# SAW Components

## SAW RF filter

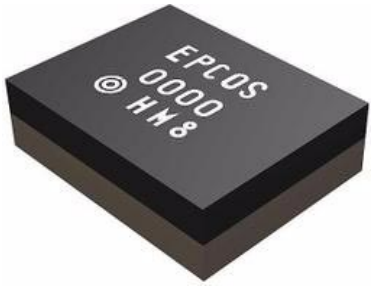
Diversity RX Band 13 & 17

| | |
|---|---|
| **Series/type:** | **B8321** |
| **Ordering code:** | **B39751B8321P810** |
| Date: | August 27, 2013 |
| Version: | 2.0 |

Data Sheet SMD

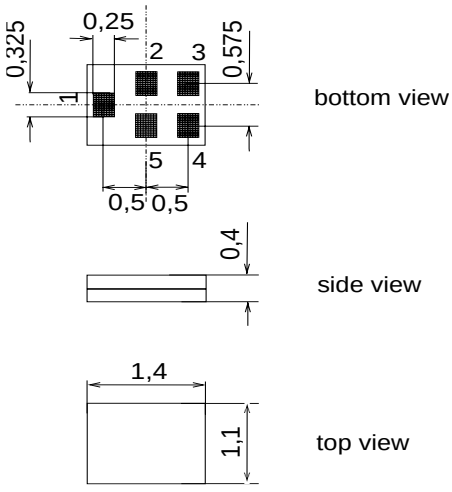
## Application

- Low Loss RF filter for band 13&17, DRX path
- Usable band width 22 MHz
- Unbalanced to balanced operation (50 Ω/100 Ω)
- Very small size and low height



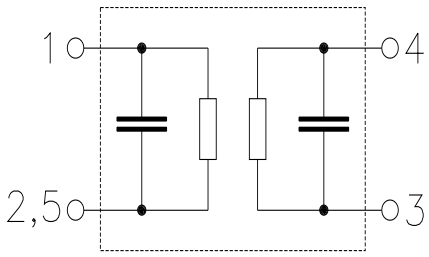

## Features

- Package size 1.4 x 1.1 mm²
- Max. Package height 0.45 mm
- Tolerance of Package dimensions +/-0.1mm
- RoHS compatible
- Approx. weight 0.003 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)
- **M**oisture **S**ensitivity **L**evel **3**




## Pin configuration

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



Data Sheet SMD

## Characteristics

Temperature range for specification: T = –20 ˚C to 85 ˚C
Terminating source impedance: $Z_S$ = 50 Ω
Terminating load impedance: $Z_L$ = 100 Ω (balanced)

