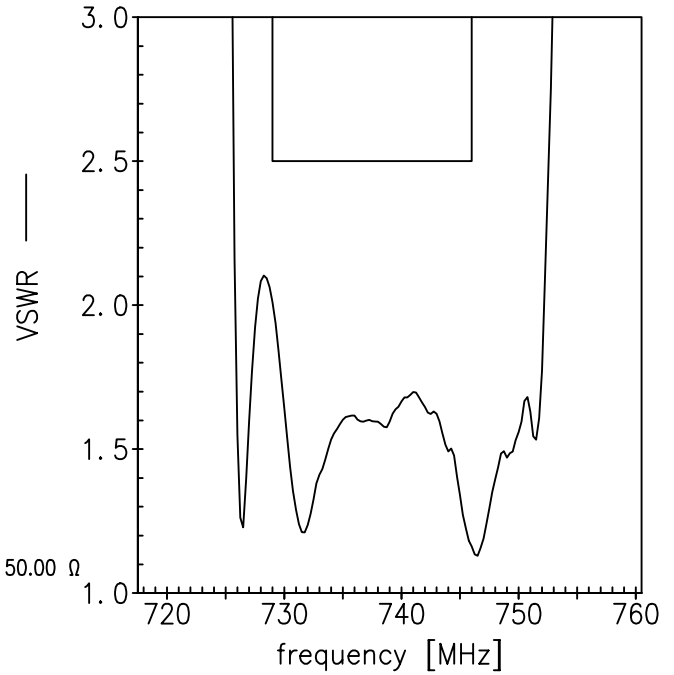
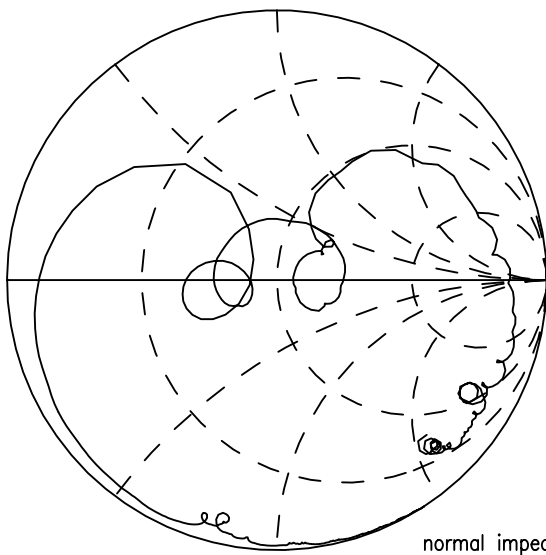


Data sheet

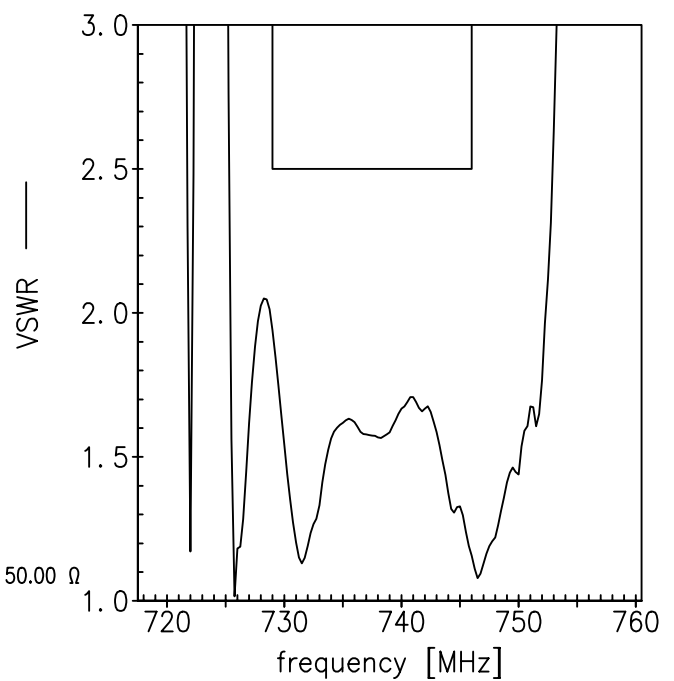
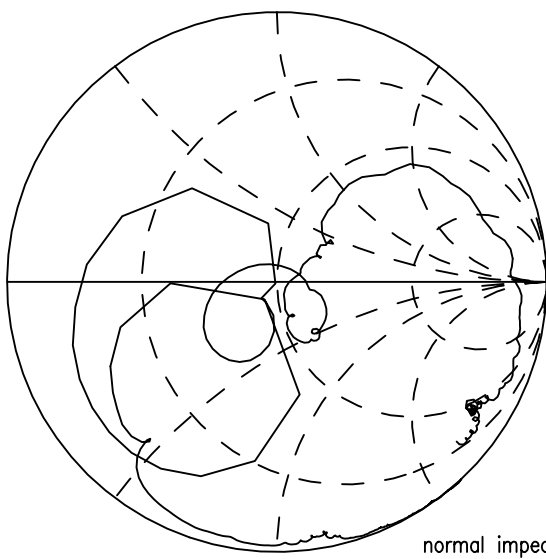


Smith chart

S₁₁ function



S₂₂ function



**SAW Components****B8811****SAW Filter****737.5 MHz**

Data sheet

**References**

| | |
|----------------------------|---|
| Type | B8811 |
| Ordering code | B39731B8811P810 |
| Marking and package | C61157-A8-A56 |
| Packaging | F61074-V8255-Z000 |
| Date codes | L_1126 |
| S-parameters | B8811_NB.s2p, B8811_WB.s2p |
| Soldering profile | S_6001 |
| RoHS compatible | RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8 th , 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases. |
| Moldability | Before using in overmolding environment, please contact your EPCOS sales office. |
| Matching coils | See http://www.tdk.co.jp/tefe02/coil.htm#aname1 http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils. |

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

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