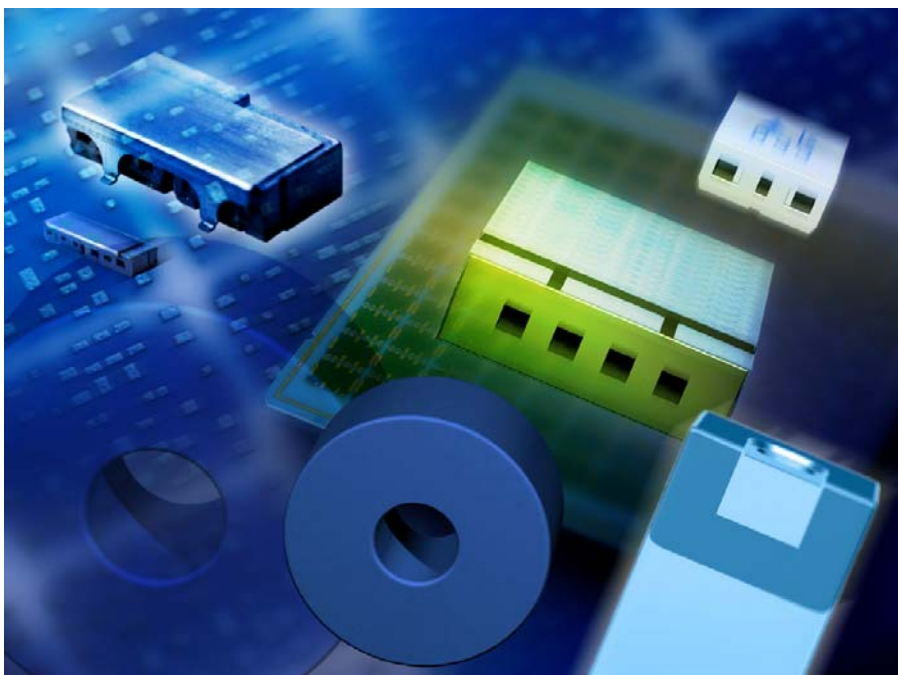


Data Sheet



**Features**

- SMD filter consisting of coupled resonators with stepped impedances
- extreme low losses
- high attenuations at GSM (900, 1800) and UMTS bands
- high attenuation at 2 times center frequency
- (NdBa)TiO<sub>3</sub> ( $\epsilon_r = 88 / TC_f = 0 \pm 10 \text{ ppm/K}$ ) 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