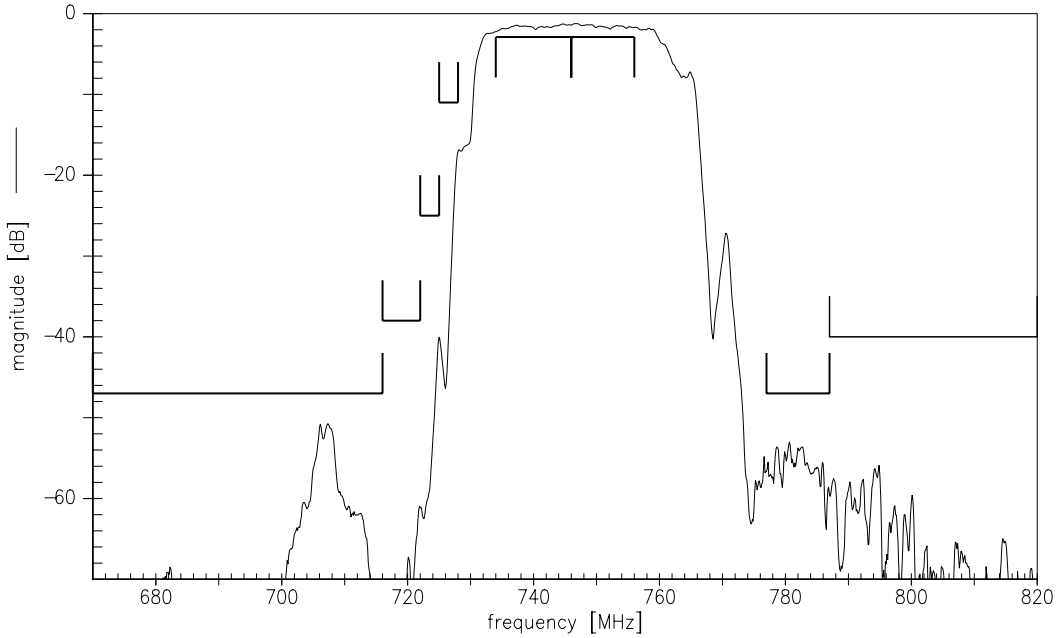
| | | B8321 | | | |
|---|---|---|---|---|---|
| | | **min.** | **typ. @ 25 ˚C** | **max.** | |
| **Nominal frequency** | $f_N$ | — | 745.0 | — | MHz |
| **Maximum insertion attenuation** | $\alpha_{max}$ | | | | |
| 734.0 ... 746.0 MHz | | — | 2.2 | 2.9 | dB |
| 746.0 ... 756.0 MHz | | — | 2.0 | 2.9 | dB |
| **Amplitude ripple** (p-p) | $\Delta\alpha$ | | | | |
| 734.0 ... 746.0 MHz | | — | 0.7 | 1.7 | dB |
| 746.0 ... 756.0 MHz | | — | 0.8 | 1.7 | dB |
| **Input VSWR** | | | | | |
| 734.0 ... 756.0 MHz | | — | 1.8 | 2.1 | |
| **Output VSWR** | | | | | |
| 734.0 ... 756.0 MHz | | — | 1.8 | 2.1 | |
| **Common mode rejection ratio** | | | | | |
| 734.0 ... 756.0 MHz | | — | 33 | 27 | dB |
| **Attenuation** | $\alpha$ | | | | |
| 10.0 ... 704.0 MHz | | 47 | 80 | — | dB |
| 704.0 ... 716.0 MHz | | 47 | 55 | — | dB |
| 716.0 ... 722.0 MHz | | 38 | 60 | — | dB |
| 722.0 ... 725.0 MHz | | 25 | 40 | — | dB |
| 725.0 ... 728.0 MHz | | 11 | 18 | — | dB |
| 777.0 ... 787.0 MHz | | 47 | 52 | — | dB |
| 787.0 ... 4000.0 MHz | | 40 | 55 | — | dB |
| 4000.0 ... 6000.0 MHz | | 30 | 52 | — | dB |
| **Attenuation** | $\alpha_{meam}$ | | | | |
| 722.0 ... 728.0 MHz | | 20 | 30 | — | dB |

