

Preliminary Data Sheet

Microwave Ceramics

2-Pole Filter for GPS

1575 MHz



B69812-N1577-A503

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Revision History

Issue	Detail of change	Date	Name
P6		14.05.97	Reichel
P7	Recommended footprint, drawing of tape	24.10.97	Salz

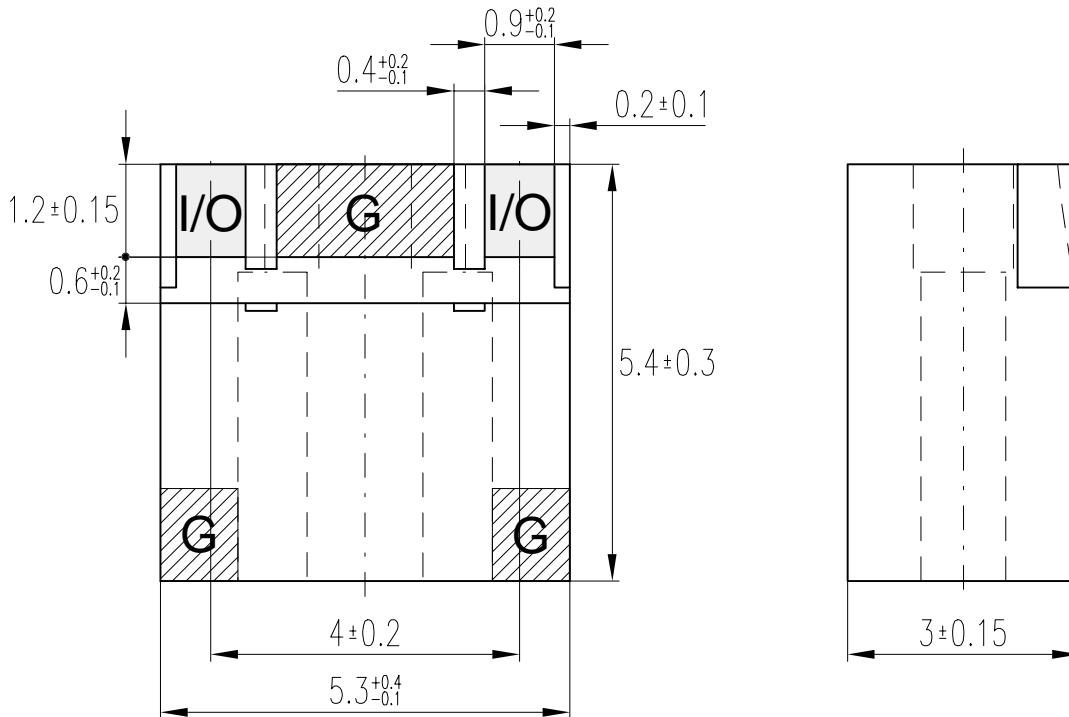
Application

- RF filter for GPS (Global Positioning System)

Features

- SMD filter consisting of coupled resonators with stepped impedances
- (NdBa)TiO₃ ($\epsilon_r = 88$ / $TC_f = 0 \pm 10$ ppm/K) with a coating of copper (10 μ m) and tin (>5 μ m)
- Excellent reflow solderability, no migration effect due to copper/tin metallization