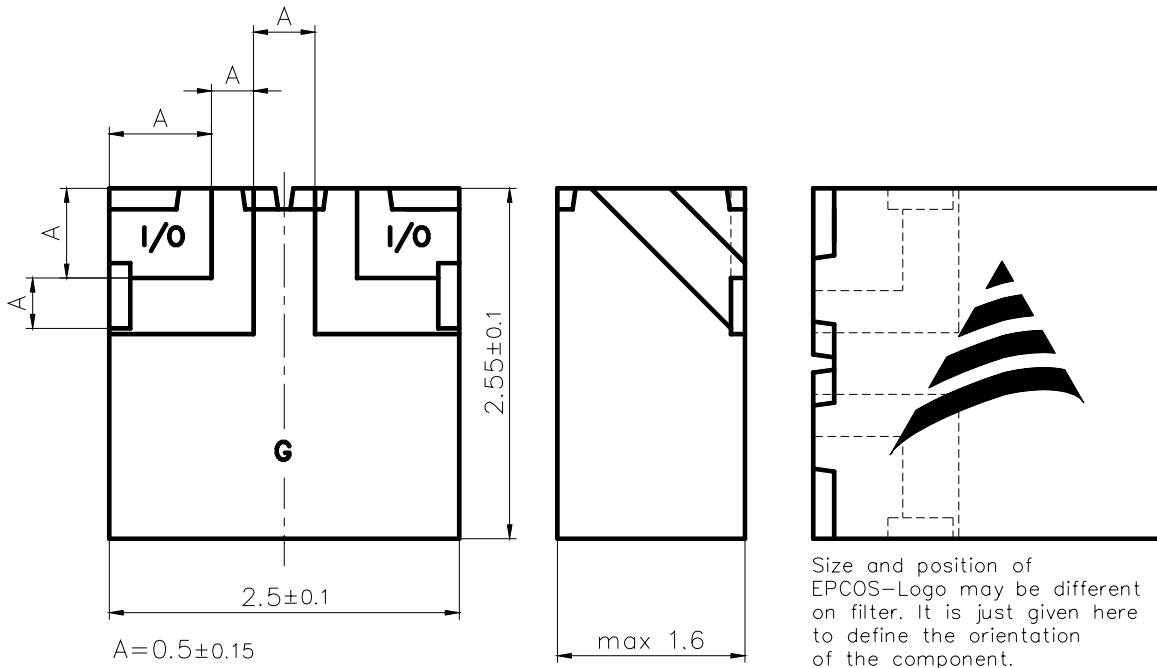
**Index**

- Page 2
  - Dimension Limits , Marking
  - Recommended footprint
- Page 3
  - Characteristics
  - Maximum ratings
  - Typical passband characteristic
- Page 4
  - Processing information
  - Soldering requirements
  - Delivery mode

ISSUE DATE	26.04.04	ISSUE	A	PUBLISHER	SAW MWC PD	PAGE	1/4
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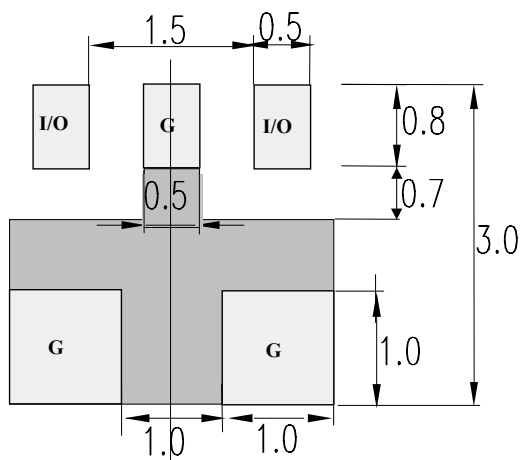
Data Sheet



Dimension Limits , Marking



View from below onto the solder terminals and view from beside

Recommended footprint



-  **Solder Pads:**  
I/O Pads must be connected to lines with 50 Ω impedance. In the application a termination of 50 Ω 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

