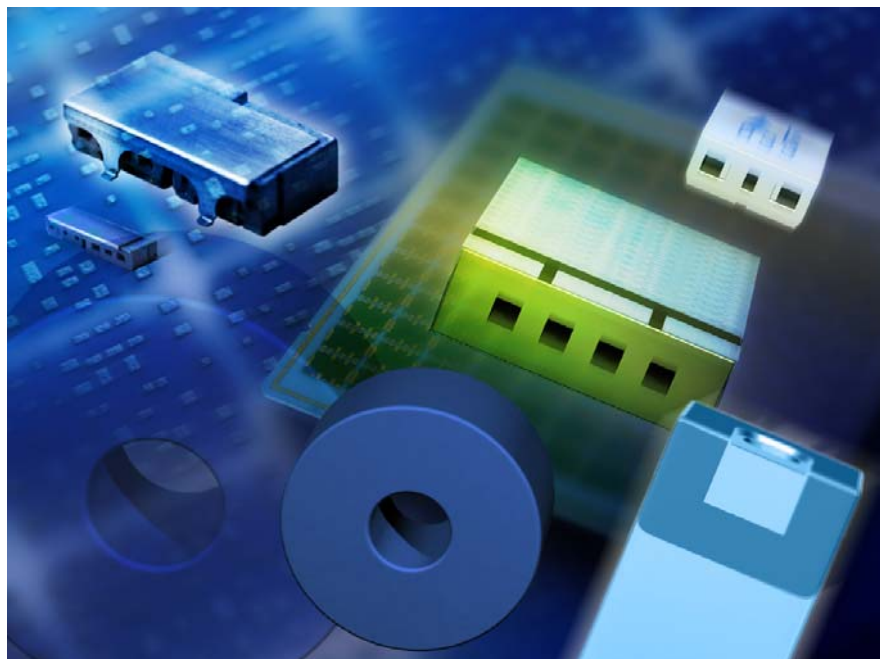


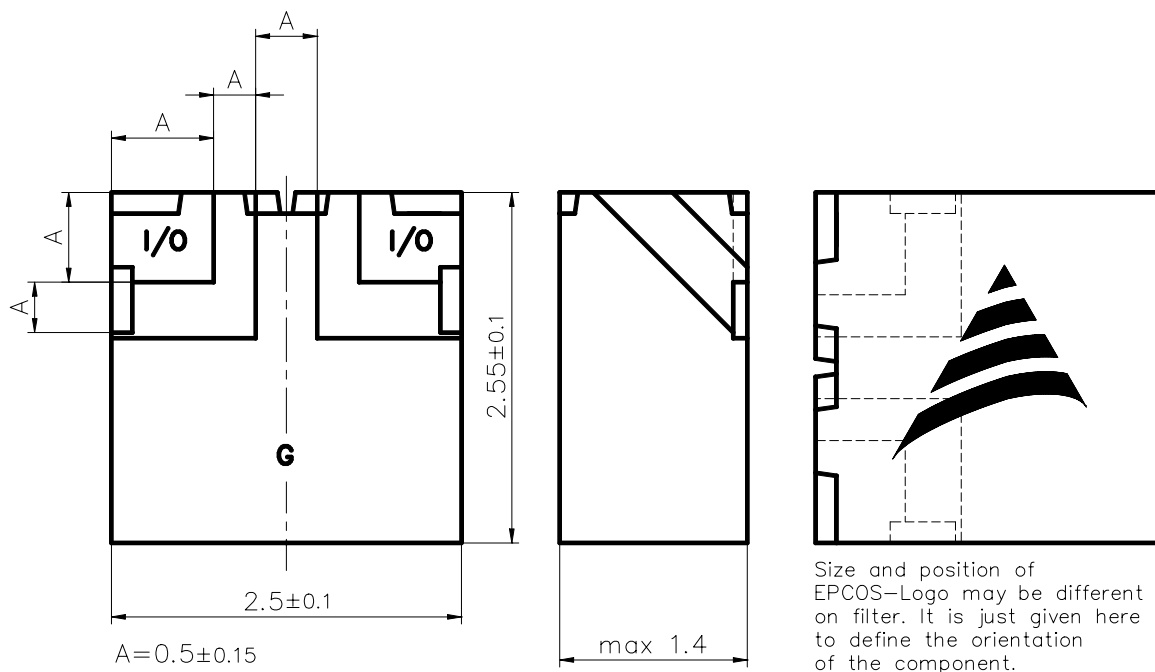
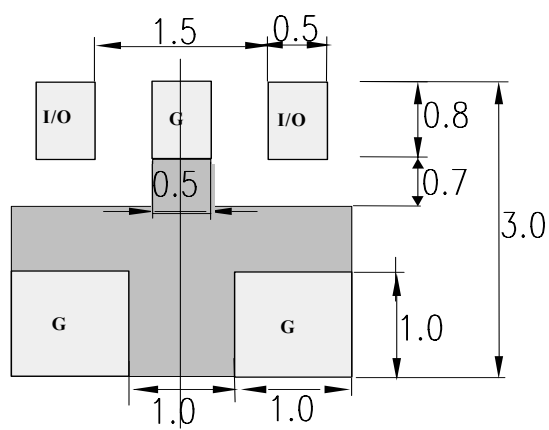
**Datasheet**

