



SAW Components

Preliminary Data Sheet LF74D





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LF74D

Low-Loss Filter

140,0 MHz

Preliminary Data Sheet

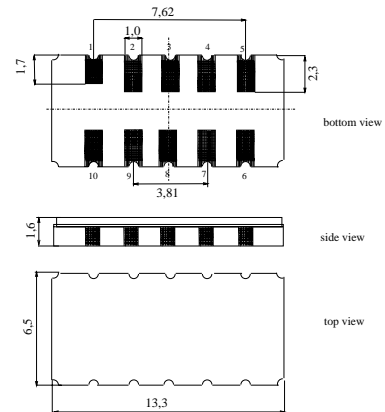
Ceramic package **DCC12A**

Features

- IF low-loss filter
- 14,0 MHz usable bandwidth
- Ceramic SMD package

Terminals

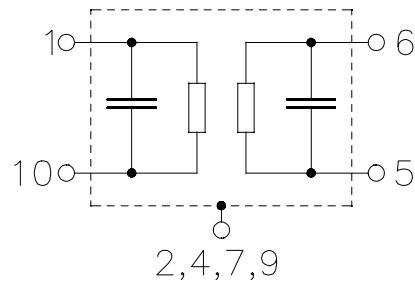
- Gold plated



Dimensions in mm, approx. weight 0,4 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
LF74D		C61157-A7-A94	F61074-V8131-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-40 / +85	°C
Storage temperature range	T_{stg}	-55 / +125	°C
DC voltage	V_{DC}	0	V
Source power	P_s	10	dBm


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Characteristics

Operating temperature:

 $T = -40^{\circ}\text{C} \dots 85^{\circ}\text{C}$

Terminating source impedance:

 $Z_S = 50 \ \Omega$ bal. and external matching network

Terminating load impedance:

 $Z_L = 50 \ \Omega$ bal. and external matching network

			min.	typ.	max.	
Nominal frequency	f_N		—	140,0	—	MHz
Average insertion attenuation (including matching network)	$f_N \pm 7,0 \text{ MHz}$	α_{avg}	—	11,0	13,0	dB
Pass bandwidth	$\alpha_{\text{rel}} \leq 3,0 \text{ dB}$	$B_{3,0\text{dB}}$	—	18,9	—	MHz
Amplitude ripple TTE ¹⁾		$\Delta\alpha$				
	$f_N \pm 5,5 \text{ MHz}$		—	0,3	0,4	dB
	$f_N \pm 7,0 \text{ MHz}$		—	0,4	0,6	dB
Absolute group delay (@ f_C)		τ	—	1,0	—	μs
Phase ripple (p-p) TTE ¹⁾		$\Delta\phi$				
	$f_N \pm 5,5 \text{ MHz}$		—	2,6	4,0	$^{\circ}$
	$f_N \pm 7,0 \text{ MHz}$		—	4,5	6,0	$^{\circ}$
Relative attenuation (relative to α_{min})	$f_N \pm 14,0 \text{ MHz} \dots f_N \pm 100,0 \text{ MHz}$	α_{rel}	40	50	—	dB
Tripple transit suppression		TTS	40	45	—	dB
Return loss	$f_N \pm 7,0 \text{ MHz}$		—	15	—	dB
Pyroelectric pulse amplitude (p-p)		V_p	—	0,0	50,0	mV
Temperature coefficient of frequency		TC_f	—	-87	—	ppm/K

¹⁾ TTE = Triple transit signal excluded (Gate from 0 μs to 2.6 μs)



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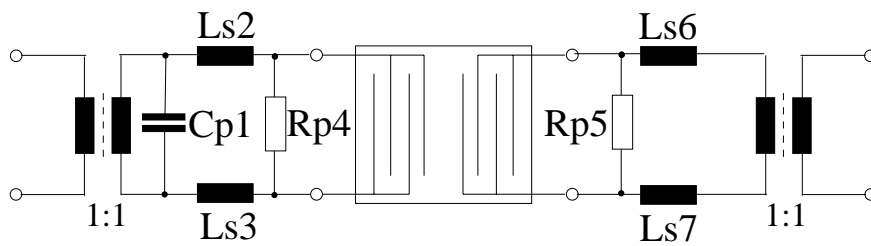
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Matching network to 50 Ω balanced

