Microwave Ceramics Filter

3-pole filter for WLL base station RX filter

Series/Type:	**S3B3/1/7**
Ordering code:	**B69843N3707A220**
Date:	2010-02-10
Version:	P3

Preliminary data sheet

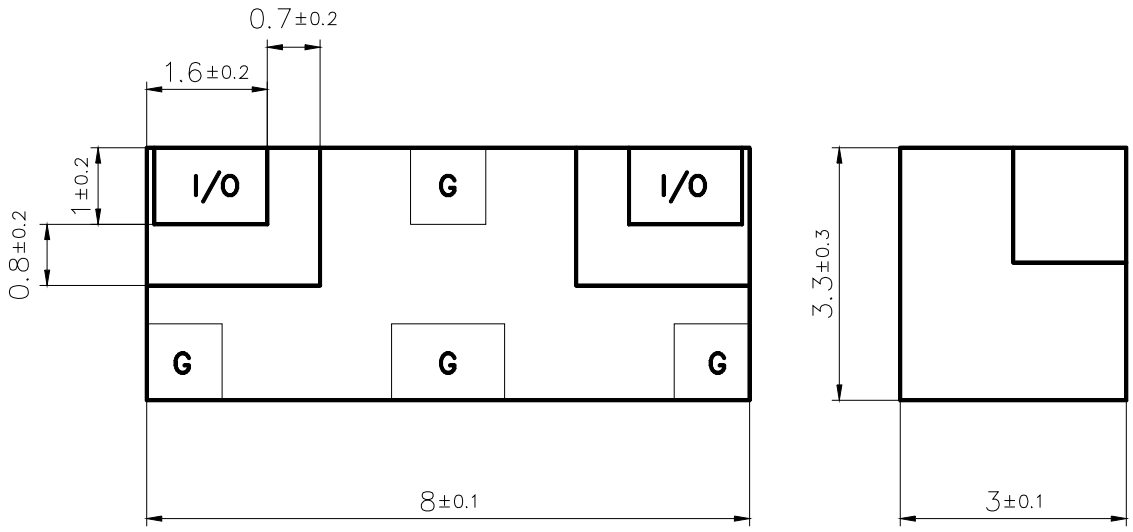
Modification

P1		20.12.04	Freising
P2	Update of electrical specification	22.08.05	Reichel
P3	Upgraded to new form	10.02.10	Reichel
	Not yet released		

Features

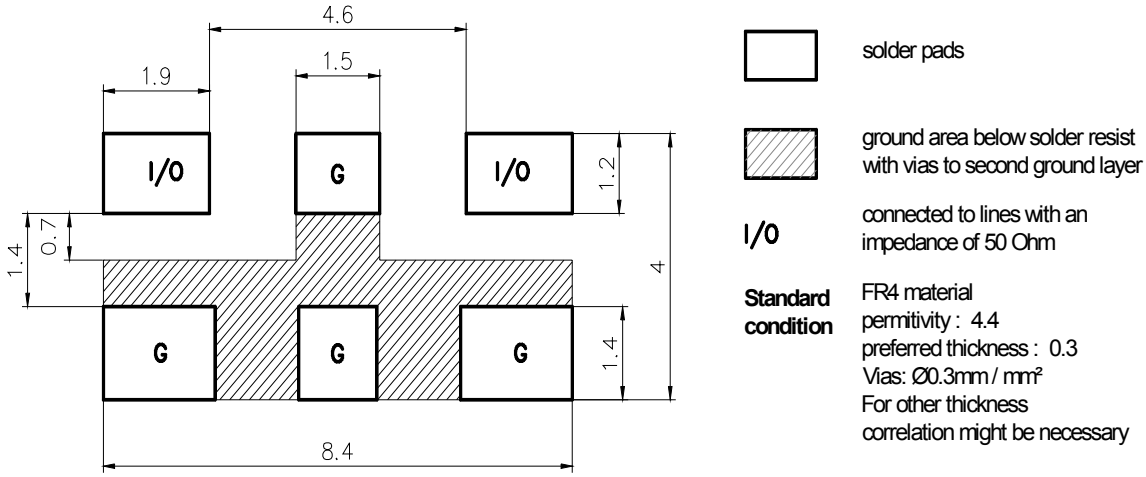
- SMD filter consisting of coupled resonators with stepped impedances
- $MgTiO_3$-$CaTiO_3$ (ε_r = 21/TC_f = 0 ±10 ppm/K) with a coating of copper (10 µm) and tin (>5 µm)
- Excellent reflow solderability, no migration effect due to copper/tin metallization
- ESD insensitivity and ESD protecting due to filter characteristics

