



IF Filters for Basestations

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39401B5002U310		2006-12-01	2007-02-28	2007-05-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.



SAW Components

Data Sheet B5002





SAW Components

B5002

Low-Loss Filter

398,0 MHz

Data Sheet

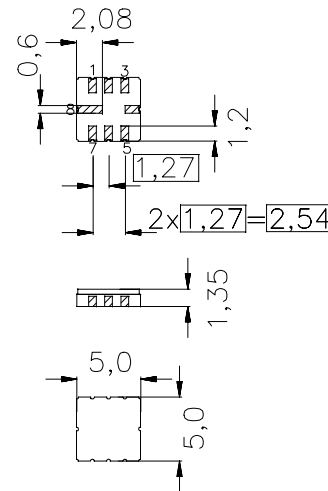
Features

- Low-loss IF filter for W-CDMA base station, Tx
- 20 MHz usable bandwidth
- Very low passband ripple
- Ceramic SMD package

Terminals

- Gold plated

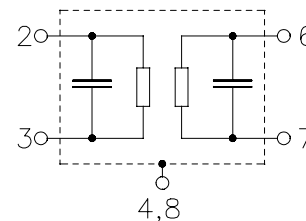
Ceramic package QCC8C



Dim. in mm, approx. weight 0,1 g

Pin configuration

- | | |
|------|----------------|
| 2 | Input |
| 3 | Input ground |
| 6 | Output |
| 7 | Output ground |
| 1, 5 | To be grounded |
| 4, 8 | Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B5002	B39401-B5002-U310	C61157-A7-A56	F61074-V8169-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-40 / +85	°C
Storage temperature range	T_{stg}	-40 / +85	°C
DC voltage	V_{DC}	5	V
Source power	P_s	10	dBm



Data Sheet

Characteristics

Operating temperature range: $T = -40 \dots +85 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ unbalanced and matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ unbalanced and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	398,0	—	MHz
Minimum insertion attenuation $f_N - 7,50 \text{ MHz} \dots f_N + 7,50 \text{ MHz}$	α_{\min}	—	3,3	4,0	dB
Maximum insertion attenuation (in passband) $f_N - 7,50 \text{ MHz} \dots f_N + 7,50 \text{ MHz}$	α_{\max}	—	3,8	5,0	dB
Pass bandwidth $\alpha_{\text{rel}} \leq 1,0 \text{ dB}$	$B_{1,0\text{dB}}$	20	26	—	MHz
Amplitude ripple (p-p) $f_N - 1,92 \text{ MHz} \dots f_N + 1,92 \text{ MHz}$ $f_N - 7,50 \text{ MHz} \dots f_N + 7,50 \text{ MHz}$	$\Delta\alpha$	—	0,2 0,4	0,5 1,0	dB dB
Deviation from linear phase (rms) $f_N - 1,92 \text{ MHz} \dots f_N + 1,92 \text{ MHz}$ $f_N - 7,50 \text{ MHz} \dots f_N + 7,50 \text{ MHz}$	$\Delta\varphi$	—	0,1 1,0	0,5 3,0	$^\circ$ $^\circ$
Relative attenuation (relative to α_{\min}) 100 MHz ... 335 MHz 335 MHz ... 338 MHz 338 MHz ... 365 MHz 365 MHz ... 368 MHz 448 MHz ... 3 GHz	α_{rel}	15 38 15 35 15	60 60 60 45 45	— — — — —	dB dB dB dB dB
Input return loss (in passband) $f_N - 7,50 \text{ MHz} \dots f_N + 7,50 \text{ MHz}$		6	8	—	dB
Output return loss (in passband) $f_N - 7,50 \text{ MHz} \dots f_N + 7,50 \text{ MHz}$		8	10	—	dB
Temperature coefficient of frequency	TC_f	—	-70	—	ppm/K



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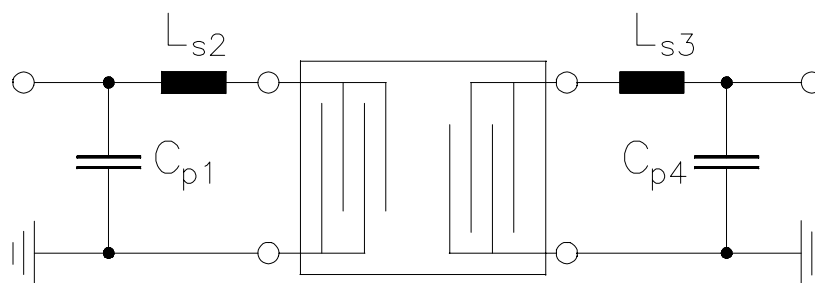
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Matching network to 50 Ω



