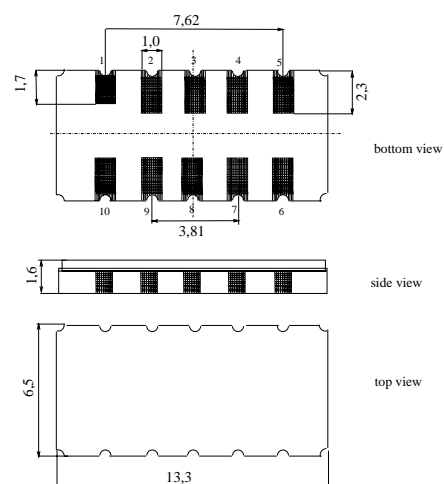# SAW Components

Data Sheet B3867

EPCOS

Data Sheet

Ceramic package **DCC12A**

Features

- Low-loss IF filter for WLL
- Temperature stable
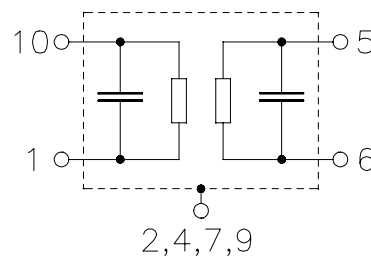- High nearby selectivity
- Ceramic SMD package

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	Ground
2, 4, 7, 9	Case Ground

Type	Ordering code	Marking and Package according to	Packing according to
B3867	B39301-B3867-H510	C61157-A7-A94	F61074-V8163-Z000

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	

Low-Loss Filter   **300,0 MHz**

Data Sheet

Characteristics

Operating temperature: T_A = -30 ... +70 $^\circ$C
Terminating source impedance: Z_S = 50 Ω and matching network
Terminating load impedance: Z_L = 50 Ω and matching network

		min.	typ.	max.	
Center frequency (center between 3dB points)	f_C	299,910	300,015	300,090	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	18,0	19,0	dB
Passband width[1]					
$\alpha_{rel} \leq$ 3 dB	$B_{3,0dB}$	3,3	3,35	—	MHz
$\alpha_{rel} \leq$ 40 dB	B_{40dB}	—	4,75	4,8	MHz
Absolute group delay (at f_C)	τ	—	1,75	1,8	µs
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_C \pm$ 1,2 MHz		—	0,8	1,1	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_C \pm$ 1,6 MHz		—	125	200	ns
Phase ripple (p-p)	$\Delta\varphi$				
$f_C \pm$ 1,6 MHz		—	5	10	$^\circ$
Return loss (Input and Output)					
$f_C \pm$ 1,6 MHz		10	12	—	dB
Triple Transit Suppression		37	38	—	dB
Relative attenuation (relative to α_{min})[2]	α_{rel}				
$f_C \pm$ 6 MHz ... $f_C \pm$ 40 MHz		45	50	—	dB
Temperature coefficient of frequency[3]	TC_f	—	– 0,036	—	ppm/K^2
Turnover temperature	T_0	—	20	—	$^\circ$C

1) all bandwidths are centered at f_c

2) apart from two peaks at or around $f_C +$ 21 MHz with typically 45 dB attenuation

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

Data Sheet

Matching network (Element values depend upon PCB layout):

Ls2   Ls4

Cp1   Rp3   Cp5
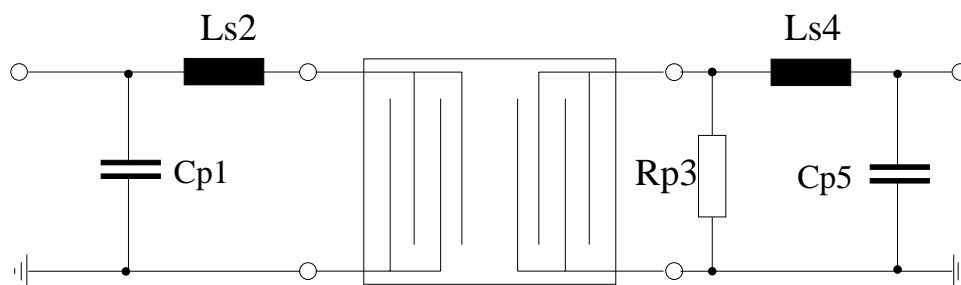
C_{p1} = 22 pF R_{p3} = 150 Ohm

L_{s2} = 33 nH L_{s4} = 18 nH

                                        C_{p5} = 22 pF

Data Sheet

Transfer function
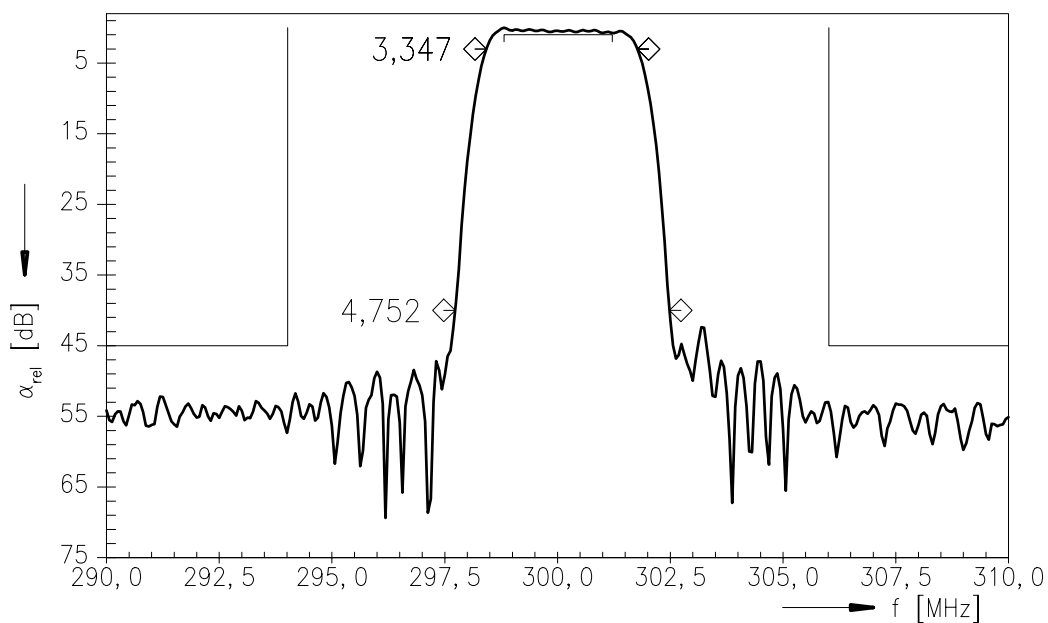
Transfer function (pass band)

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

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