(Element values depend upon PCB layout)



$$C_{p1} = 12 \text{ pF}$$

$$L_{s2} = 47 \text{ nH}$$

$$L_{s3} = 56 \text{ nH}$$

$$R_{p4} = 820 \text{ } \Omega$$

$$R_{p5} = 820 \text{ } \Omega$$

$$L_{s6} = 39 \text{ nH}$$

$$L_{s7} = 47 \text{ nH}$$



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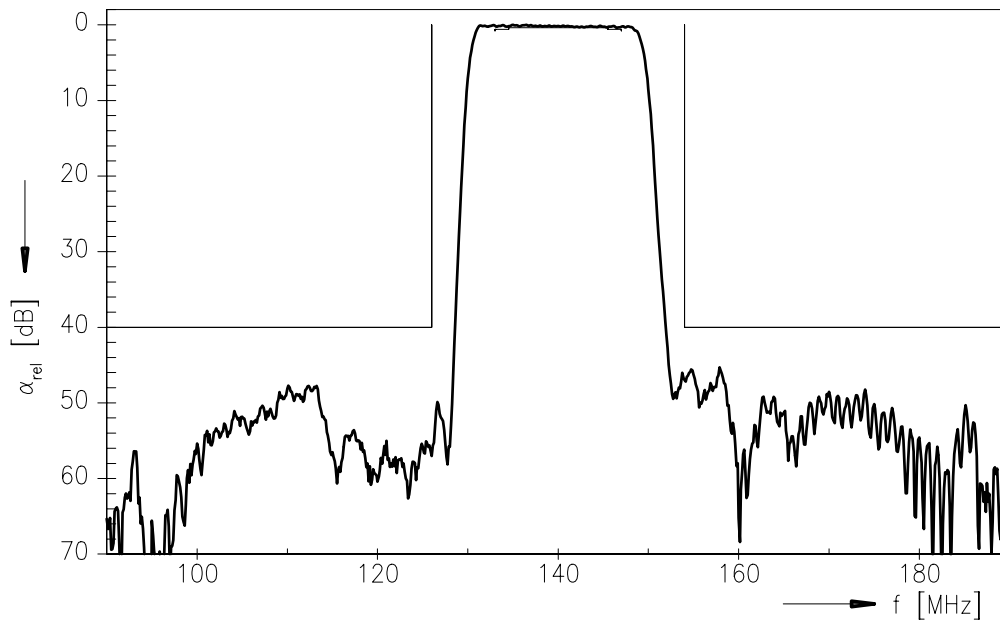
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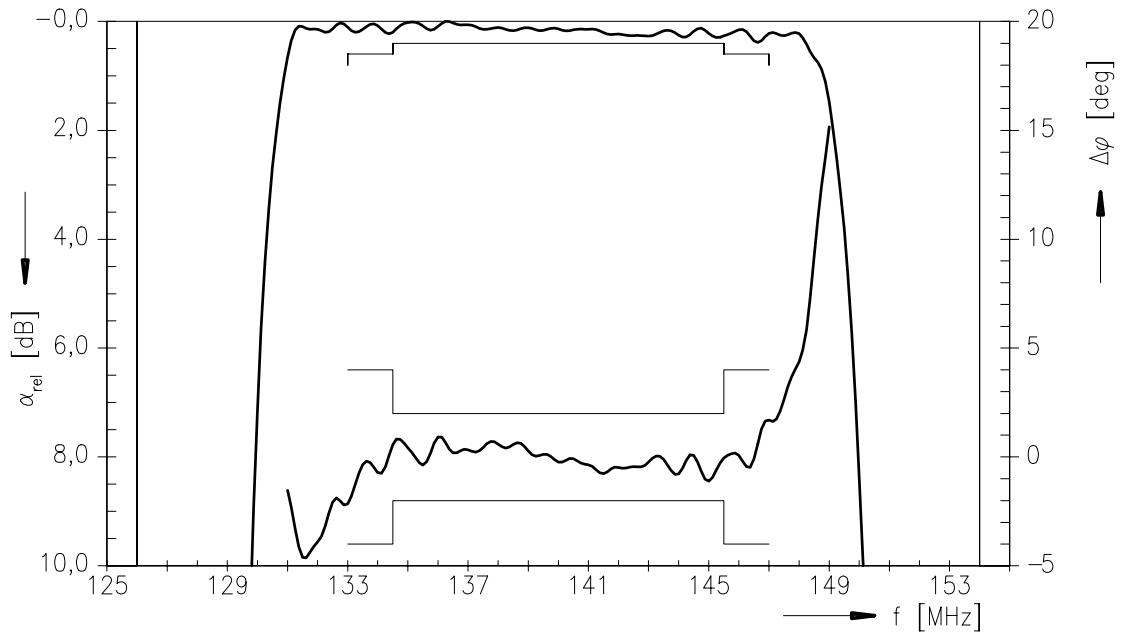
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Normalized frequency response: **Triple transit signal included**



Normalized frequency response (pass band): **Triple transit signal excluded**





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