EPCOS

SAW Components

Preliminary Data LN16B

Preliminary Data

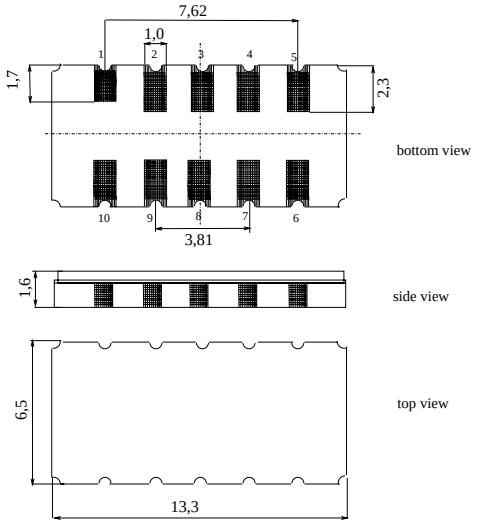
Ceramic package **DCC12A**

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

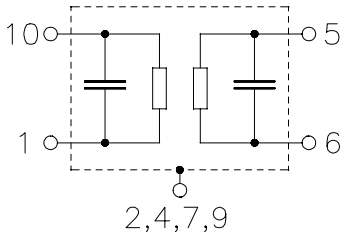
- Gold plated



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 **S**ensitive **D**evice (**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 <= 10 hours

Preliminary Data

Characteristics

Operating temperature range: T = 0 ˚C to 80 ˚C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

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

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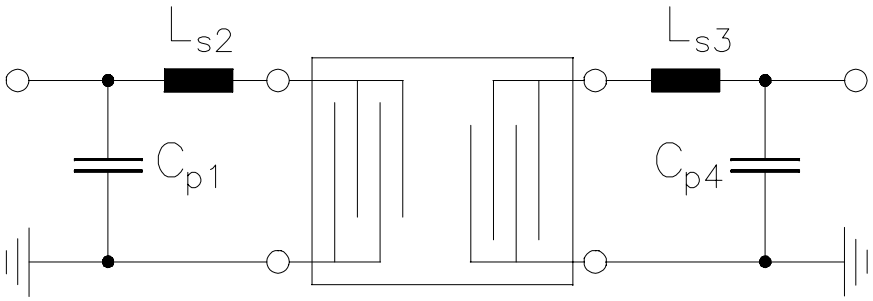
Matching network to 50Ω

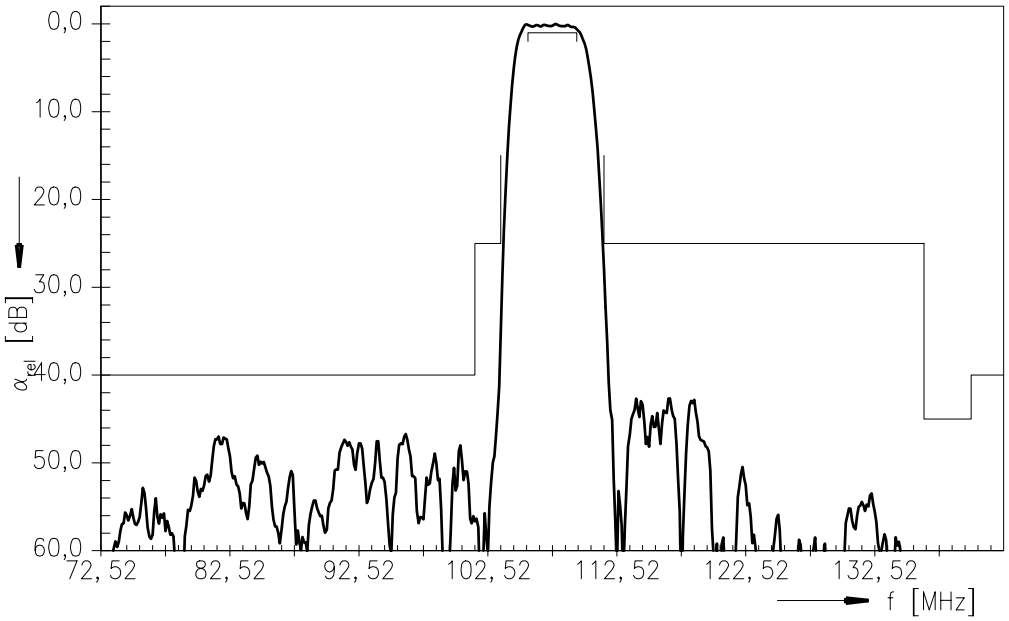
(Element values depend upon PCB layout)



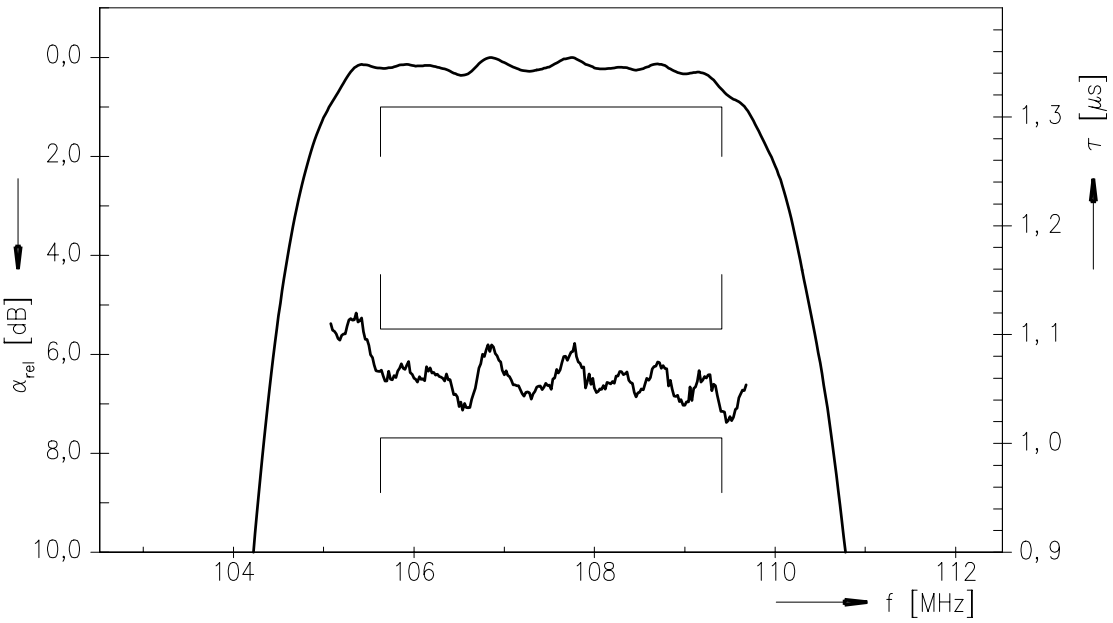
L_{s2} = (56+ 2,2) nH
C_{p1} = (56+10) pF

L_{s3} = (56 + 5,6) nH
C_{p4} = (56 +10) pF

Normalized transfer function:



Normalized transfer function (pass band):



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