**Maximum ratings**

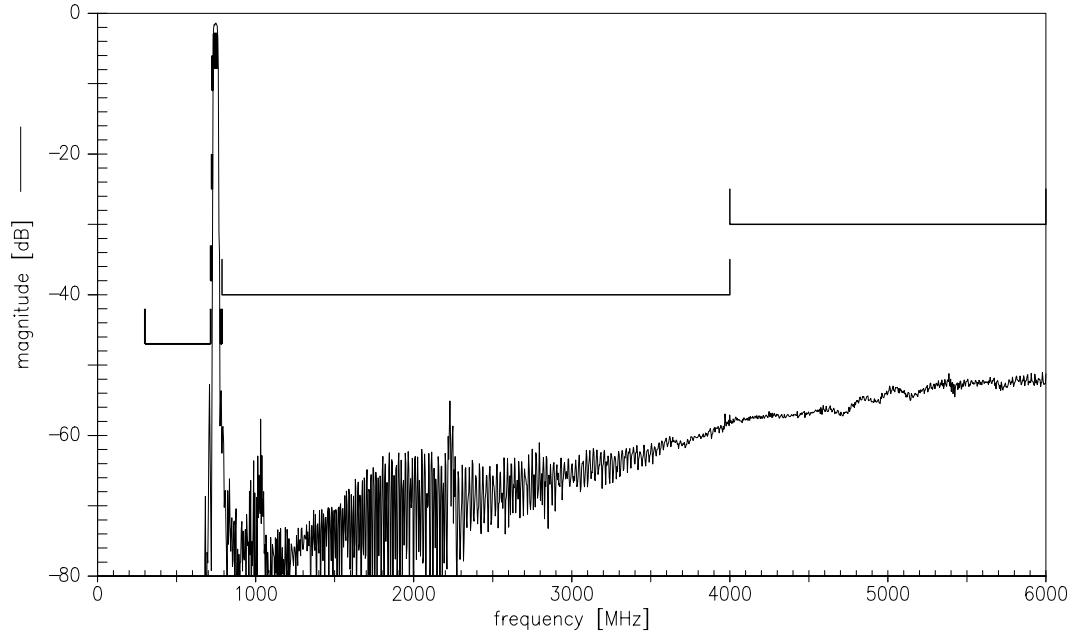
| | | | | |
|---|---|---|---|---|
| Operating temperature range | $T_{stg}$ | –30/+85 | °C | |
| Storage temperature range | $T_{stg}$ | –40/+125 | °C | |
| DC voltage | $V_{DC}$ | 5 | V | |
| ESD voltage | $V_{ESD}$ | 100[1)] | V | machine model, 1 pulse |
| Input power | $P_{IN}$ | 15 | dBm | continous wave, 55°C , 50000h |

