EPCOS

SAW Components

Data Sheet B3892

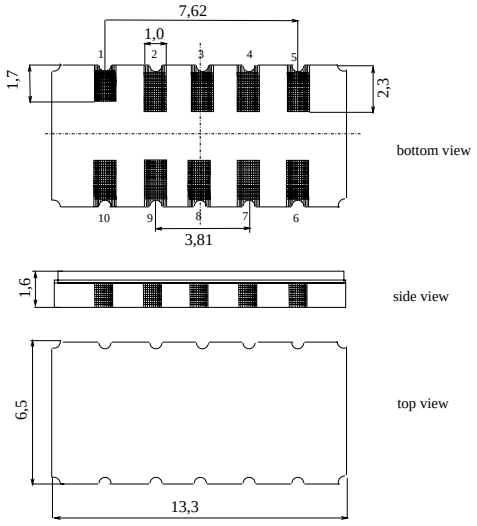
Ceramic package **DCC12A**

Features

- Low-loss IF filter for GSM-EDGE base station
- Temperature stable
- Balanced or unbalanced operation possible
- Ceramic SMD package

Terminals

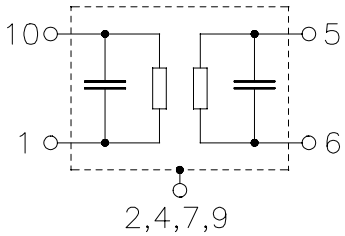
- Gold plated



Dimensions in mm, approx. weight 0,4 g

Pin configuration

1	Input
10	Input ground
6	Output
5	Output ground
3, 8	Ground
2, 4, 7, 9	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B3892	B39251-B3892-H510	C61157-A7-A94	F61074-V8163-Z000

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

Maximum ratings

Operable temperature range	T	–30 / +80	°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	20	dBm	t <= 100 hours

Characteristics

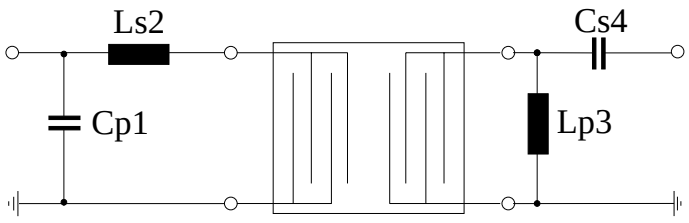
Operating temperature: T = -5 °C to 75 °C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	248,6	—	MHz
Minimum insertion attenuation (including losses in matching network)	α_{min}	—	4,7	6,0	dB
Passband width $\alpha_{rel} \leq 3{,}0$ dB	$B_{3,0dB}$	—	430	—	kHz
Amplitude ripple (p-p) $f_N \pm 100{,}0$ kHz	$\Delta\alpha$	—	0,5	1,0	dB
Group delay ripple (p-p) $f_N \pm 100{,}0$ kHz	$\Delta\tau$	—	0,6	0,7	µs
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N \pm 0{,}33$ MHz ... $f_N \pm 0{,}60$ MHz		12	15	—	dB
$f_N \pm 0{,}60$ MHz ... $f_N \pm 0{,}80$ MHz		25	37	—	dB
$f_N \pm 0{,}80$ MHz ... $f_N \pm 1{,}60$ MHz		45	50	—	dB
10,0 MHz ... f_N - 29,20 MHz		55	70	—	dB
f_N - 29,20 MHz ... f_N - 1,60 MHz		48	55	—	dB
f_N + 1,60 MHz ... f_N + 100,0 MHz		48	60	—	dB
@ f_N + 22,80 MHz		55	60	—	dB
@ f_N + 52,00 MHz		55	65	—	dB
@ f_N + 74,80 MHz		55	65	—	dB
@ f_N + 104,0 MHz		55	65	—	dB
@ f_N + 126,8 MHz		55	65	—	dB
Temperature coefficient of frequency [1]	TC_f	—	–0,036	—	ppm/K²
Frequency inversion point	T_0	—	35	—	°C

[1] Temperature dependence of f_c: $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2)$

Matching network to 50Ω

(Element values depend upon PCB layout)



