EPCOS

SAW Components

Data Sheet B3866

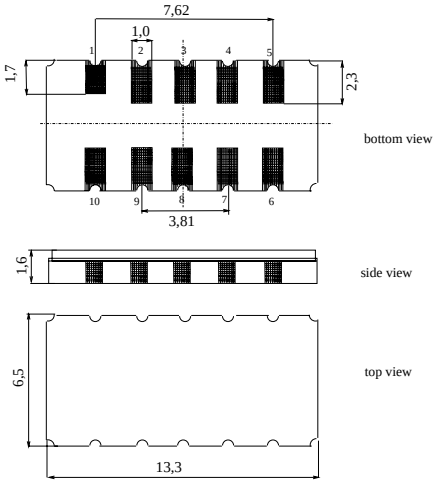
Ceramic package **DCC12A**

Features

- Low-loss IF filter for GSM / EDGE base station
- Channel selection in PCS, DCS systems
- Temperature stable
- Balanced and unbalanced operation possible
- Ceramic SMD package

Terminals

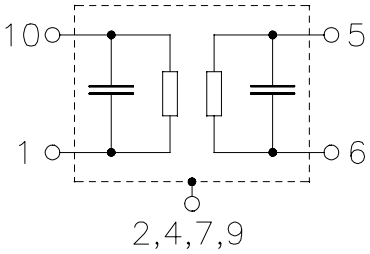
- Gold plated



Dimensions in mm, approx. weight 0,4 g

Pin configuration

1, 10	Balanced input
5, 6	Balanced output
3, 8	Ground
2, 4, 7, 9	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3866	B39201-B3866-H510	C61157-A7-A94	F61074-V8163-Z000

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

Maximum ratings

Operable temperature range	T_A	–30 / +85	˚C	
Storage temperature range	T_{stg}	–30 / +85	˚C	
DC voltage	V_{DC}	5	V	between terminals 1 and 10
		0	V	else
Source power	P_s	10	dBm	

Characteristics

Operating temperature range: T_A = 0 - 70 °C
Terminating source impedance: Z_S = 80 Ω || 30 nH
Terminating load impedance: Z_L = 90 Ω || 35 nH

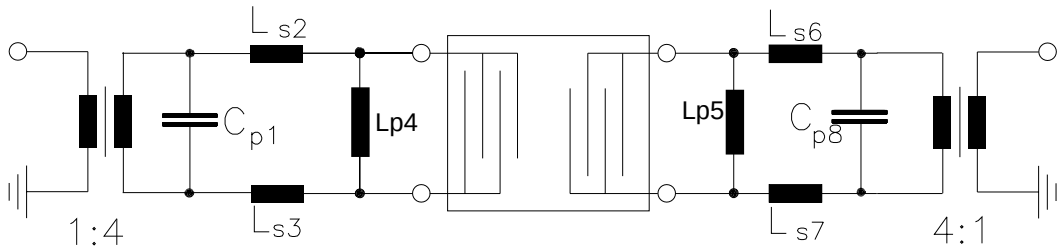
		min.	typ.	max.	
Nominal frequency	f_N	—	201,0	—	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	4,0	6,0	dB
Passband width $\alpha_{rel} \leq 3$ dB	$B_{3,0dB}$	—	300	—	kHz
Amplitude ripple in passband	$\Delta\alpha_{rel}$				
$f_N \pm 80$ kHz		—	±0,2	±1,0	dB
Absolute group delay (at f_N)	τ	—	2,2	—	µs
Group delay ripple (p-p)	$\Delta\tau$				
$f_N \pm 80$ kHz		—	0,7	1,5	µs
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 200$ kHz ... $f_N \pm 300$ kHz		3	8	—	dB
$f_N \pm 300$ kHz ... $f_N \pm 400$ kHz		13	20	—	dB
$f_N \pm 400$ kHz ... $f_N \pm 700$ kHz		20	30	—	dB
$f_N \pm 700$ kHz ... $f_N \pm 1600$ kHz		27	40	—	dB
$f_N \pm 1600$ kHz ... $f_N \pm 3000$ kHz		30	45	—	dB
$f_N \pm 3000$ kHz ... $f_N \pm 6000$ kHz		33	55	—	dB
$f_N \pm 6000$ kHz ... $f_N \pm 35000$ kHz		40	55	—	dB
IM3 level (Input level -17 dBm)					
$f_N \pm$ 800 kHz		—	—	-110	dBm
$f_N \pm 1600$ kHz		—	—	-110	dBm
Temperature coefficient of frequency[1]	TC_f	—	– 0,036	—	ppm/K²
Turnover temperature	T_0	—	35	—	°C

