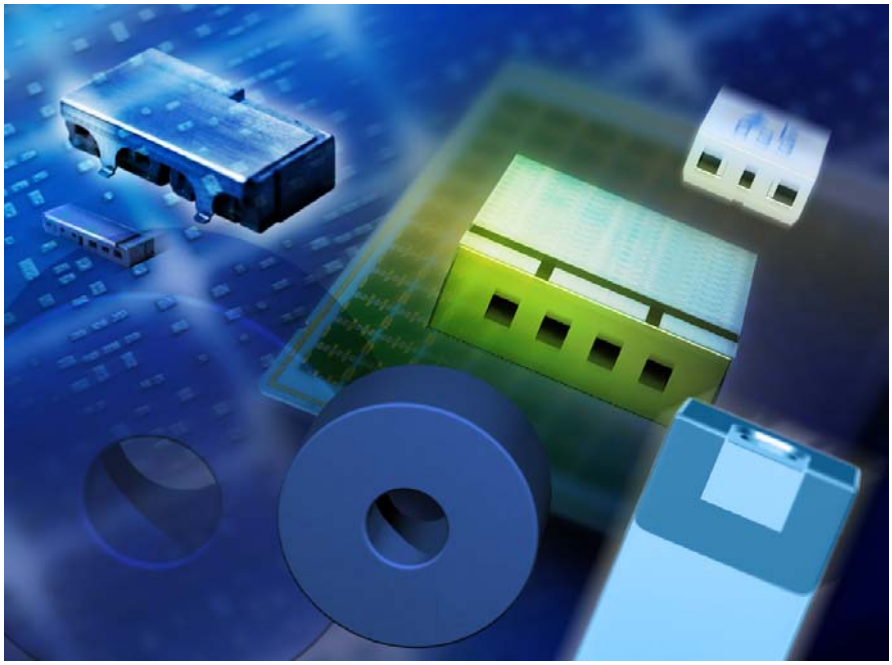
# 2 – Pole Filter for W - LAN

**B69812N2457C101**

Preliminary Datasheet

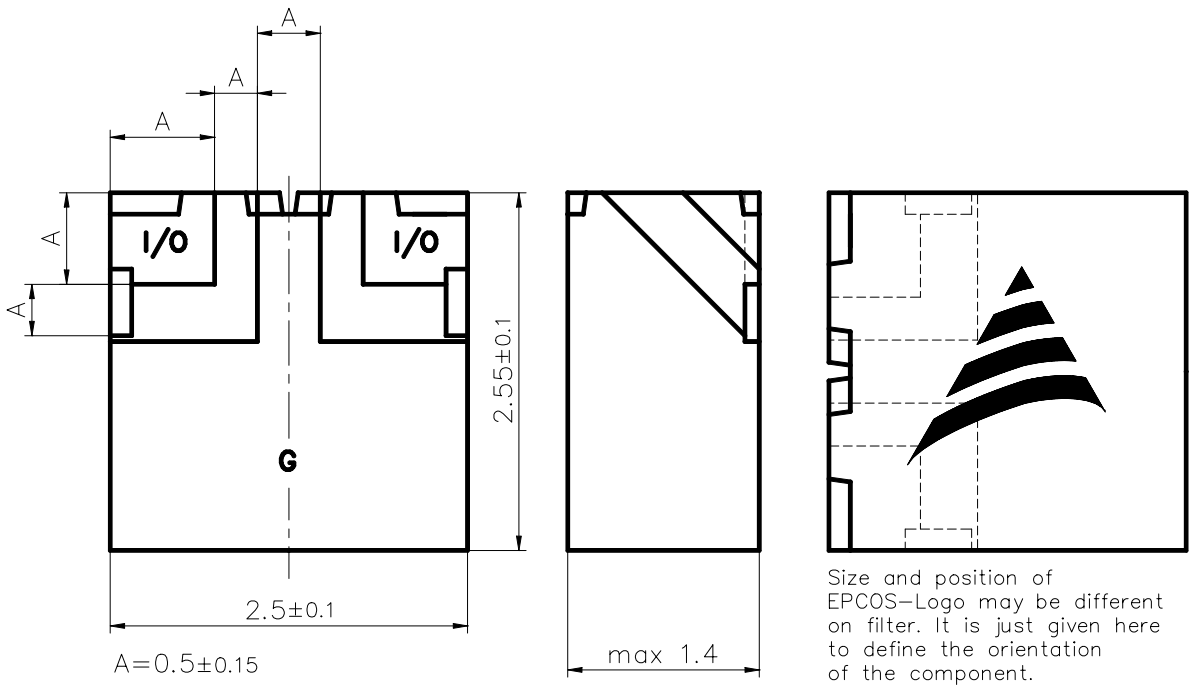


## Features

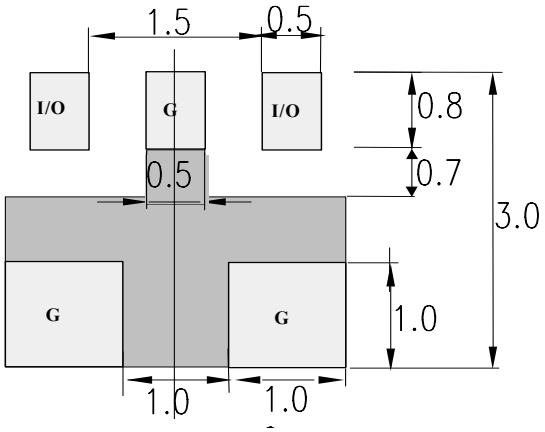
- Low Profile (maximum height 1.4 mm)
- SMD filter consisting of coupled resonators with stepped impedances
- Low losses
- High attenuations at GSM (900, 1800) and UMTS bands
- High attenuation at 2 times center frequency
- (NdBa)$TiO_3$ ($\varepsilon_r$ = 88 / $TC_f$ =0±10 ppm/K) with a coating of copper (10µm) and tin (>5µm)
- Excellent reflow solderability, no migration effect due to copper/tin metallization