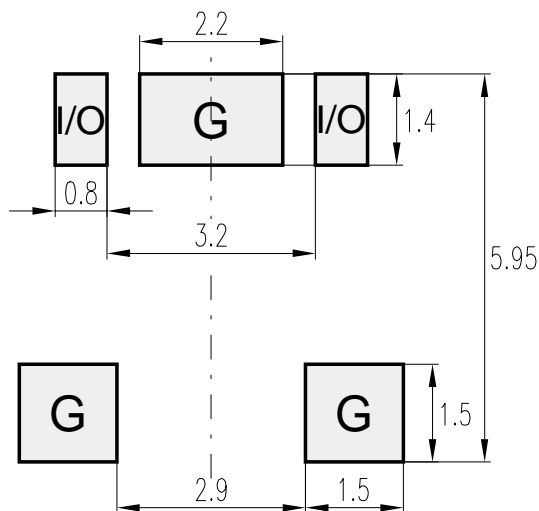
Component drawing



View from below onto the solder terminals and view from beside

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Recommended footprint



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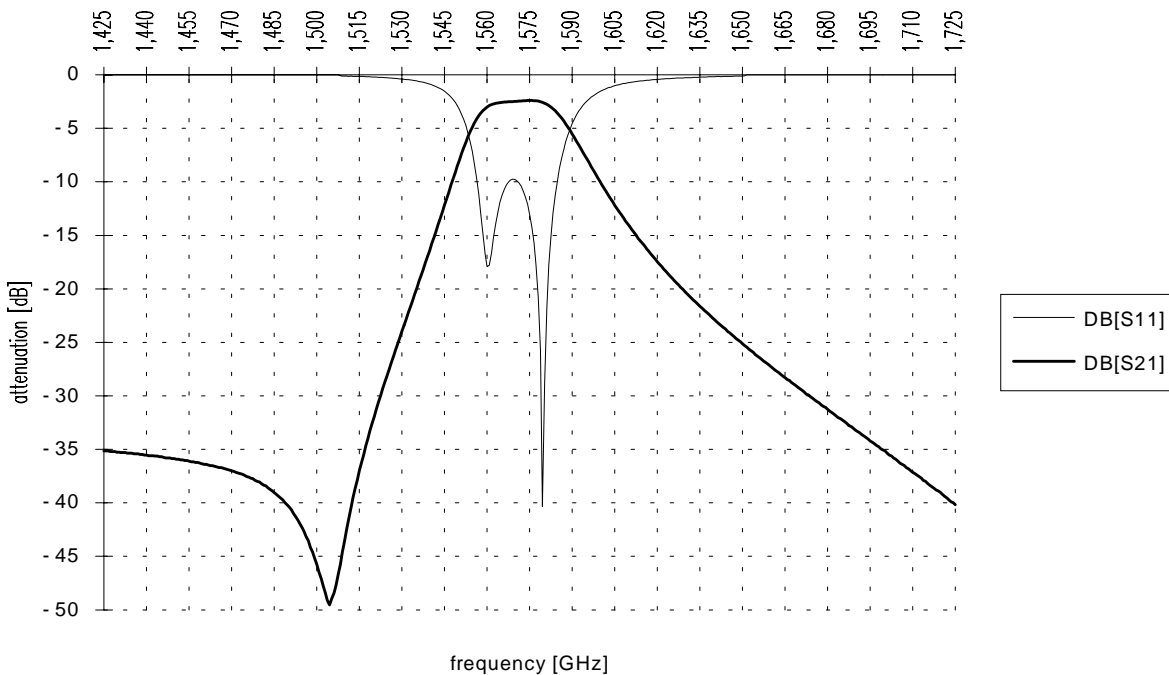
Characteristics

		min.	typ.	max.	
Center frequency	f_c	-	1575	-	MHz
Insertion loss 1 at T_{op1}	α_{IL1}		1.6	2.5	dB
Insertion loss 2 at T_{op2}	α_{IL2}		1.8	2.8	dB
Passband	B	3.0	20.0		MHz
Amplitude ripple (peak - peak)	$\Delta\alpha$		0.2	0.5	dB
Standing wave ratio	SWR		1.5	2.0	
Impedance	Z		50		Ω
Attenuation					
	at < 1490 MHz	30	35		dB
	at 1525 MHz	20	23		dB
	at 1625 MHz	18			dB

Maximum ratings

IEC climatic category (IEC 68-1)		- 40/+ 90/56	
Operating temperature 1	T_{op1}	0 / + 55	°C
Operating temperature 2	T_{op2}	- 40 / + 90	°C

Typical passband characteristic



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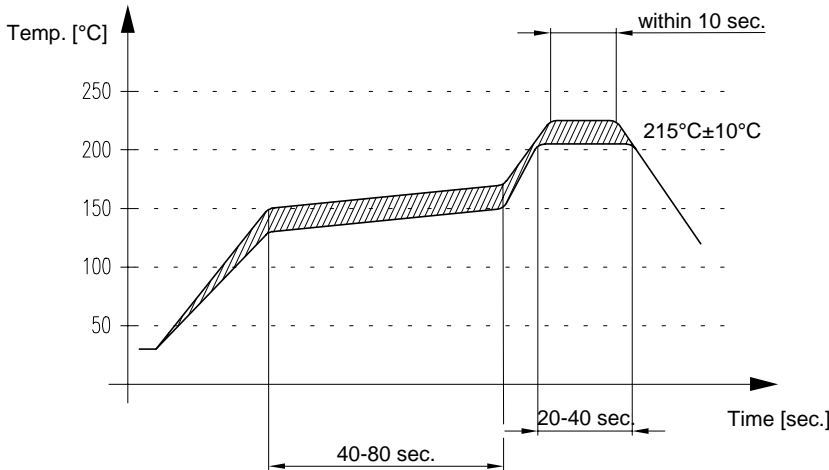
Processing information