**Features**

- Low Profile (maximum height 1.4 mm)
- SMD filter consisting of coupled resonators with stepped impedances
- Low losses
- High attenuations at GSM (900, 1800) and UMTS bands
- High attenuation at 2 times center frequency
- (NdBa)TiO<sub>3</sub> ( $\epsilon_r = 88$  /  $TC_f = 0 \pm 10$  ppm/K) with a coating of copper (10 $\mu$ m) and tin (>5 $\mu$ m)
- Excellent reflow solderability, no migration effect due to copper/tin metallization

**Index**

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**Datasheet**
**Dimension Limits , Marking**

**Recommended footprint**


- Solder Pads:**  
I/O Pads must be connected to lines with 50  $\Omega$  impedance. In the application a termination of 50  $\Omega$  must be realized.
- Ground, covered with solder resist, connected to lower ground plane by vias with maximum diameter of 0.3mm and max. distance of 1mm**

## Datasheet

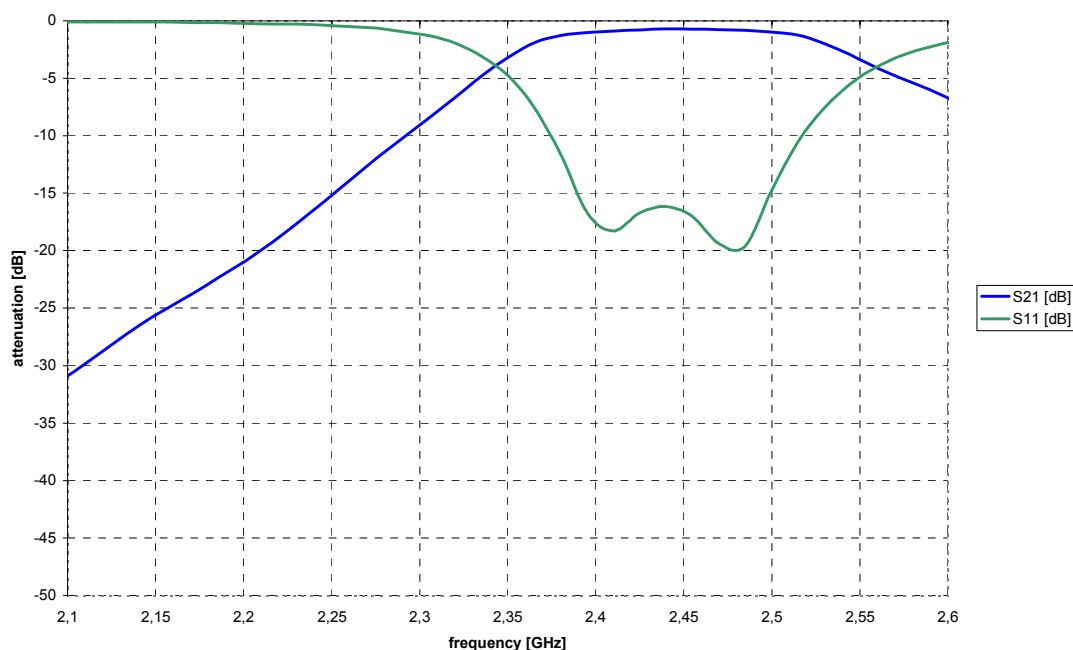
## Characteristics

		min.	typ.	max.	
Center frequency	$f_C$	-	2.450	-	GHz
Insertion loss	$\alpha_{IL}$		1.4	1.8	dB
Passband (2400- 2500)	$B$	100			MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$		0.4	0.8	dB
Standing wave ratio	$SWR$		1.5	2.0	