Component drawing



View from below onto the solder terminals and view from beside
Marking: ‘EPCOS logo ‘3707’‘, on top of the filter

Recommended footprint



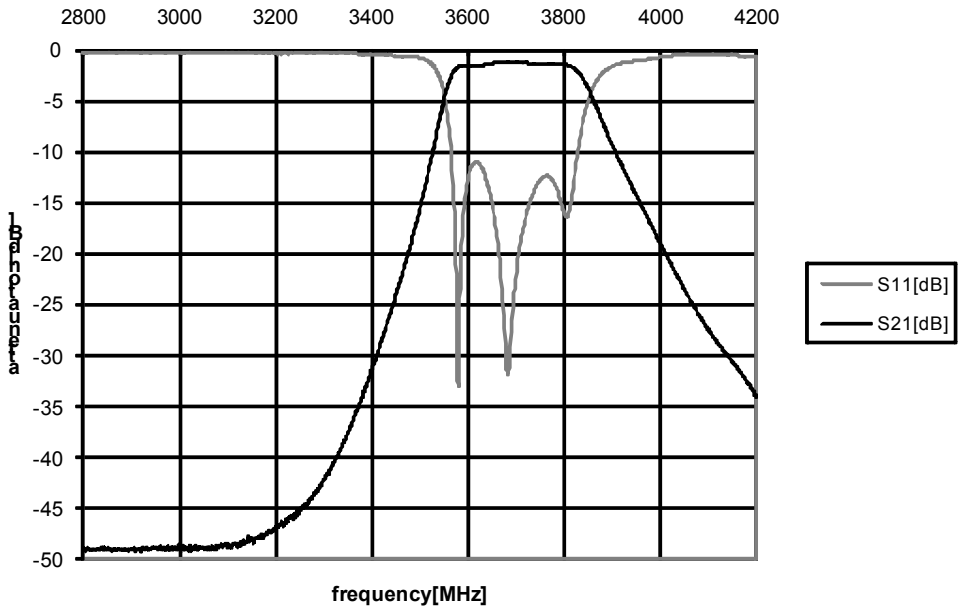
Characteristics

		min.	typ.	max.	
Center frequency	f_c	–	3700.0	–	MHz
Insertion loss	α_{IL}		1.3	1.5	dB
Passband	B	220			MHz
Amplitude ripple (peak – peak) at any 10 MHz BW	$\Delta\alpha$			0.4	dB
Standing wave ratio	SWR		1.5	2.0	
Impedance	Z		50		Ω
Power	P			1.0	W
Attenuation	α				
at 2788 to 2888 MHz		45	48		dB
at 3144 to 3244 MHz		41	45		dB
at 4056 to 4156 MHz		22	23		dB

Maximum ratings

IEC climatic category (IEC 68-1)		–40 °C/+90 °C/56	
Operating temperature	T_{op}	–40/+85	°C

Typical passband characteristic



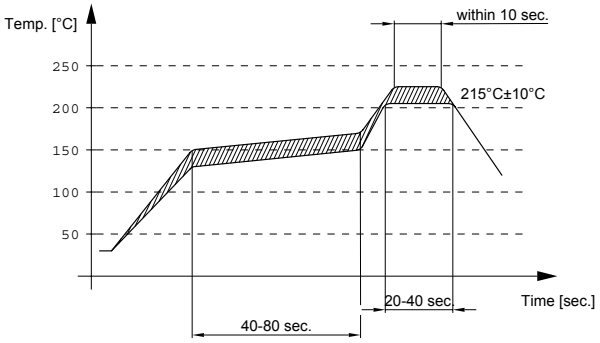
Processing information

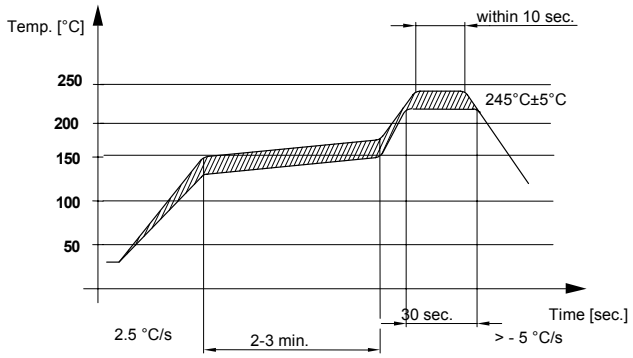
- Wettability acc. to IEC 68-2-58: ≥75% (after aging)