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

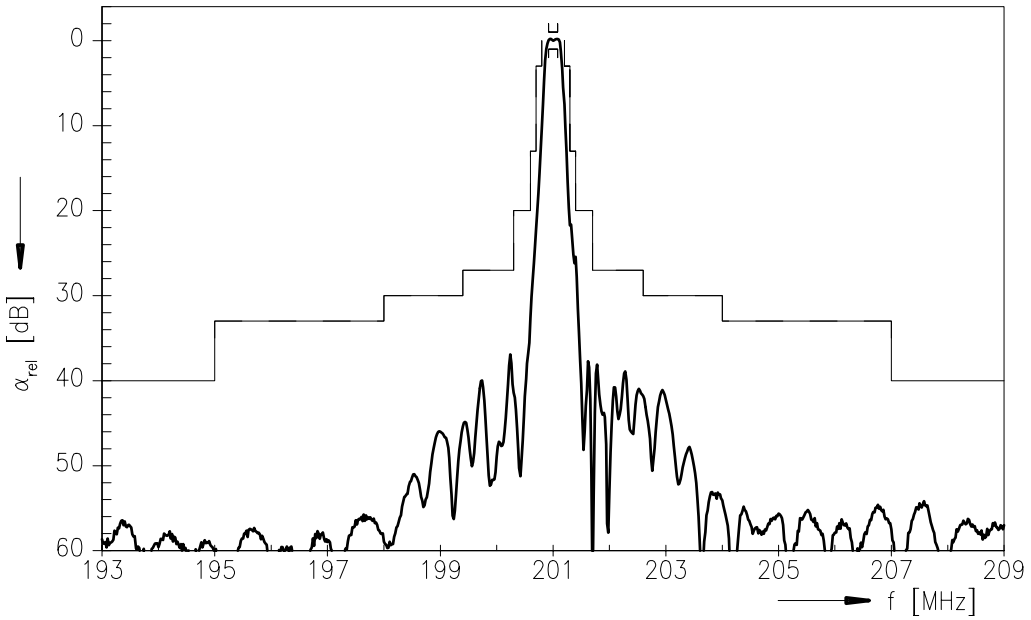
Matching network to 200 Ω

4:1 transformers are only required for measurement in a 50 Ω environment
(element values depend on PCB layout)

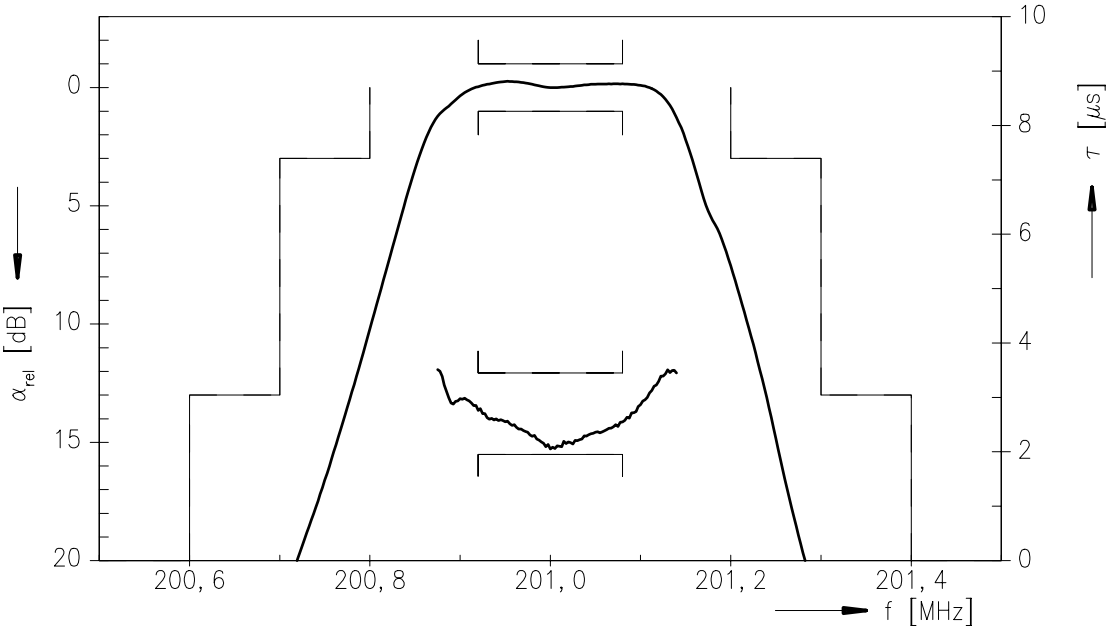
C_{p1} = 6,8 pF
L_{s2} = 27 nH
L_{s3} = 27 nH
L_{p4} = 33 nH
L_{p5} = 33 nH
L_{s6} = 27 nH
L_{s7} = 27 nH
C_{p8} = 5,6 pF



Transfer function



Transfer function (pass band)



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