



## Microwave Ceramics Filter

3-pole filter for WiMAX

<b>Series/Type:</b>	<b>S3P2/25/1</b>
<b>Ordering code:</b>	<b>B69813N2407A502</b>
Date:	2010-01-18
Version:	P5

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Preliminary data

Modification

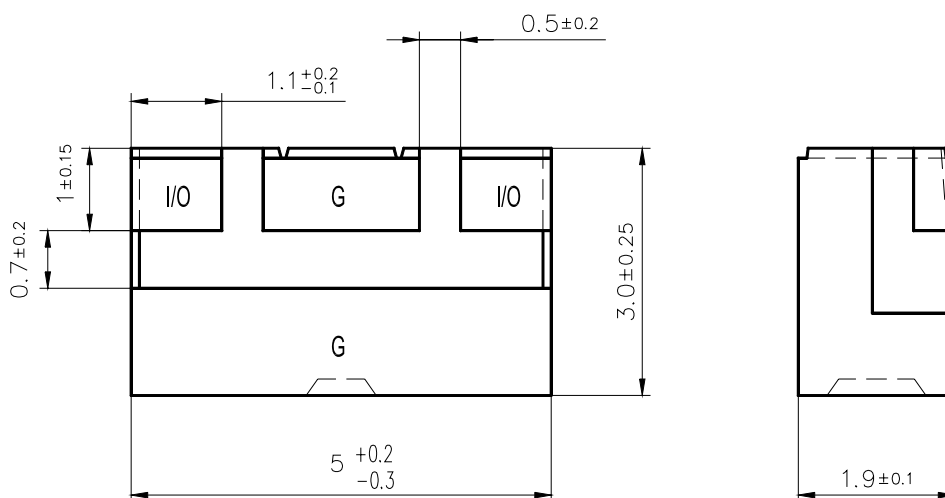
P1		16.12.05	Reichel
P2	New component drawing	16.06.06	Reichel
P3	New component and footprint drawing	26.04.07	Reichel
P4		29.01.09	Reichel
P5	Upgraded to new form	18.01.10	Reichel

Features

- SMD filter consisting of coupled resonators with stepped impedances
- (NdBa)TiO<sub>3</sub> ( $\epsilon_f = 88/TC_f = 0 \pm 10$  ppm/K) with a coating of copper (10  $\mu\text{m}$ ) and tin (>5  $\mu\text{m}$ )
- Excellent reflow solderability, no migration effect due to copper/tin metallization

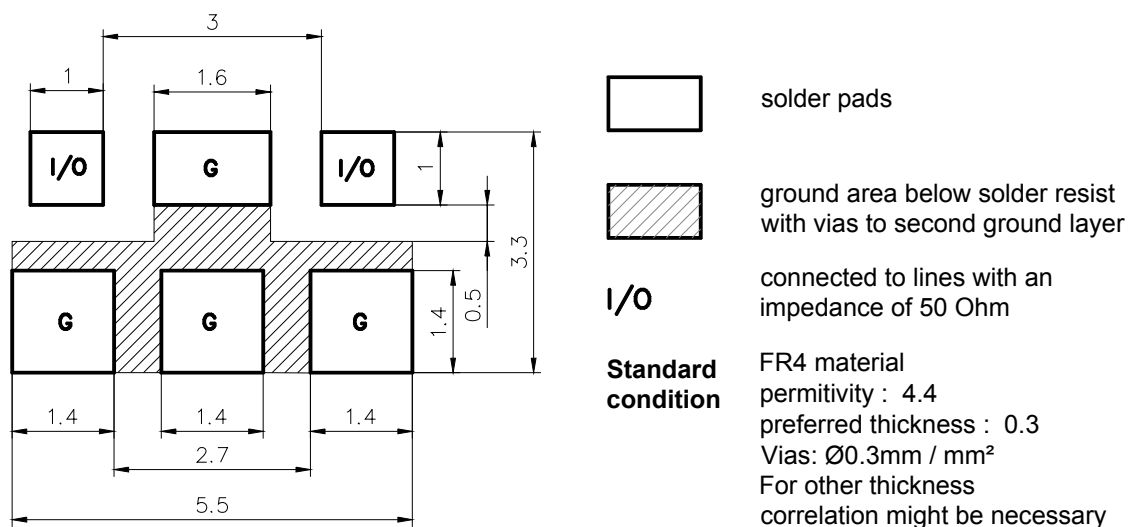
Preliminary data

Component drawing



View from below onto the solder terminals and view from beside  
 Marking: 'EPCOS Logo' on top of the filter