$$C_{p1} = 3,3 \text{ pF}$$

$$L_{s2} = 10 \text{ nH}$$

$$L_{s3} = 12 \text{ nH}$$

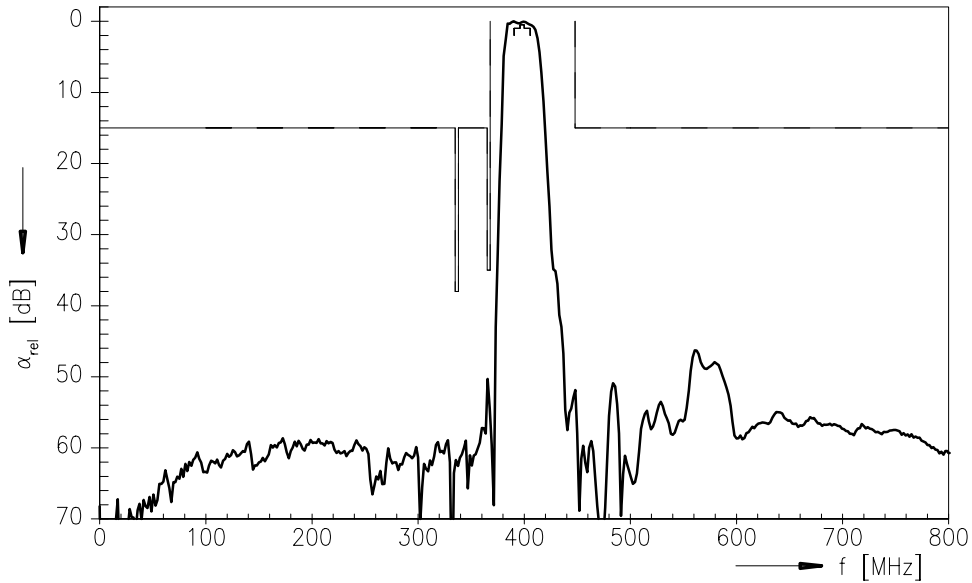
$$C_{p4} = 2,2 \text{ pF}$$

Element values depend upon board layout

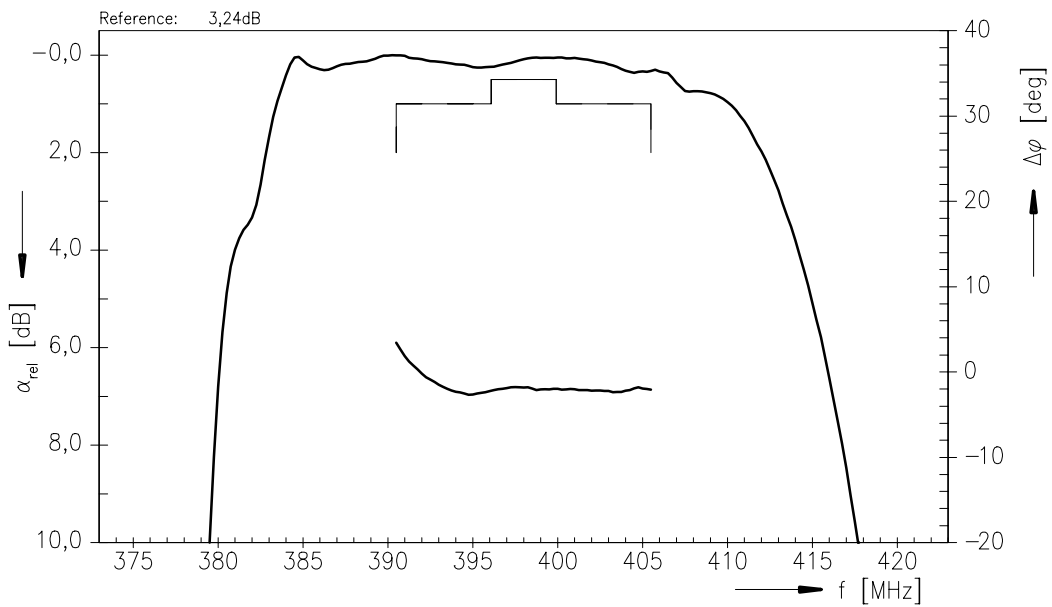


Data Sheet

Transfer function



Transfer function (pass band)





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This brochure replaces the previous edition.

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