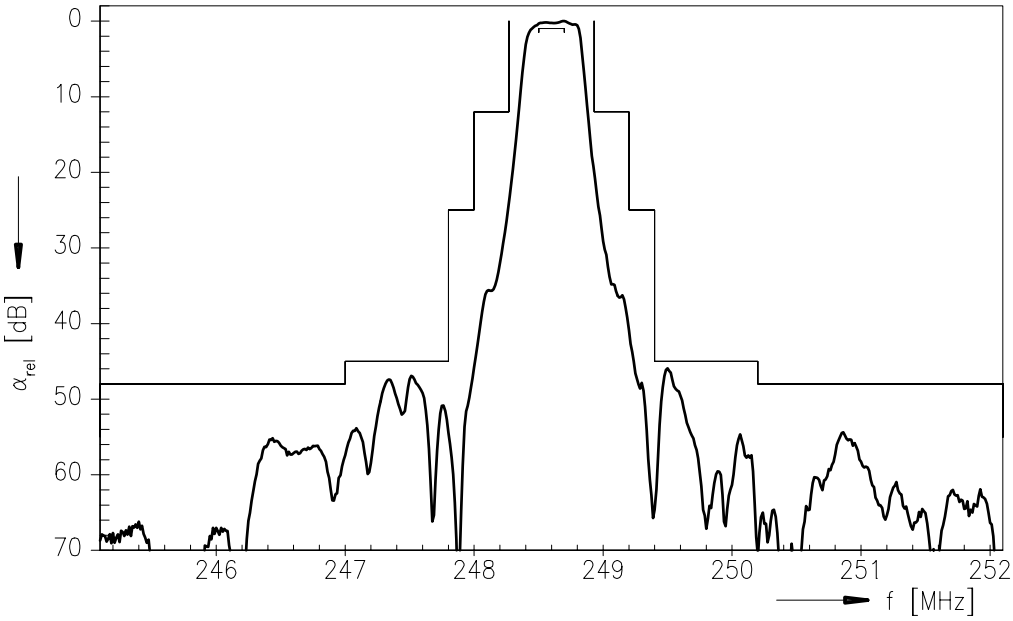
C_{p1} = 16 pF

L_{s2} = 39 nH

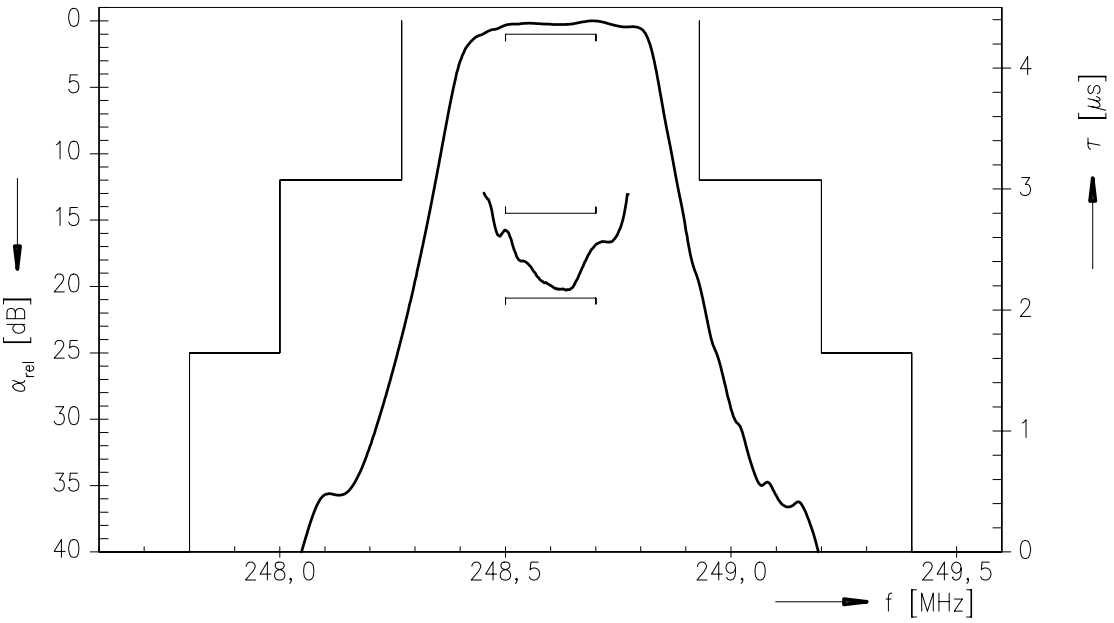
L_{p3} = 15 nH

C_{s4} = 15 pF

Normalized transfer function:



Normalized transfer function (pass band):



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