EPCOS

SAW Components

Preliminary Data LG19A

Preliminary Data

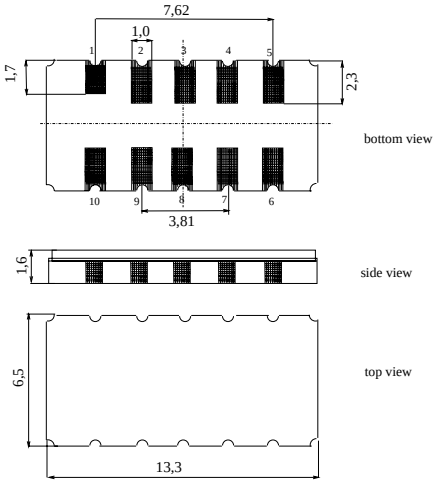
Ceramic package **DCC12A**

Features

- Low-loss IF filter for W-CDMA base station
- High near-by selectivity
- Temperature stable
- Balanced or unbalanced operation possible
- Ceramic SMD package

Terminals

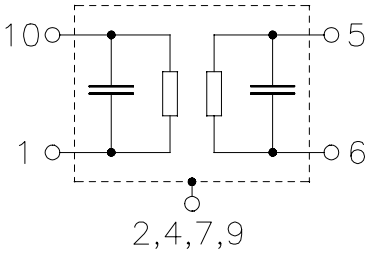
- Gold plated



Dimensions in mm, approx. weight 0,5 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
LG19A			

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T_A	–40 / +85	˚C	
Storage temperature range	T_{stg}	–40 / +85	˚C	
DC voltage	V_{DC}	0	V	
Source power	P_s	0	dBm	

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Characteristics

Operating temperature range: T_A = -30 ... +85 °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	—	190,0	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	12,0	15,0	dB
Passband width					
$\alpha_{rel} \leq 1$ dB	$B_{1,0dB}$	3,84	4,2	—	MHz
$\alpha_{rel} \leq 30$ dB	B_{30dB}	—	4,8	—	MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N \pm 1{,}92$ MHz		—	0,7	1,0	dB
Phase ripple (rms)	$\Delta\varphi$				
$f_N \pm 1{,}92$ MHz		—	1,0	1,5	° rms
Error vector magnitude	*EVM*				
$f_N \pm 1{,}92$ MHz		—	2,0	—	%
Adjacent channel suppression	*ACS*				
$f_N \pm 3{,}08$ MHz ... $f_N \pm 6{,}92$ MHz		—	50	—	dB
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 2{,}515$ MHz ... $f_N \pm 3{,}08$ MHz		32	38	—	dB
$f_N \pm 3{,}08$ MHz ... $f_N \pm 3{,}5$ MHz		37	42	—	dB
$f_N \pm 3{,}5$ MHz ... $f_N \pm 20$ MHz		40	45	—	dB
Temperature coefficient of frequency[1]	TC_f	—	–0,036	—	ppm/K²
Turnover temperature	T_0	—	20	—	°C

1) Temperature dependance of f_c: $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$

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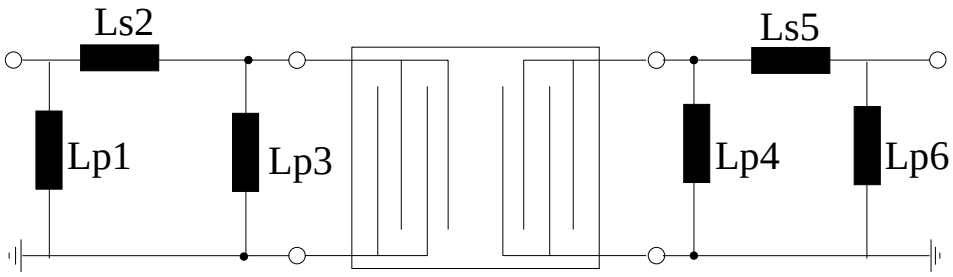
Matching network to 50 Ω

(element values depend on PCB layout)

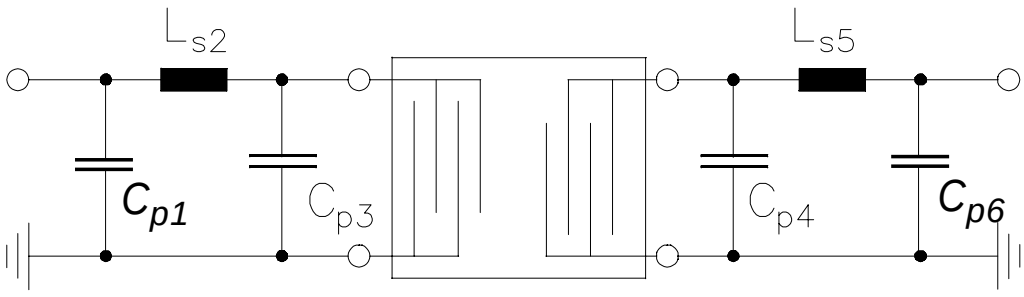
L_{p1} = 39 nH
L_{s2} = 82 nH
L_{p3} = 56 nH
L_{p4} = 100 nH
L_{s5} = 82 nH
L_{p6} = 33 nH



