



SAW Components

Preliminary Data LN16B

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a blue glow and are positioned diagonally across the frame. The background is dark and textured, with a faint globe and circuitry patterns visible. The overall effect is futuristic and high-tech.



SAW Components

LN16B

Low-Loss Filter

107,52 MHz

Preliminary Data

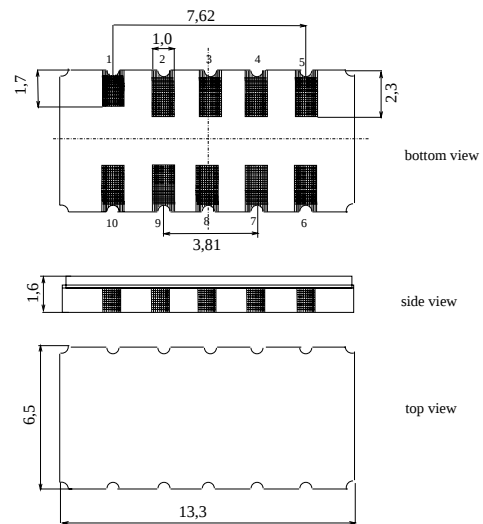
Ceramic package DCC12A

Features

- Low-loss IF filter for CDMA2000 / W-CDMA base station
- 3,78 MHz usable bandwidth
- Balanced or unbalanced operation possible
- Ceramic SMD package

Terminals

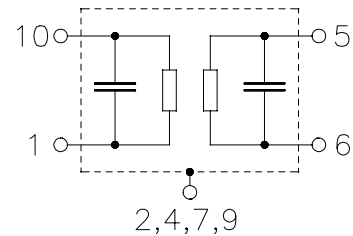
- Gold plated



Dimensions in mm, approx. weight 0,4 g

Pin configuration

10	Input
1	Input ground
5	Output
6	Output ground
3, 8	To be grounded
2, 4, 7, 9	Case ground



Type	Ordering code	Marking and Package according to	Packing according to

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}	0	V	
Source power	P_s	10	dBm	
Source power	P_s	15	dBm	$t \leq 10$ hours



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Characteristics

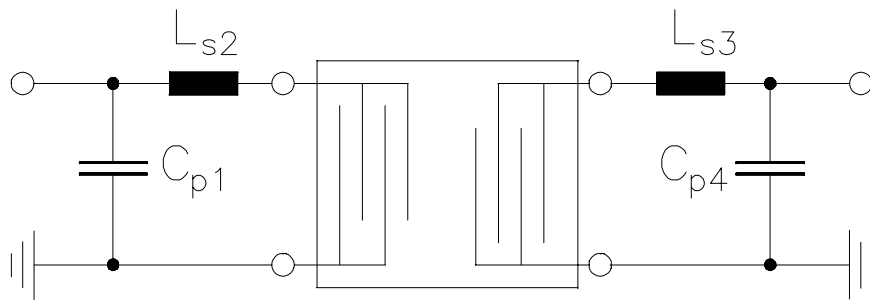
Operating temperature range:	$T = 0\text{ °C to }80\text{ °C}$
Terminating source impedance:	$Z_S = 50\ \Omega$ and matching network
Terminating load impedance:	$Z_L = 50\ \Omega$ and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	107,52	—	MHz
Minimum insertion attenuation (including losses in matching network)	$\alpha_{\min}$	—	9,9	12	dB
Passband width					
	$\alpha_{\text{rel}} \leq 1,0\text{ dB}$	$B_{1,0\text{dB}}$	3,78	4,6	— MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 1,89\text{ MHz}$	—	0,7	1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
	$f_N \pm 1,89\text{ MHz}$	—	70	120*	ns
Phase ripple (rms)	$\Delta\phi$				
	$f_N \pm 1,89\text{ MHz}$	—	0,9	1,5	°
Relative attenuation (relative to $\alpha_{\min}$)	α_{rel}				
10 MHz ... 60 MHz		45	54	—	dB
60 MHz ... $f_N - 6\text{ MHz}$		40	47	—	dB
$f_N - 6\text{ MHz}$... $f_N - 4\text{ MHz}$		25	30	—	dB
$f_N + 4\text{ MHz}$... $f_N + 28,82\text{ MHz}$		25	28	—	dB
$f_N + 28,82\text{ MHz}$... $f_N + 32,62\text{ MHz}$		45	60	—	dB
$f_N + 32,62\text{ MHz}$... 600,94 MHz		40	64	—	dB
600,94 MHz ... 1000 MHz		30	66	—	dB
Input & Output Return loss					
	$f_N \pm 1,89\text{ MHz}$	10	12	—	dB
Output-IP3		t.b.d.	—	—	dB
Temperature coefficient of frequency	TC_f	—	-18	—	ppm/K

*100 ns can be guaranteed in the temperature range from 20 °C to 80 °C

**SAW Components****LN16B****Low-Loss Filter****107,52 MHz****Preliminary Data****Matching network to 50Ω**

(Element values depend upon PCB layout)