## Index

## Dimension Limits , Marking




## 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**

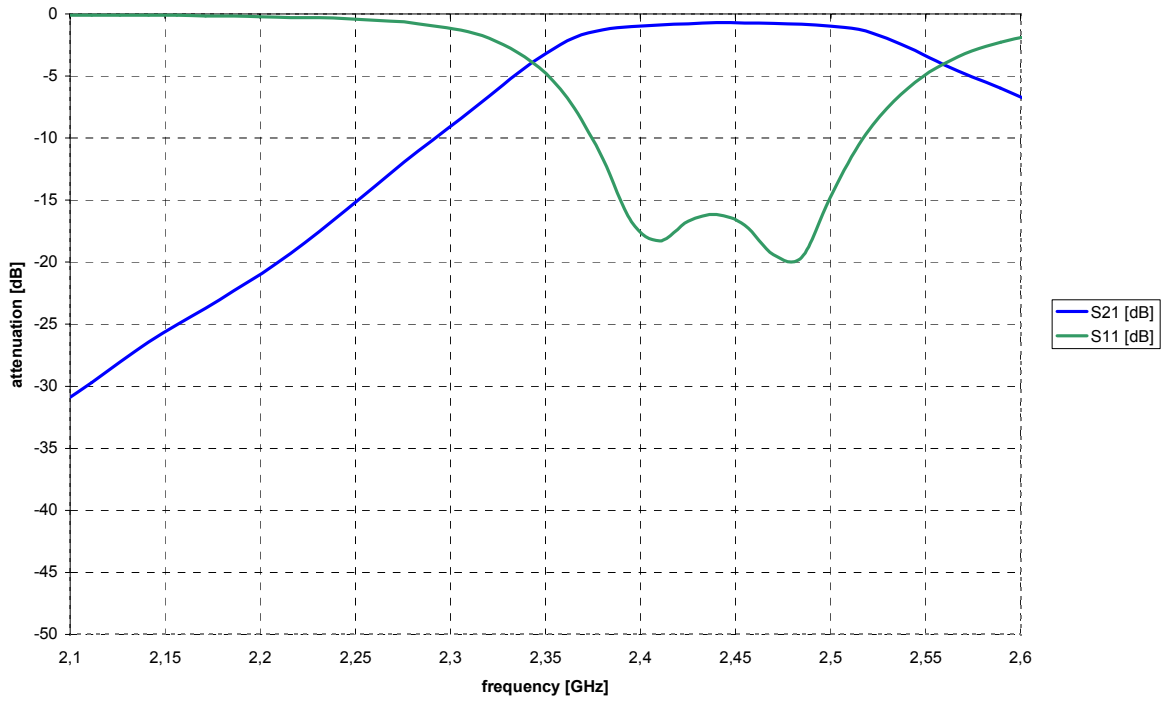
## Characteristics

| | | 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 | | Ω |
| 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 4600 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 characteristics



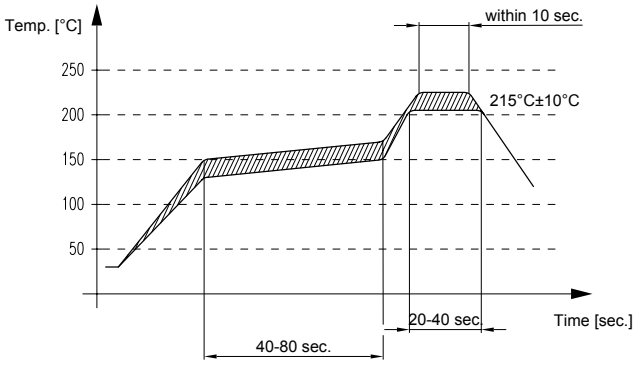
## Processing information

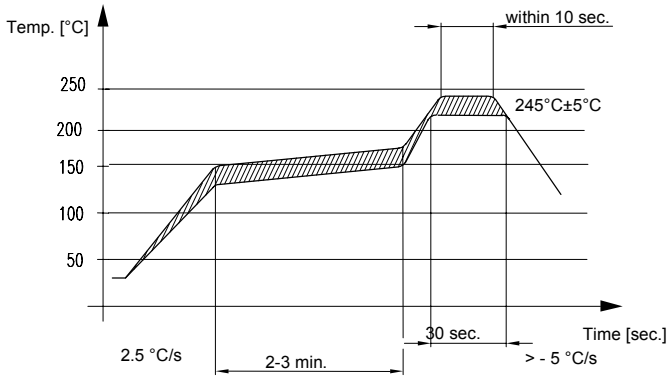
- Wettability to IEC 68-2-58: ≥ 75% (after aging)

## 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, grey
- Pieces/tape: 4000