EPCOS

SAW Components

Data Sheet B3867

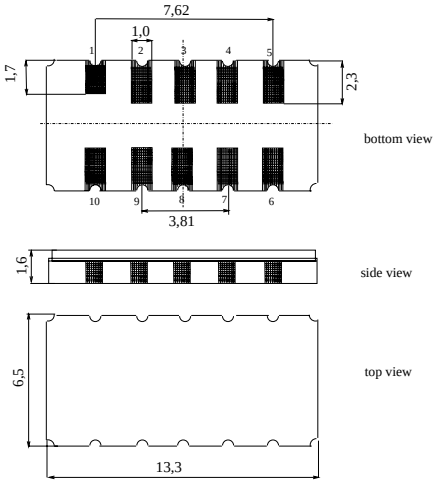
Ceramic package **DCC12A**

Features

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

Terminals

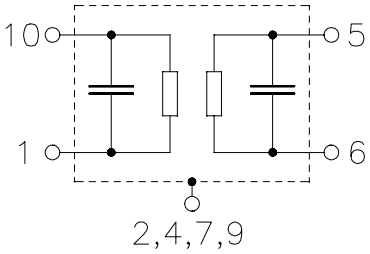
- Gold plated



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

Characteristics

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

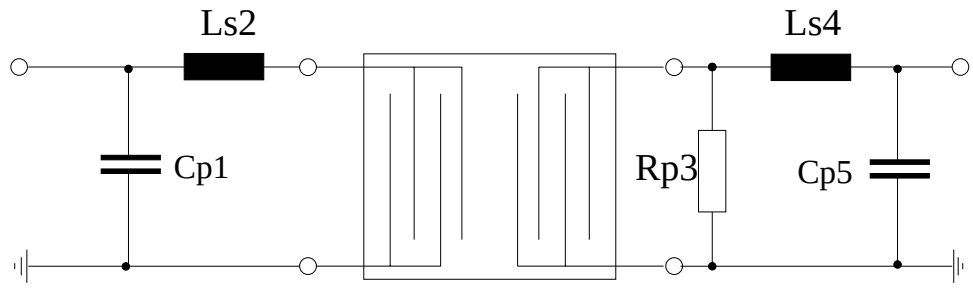
		min.	typ.	max.	
Center frequency (center between 3dB points)	f_C	299,910	300,015	300,090	MHz
Minimum insertion attenuation (including matching network)	α_{min}	—	18,0	19,0	dB
Passband width[1]					
$\alpha_{rel} \leq 3$ dB	$B_{3,0dB}$	3,3	3,35	—	MHz
$\alpha_{rel} \leq 40$ dB	B_{40dB}	—	4,75	4,8	MHz
Absolute 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	°
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/K²
Turnover temperature	T_0	—	20	—	°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: $f_c(T_A) = f_c(T_0)(1 + T_C f(T_A - T_0)^2)$

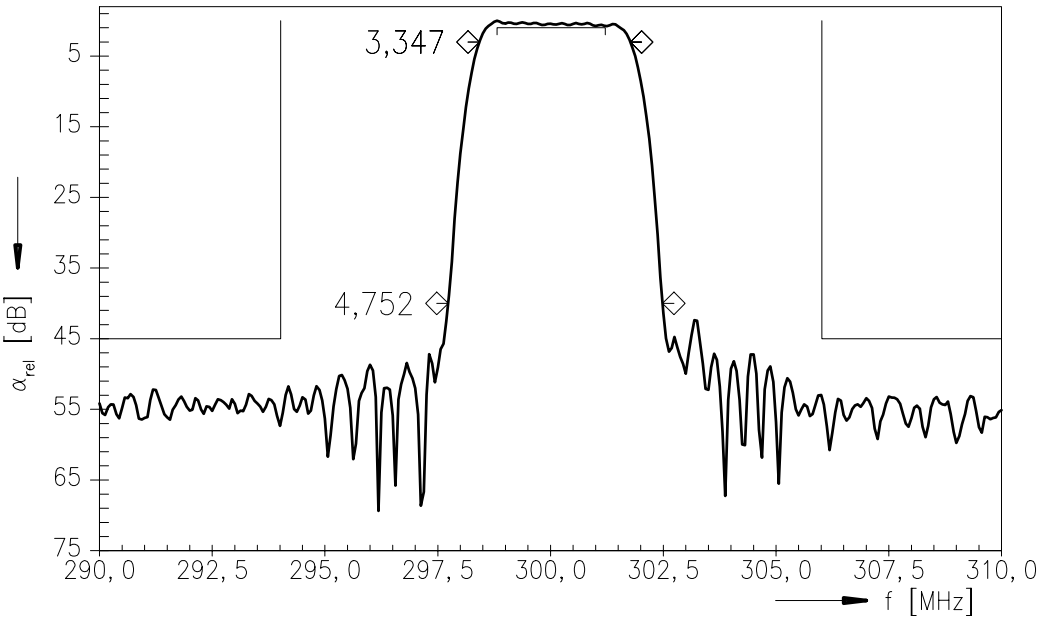
Matching network (Element values depend upon PCB layout):



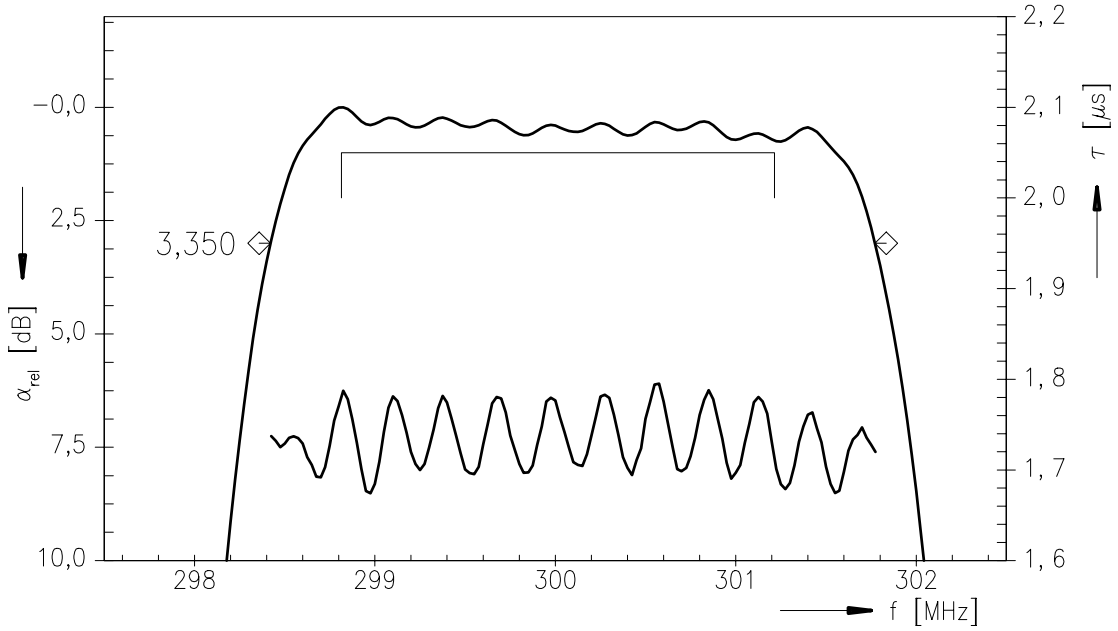
C_{p1} = 22 pF
L_{s2} = 33 nH

R_{p3} = 150 Ohm
L_{s4} = 18 nH
C_{p5} = 22 pF

Transfer function



Transfer function (pass band)



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