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

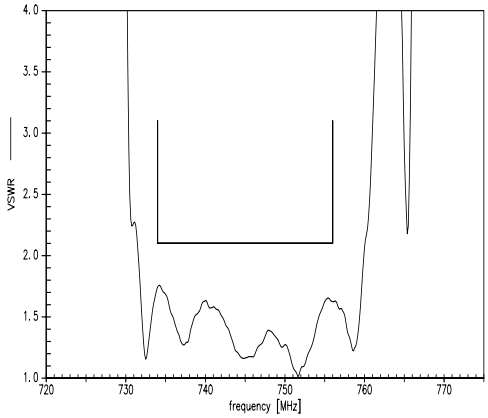
**Transfer function (narrow band)**

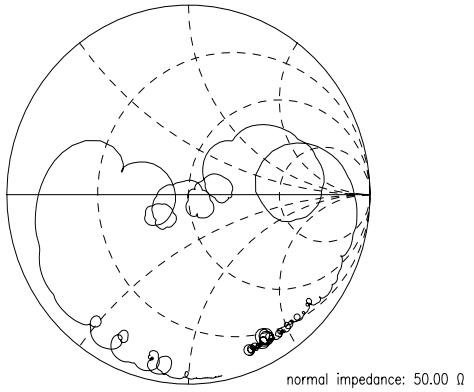



**Transfer function (wide band)**

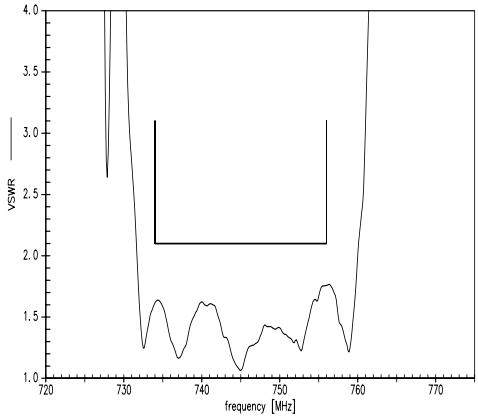


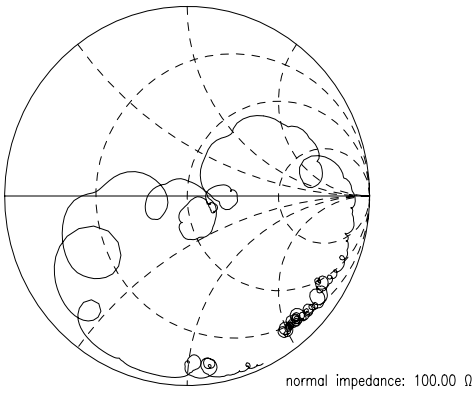
**S11 VSWR**




**S22 VSWR**



## References

| | |
|---|---|
| **Type** | B8321 |
| **Ordering code** | B39751B8321P810 |
| **Marking and package** | C61157-A8-A3 |
| **Packaging** | F61074-V8237-Z000 |
| **Date codes** | L_1126 |
| **S-parameters** | B8321_NB.s3p, B8321_WB.s3p<br>see file header for port/in assignment table |
| **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 8th, 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 coilss** | See Inductor pdf-catalog<br>http://www.tdk.co.jp/tefe02/coil.htm#aname1<br>and Data Library for circuit simulation<br>http://www.tdk.co.jp/etvcl/index.htm |

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

**Published by EPCOS AG**
**Systems, Acoustics, Waves Business Group**
**P.O. Box 80 17 09, 81617 Munich, GERMANY**



For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.

## Important notes

The following applies to all products named in this publication:

1. Some parts of this publication contain **statements about the suitability of our products f certain areas of application**. These statements are based on our knowledge of typical requir ments that are often placed on our products in the areas of application concerned. We neve theless expressly point out **that such statements cannot be regarded as bindi statements about the suitability of our products for a particular customer application.** A a rule, EPCOS is either unfamiliar with individual customer applications or less familiar w them than the customers themselves. For these reasons, it is always ultimately incumbent the customer to check and decide whether an EPCOS product with the properties described the product specification is suitable for use in a particular customer application.
2. We also point out that **in individual cases, a malfunction of electronic components failure before the end of their usual service life cannot be completely ruled out in tl current state of the art, even if they are operated as specified.** In customer applicatio requiring a very high level of operational safety and especially in customer applications in whi the malfunction or failure of an electronic component could endanger human life or health (e. in accident prevention or life-saving systems), it must therefore be ensured by means of suitab design of the customer application or other action taken by the customer (e.g. installation protective circuitry or redundancy) that no injury or damage is sustained by third parties in tl event of malfunction or failure of an electronic component.
3. **The warnings, cautions and product-specific notes must be observed.**
4. In order to satisfy certain technical requirements, **some of the products described in th publication may contain substances subject to restrictions in certain jurisdictions (e. because they are classed as hazardous)**. Useful information on this will be found in o Material Data Sheets on the Internet (www.epcos.com/material). Should you have any mo detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in th publication may change from time to time**. The same is true of the corresponding produ specifications. Please check therefore to what extent product descriptions and specificatio contained in this publication are still applicable before or when you place an order.
   We also **reserve the right to discontinue production and delivery of products**. Cons quently, we cannot guarantee that all products named in this publication will always be availab The aforementioned does not apply in the case of individual agreements deviating from tl foregoing for customer-specific products.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current versi of the "General Terms of Delivery for Products and Services in the Electrical Industr published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, BAOKE, Alu-X, CeraDiode, CeraLink, CeraPlas, CSMP, CSS CTVS, DeltaCap, DigiSiMic, DSSP, FilterCap, FormFit, MiniBlue, MiniCell, MKD, MKK, MLS MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, SIFERRIT, SIFI, SIKORE SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, WindC are **trademarks registered or pending** in Europe and in other countries. Further informati will be found on the Internet at www.epcos.com/trademarks.