Impedance	$Z$		50		$\Omega$
Attenuation	$\alpha$				
	at DC to 827 MHz	56	60		dB
	at 880 to 960 MHz	48	55		dB
	at 1710 to 1910 MHz	45	47		dB
	at 1930 to 1990 MHz	48	49		dB
	at 1990 to 2100 MHz	30	34		dB
	at 2100 to 2170 MHz	23	27		dB
	at 3200 to 3500 MHz	28	30		dB
	at 4000 to 4600 MHz	27	30		dB
	at 4800 to 5000 MHz	25	30		dB
	at 5600 to 5789 MHz	15	20		dB
	at 6400 to 6615 MHz	5	10		dB

## Maximum ratings

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

## Typical passband characteristics

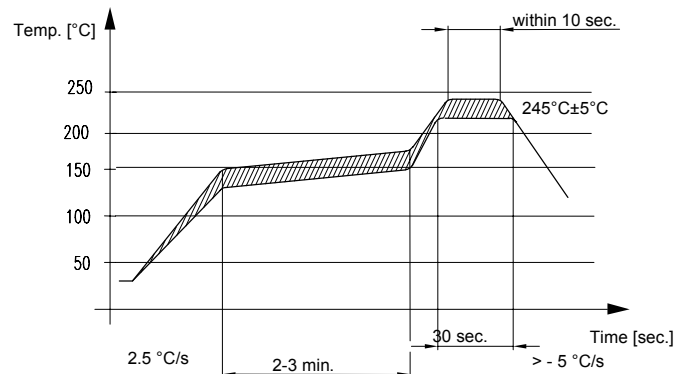
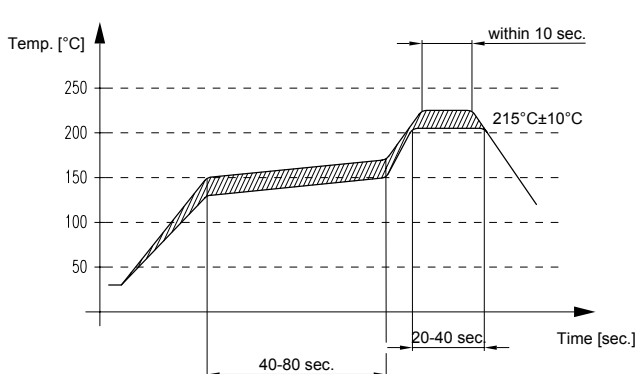


**Datasheet**
**Processing information**

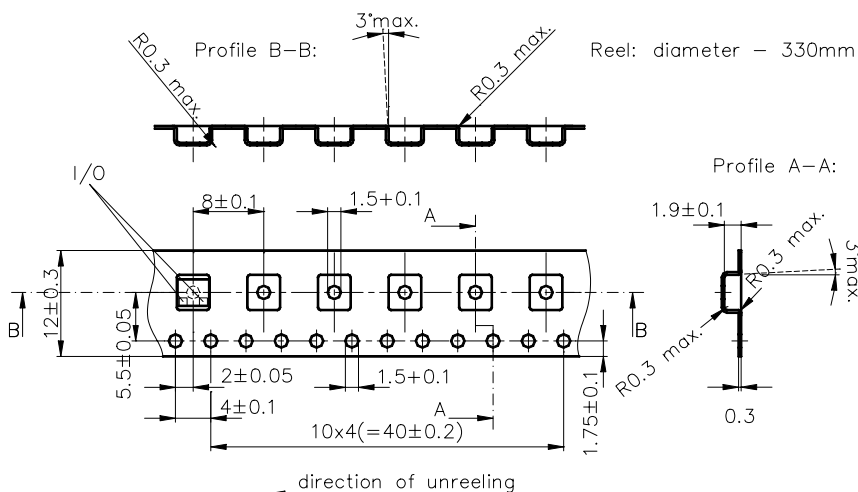
- Wettability to IEC 68-2-58:  $\geq 75\%$  (after aging)

**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.)	°C °C

**Recommended soldering conditions (infrared):**

**Delivery mode**

- Blister tape acc. to IEC 286-3, grey
- Pieces/tape: 4000



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The information contained in this data sheet describes the type of component and shall not be considered as guaranteed characteristics. Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

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