Alternative matching network to 50 Ω

(element values depend on PCB layout)

C_{p1} = 68 pF
L_{s2} = 39 nH
C_{p3} = 2,2 pF
C_{p4} = 1,8 pF
L_{s5} = 56 nH
C_{p6} = 56 pF



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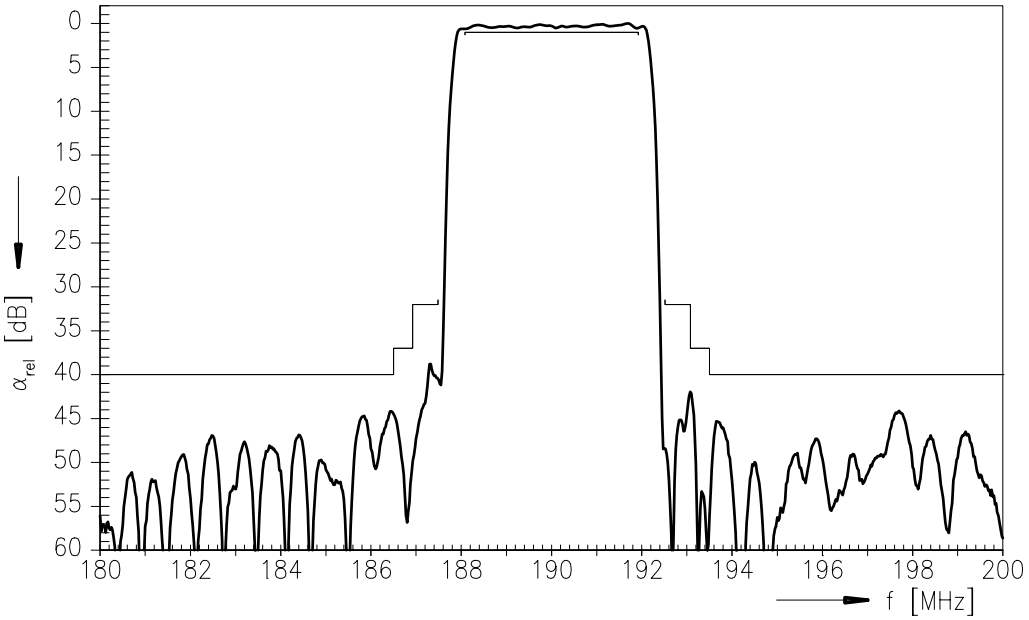
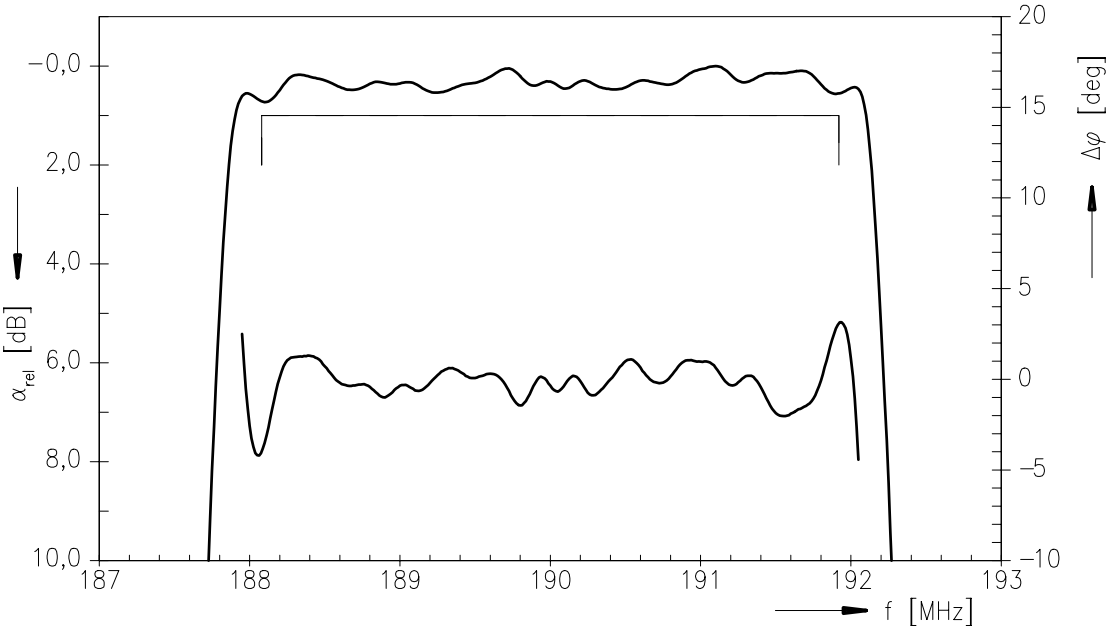
Transfer function



Transfer function (pass band)



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