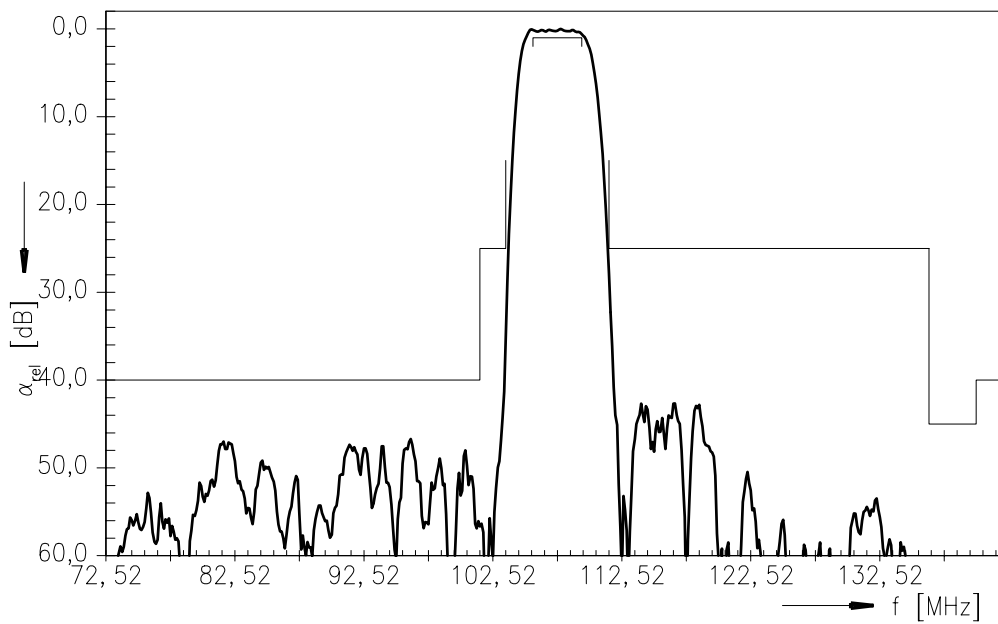
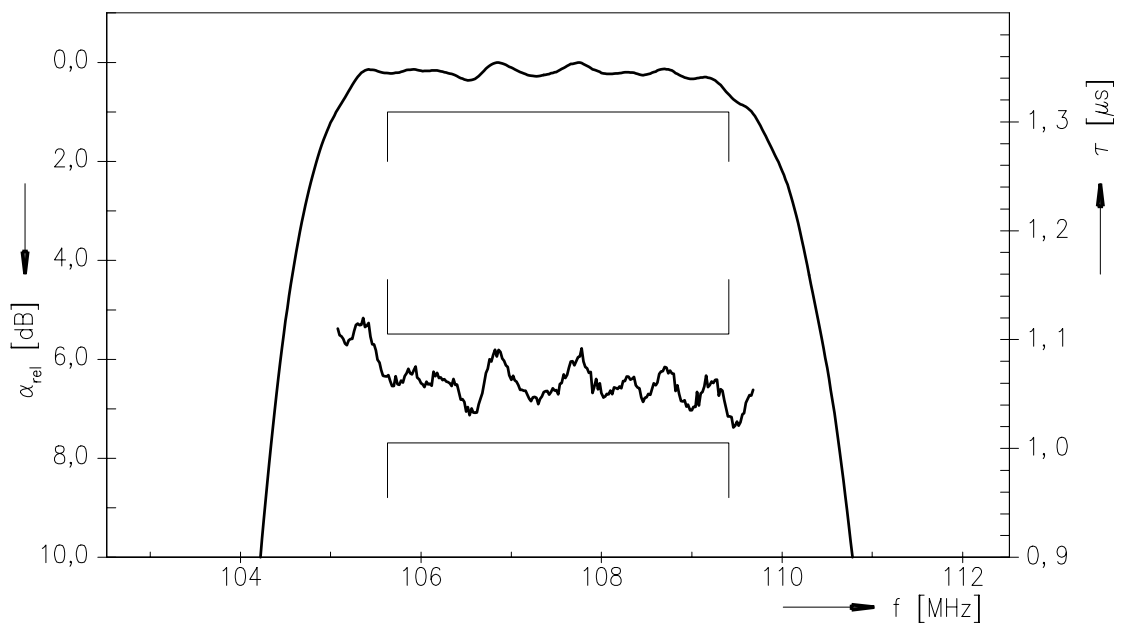


$$L_{s2} = (56 + 2,2) \text{ nH}$$

$$C_{p1} = (56 + 10) \text{ pF}$$

$$L_{s3} = (56 + 5,6) \text{ nH}$$

$$C_{p4} = (56 + 10) \text{ pF}$$

**SAW Components****LN16B****Low-Loss Filter****107,52 MHz****Preliminary Data****Normalized transfer function:****Normalized transfer function (pass band):**



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