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

Soldering requirements

Soldering type	reflow	
Maximum soldering temperature (measuring point on top surface of the component)	235 (max. 2 sec.) 225 (max. 10 sec.)	°C °C

Recommended soldering conditions (infrared):



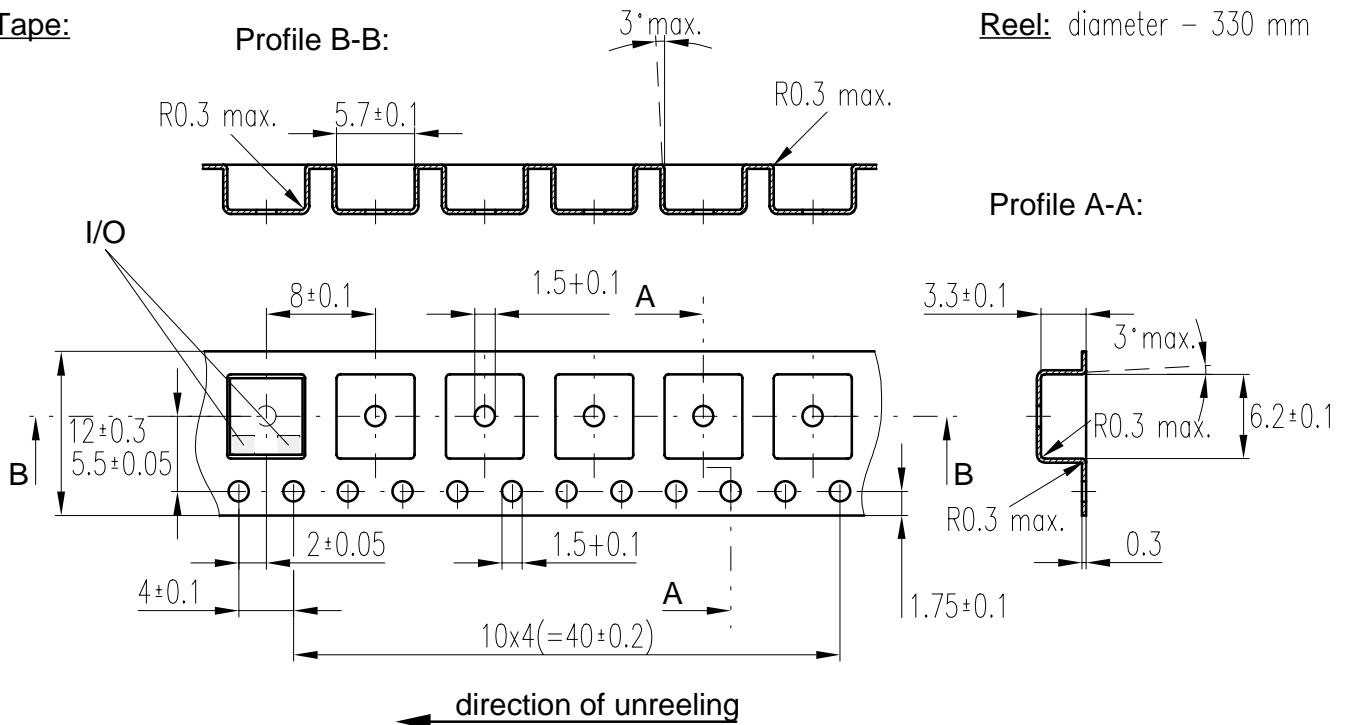
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Delivery mode

- Blister tape to IEC 286-3, polyester, grey
- Pieces/tape: 2000

Tape:

Reel: diameter – 330 mm



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