Soldering requirements

	Profile for eutectic SnPb solder paste	Profile for leadfree solder paste	
Soldering type	reflow	reflow	
Maximum soldering temperature	235 (max. 2 sec.)	260 (max. 2 sec.)	°C
(measuring point on top surface of the component)	225 (max. 10 sec.)	250 (max. 10 sec.)	°C

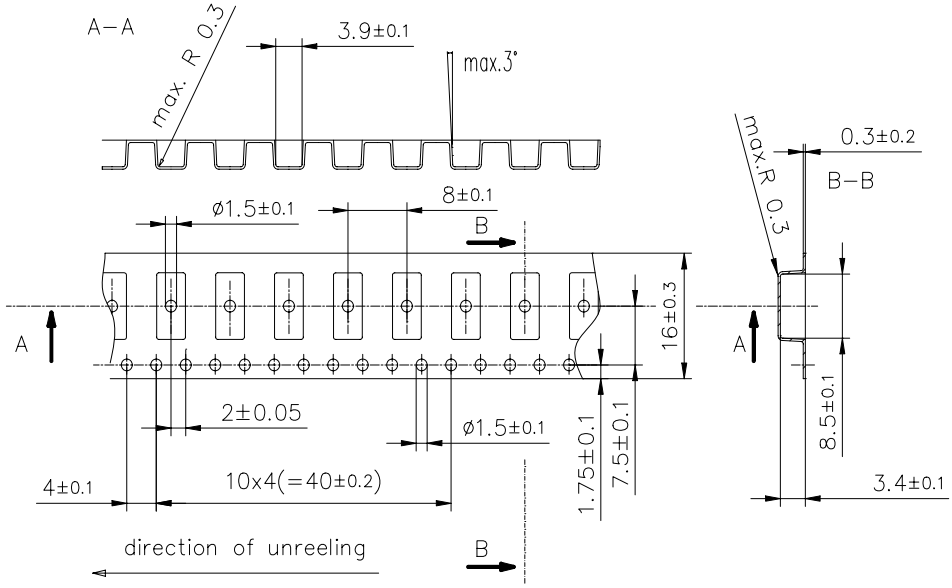
Recommended soldering conditions (infrared):





Delivery mode

- Blister tape acc. to IEC 286-3, PS, grey
- Pieces/tape: 2000



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 for certain areas of application**. These statements are based on our knowledge of typical requirements that are often placed on our products in the areas of application concerned. We nevertheless expressly point out **that such statements cannot be regarded as binding statements about the suitability of our products for a particular customer application.** As a rule, EPCOS is either unfamiliar with individual customer applications or less familiar with them than the customers themselves. For these reasons, it is always ultimately incumbent on the customer to check and decide whether an EPCOS product with the properties described in 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 or failure before the end of their usual service life cannot be completely ruled out in the current state of the art, even if they are operated as specified.** In customer applications requiring a very high level of operational safety and especially in customer applications in which the malfunction or failure of an electronic component could endanger human life or health (e.g. in accident prevention or life-saving systems), it must therefore be ensured by means of suitable design of the customer application or other action taken by the customer (e.g. installation of protective circuitry or redundancy) that no injury or damage is sustained by third parties in the 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 this publication may contain substances subject to restrictions in certain jurisdictions (e.g. because they are classed as hazardous)**. Useful information on this will be found in our Material Data Sheets on the Internet (www.epcos.com/material). Should you have any more detailed questions, please contact our sales offices.
5. We constantly strive to improve our products. Consequently, **the products described in this publication may change from time to time**. The same is true of the corresponding product specifications. Please check therefore to what extent product descriptions and specifications 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**. Consequently, we cannot guarantee that all products named in this publication will always be available. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products.
6. Unless otherwise agreed in individual contracts, **all orders are subject to the current version of the "General Terms of Delivery for Products and Services in the Electrical Industry" published by the German Electrical and Electronics Industry Association (ZVEI)**.
7. The trade names EPCOS, BAOKE, Alu-X, CeraDiode, CSMP, CSSP, CTVS, DeltaCap, DigiSiMic, DSSP, FormFit, MiniBlue, MiniCell, MKD, MKK, MLSC, MotorCap, PCC, PhaseCap, PhaseCube, PhaseMod, PhiCap, SIFERRIT, SIFI, SIKOREL, SilverCap, SIMDAD, SiMic, SIMID, SineFormer, SIOV, SIP5D, SIP5K, ThermoFuse, WindCap are **trademarks registered or pending** in Europe and in other countries. Further information will be found on the Internet at www.epcos.com/trademarks.