Recommended footprint



Preliminary data

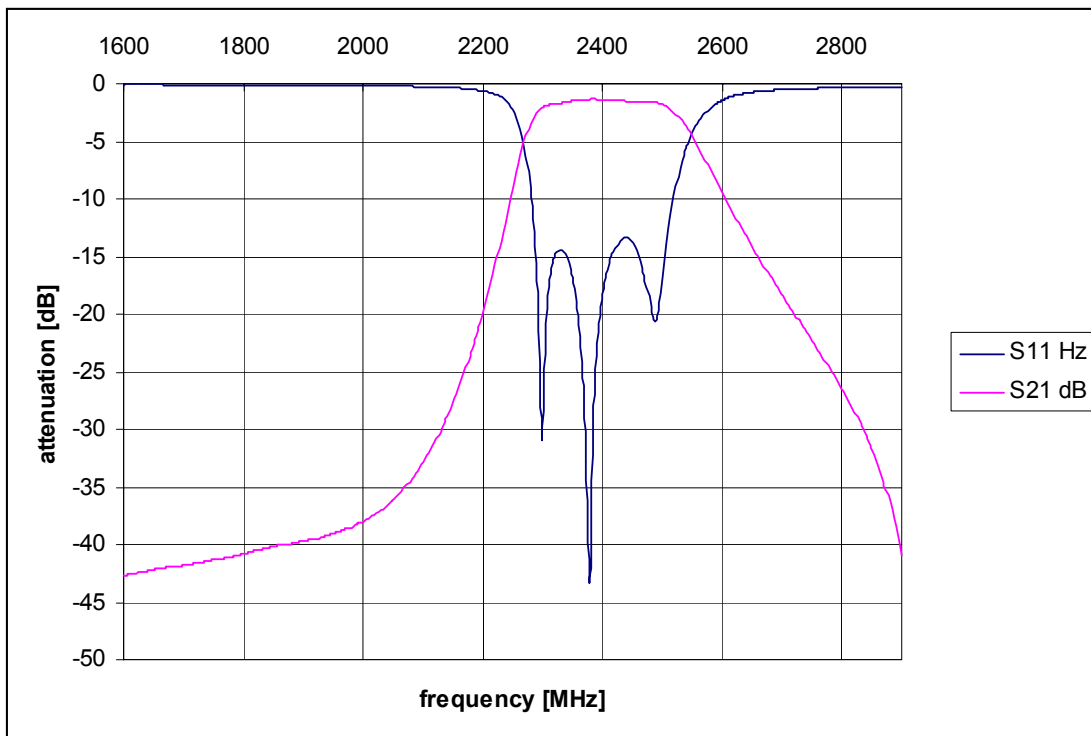
Characteristics

		min.	typ.	max.	
Center frequency	$f_c$	–	2400	–	MHz
Insertion loss	$\alpha_{IL}$		1.8	2.0	dB
Passband	B	200			MHz
Amplitude ripple (peak – peak)	$\Delta\alpha$		0.5	1.0	dB
Standing wave ratio	SWR		1.5	2.0	
Impedance	Z		50		$\Omega$
Attenuation	from 1000 to 2050	35	38		dB
	at 2050 to 2200 MHz	18	20		dB
	at 2680 MHz	15	18		dB

Maximum ratings

IEC climatic category (IEC 68-1)		–40 °C/+90 °C/56	
Operating temperature	$T_{op}$	–40/+105	°C

Typical passband characteristic

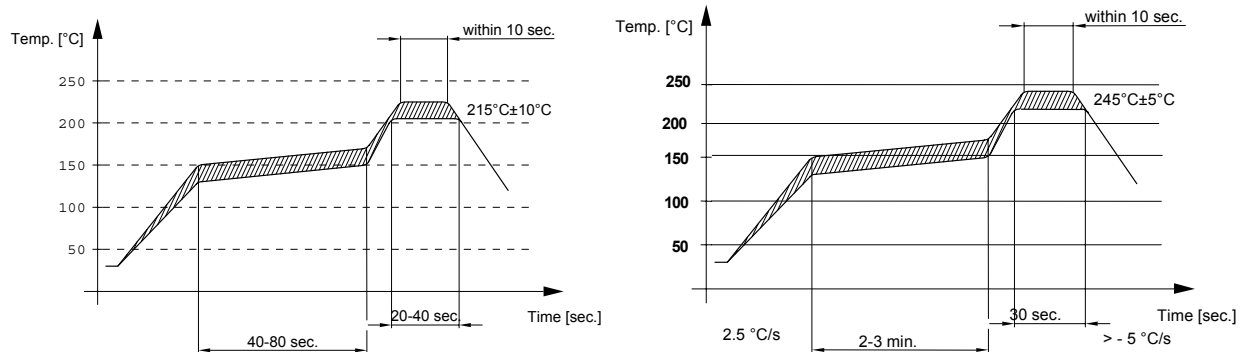


**Preliminary data**
**Processing information**

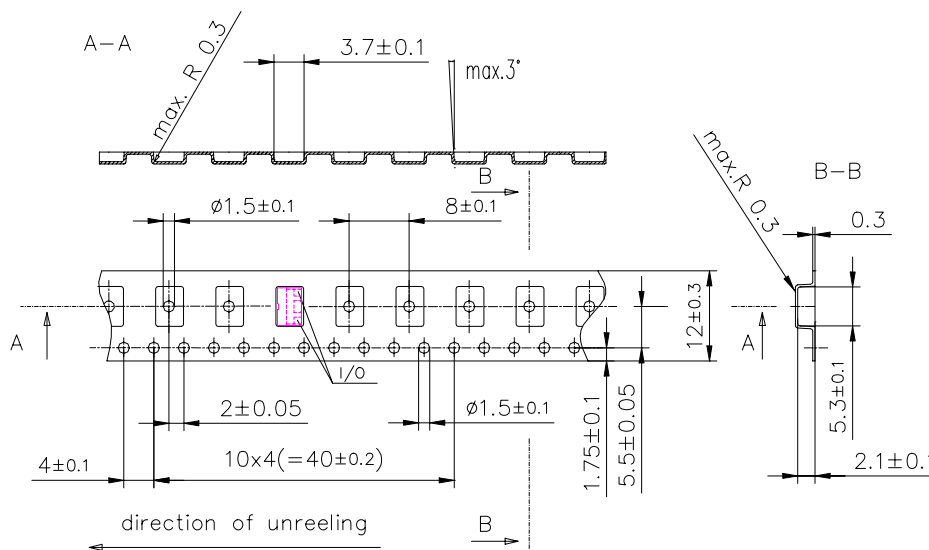
- Wettability acc. to IEC 68-2-58:  $\geq 75\%$  (after aging)

**Soldering requirements**

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

**Recommended soldering conditions (infrared):**

**Delivery mode**

- Blister tape acc. to IEC 286-3, polyester, grey
- Pieces/tape: 3000



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