Data Sheet

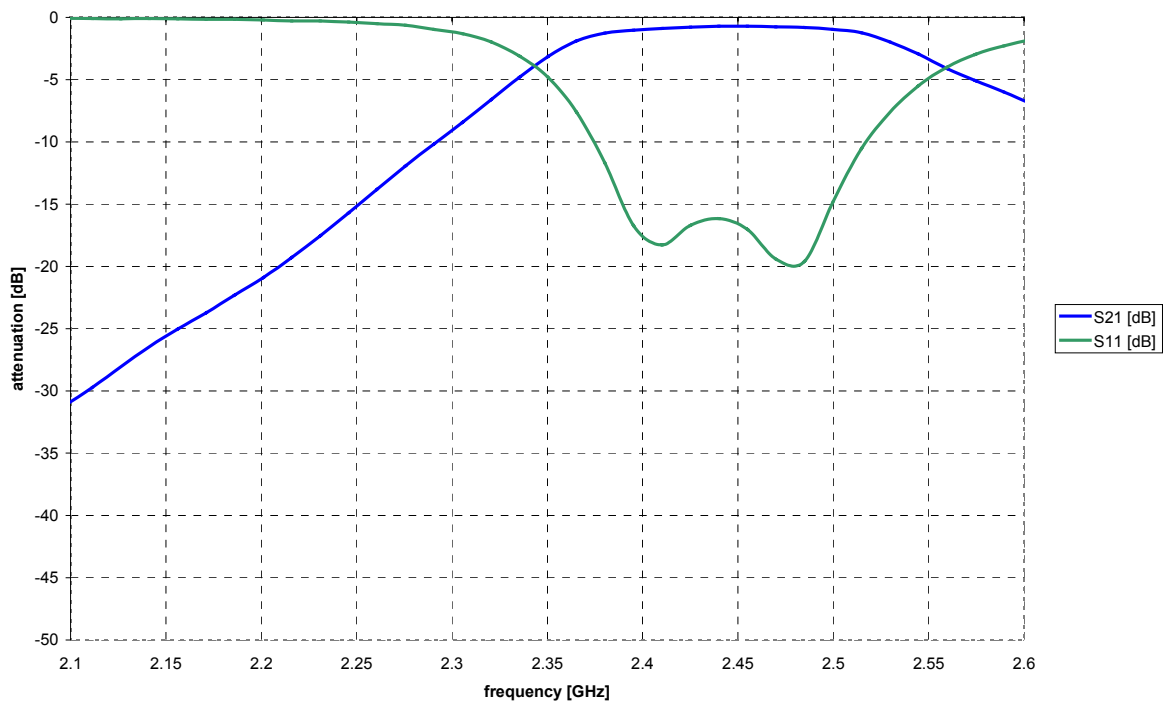
Characteristics

		min.	typ.	max.	
Center frequency	$f_c$	-	2.450	-	GHz
Insertion loss	$\alpha_{IL}$		0.7	1.0	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 880 MHz	50	55		dB
	at 880 to 960 MHz	45	50		dB
	at 960 to 1990 MHz	40	45		dB
	at 1990 to 2100 MHz	25	30		dB
	at 2100 to 2170 MHz	20	25		dB
	at 3000 to 3200 MHz	15	20		dB
	at 3200 to 3500 MHz	20	25		dB
	at 3500 to 4800 MHz	27	30		dB
	at 4800 to 5000 MHz	25	30		dB

Maximum ratings

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

Typical passband characteristic



Data Sheet

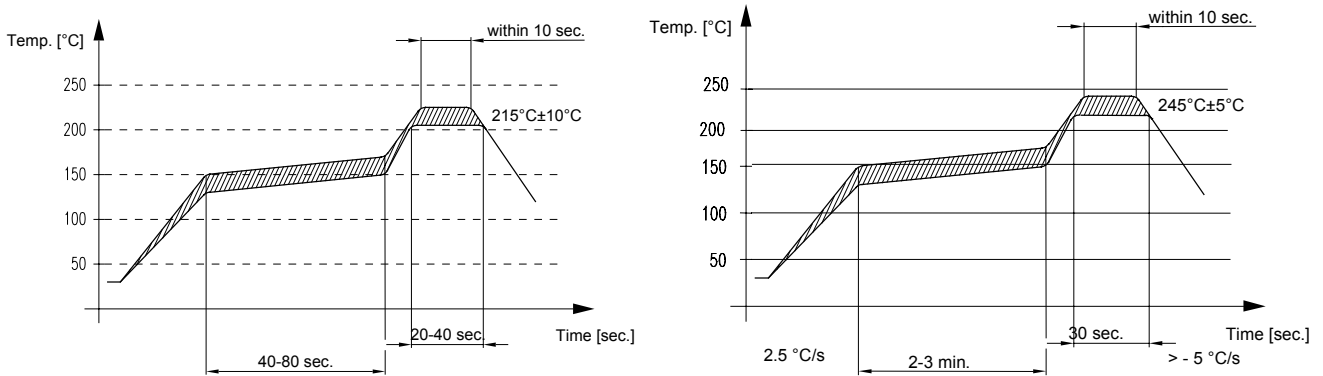
Processing information

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

Soldering Requirements

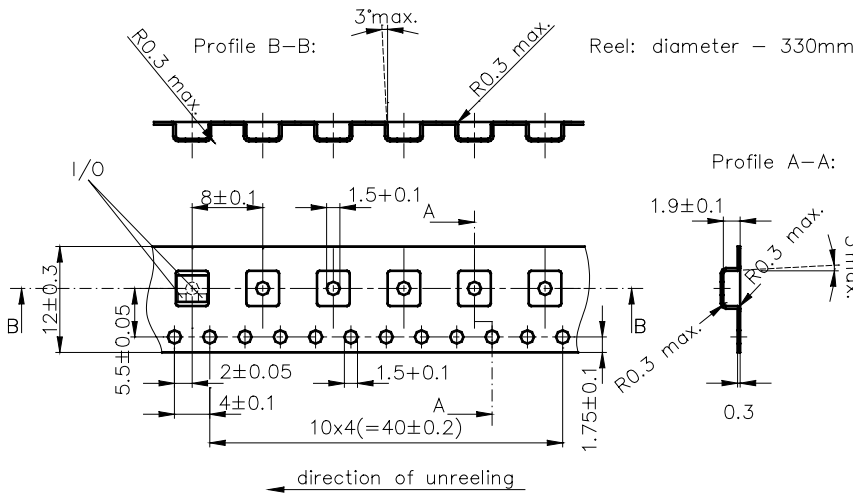
	Profile for eutectic SnPb solder paste	Profile for leadfree solder paste	
Soldering type	reflow	reflow	
Maximum soldering temperature (measuring point on top surface of the component)	235 (max. 2 sec.) 225 (max. 10 sec.)	260 (max. 2 sec.) 250 (max. 10 sec.)	$^{\circ}\text{C}$ $^{\circ}\text{C}$

Recommended soldering conditions (infrared):



Delivery mode

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



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ISSUE DATE	26.04.04	ISSUE	A	PUBLISHER	SAW MWC PD	PAGE	4/4
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