



SAW Components

Data Sheet B3867





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B3867

Low-Loss Filter

300,0 MHz

Data Sheet

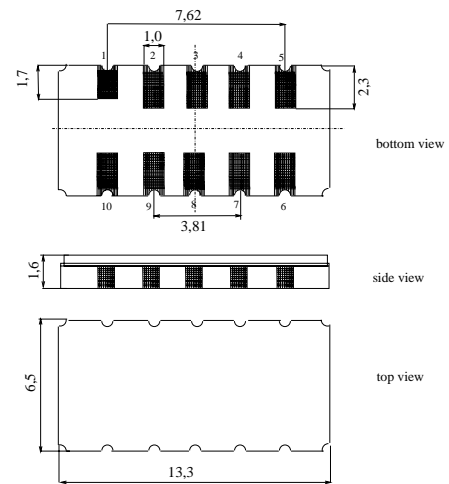
Ceramic package DCC12A

Features

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

Terminals

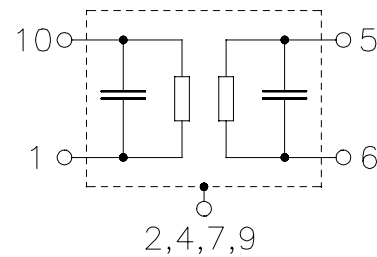
- Gold plated



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 Sensitive Device (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: $T_A = -30 \dots +70 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$ and matching network
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$ 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 width¹⁾					
$\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3,0\text{dB}}$	3,3	3,35	—	MHz
$\alpha_{\text{rel}} \leq 40 \text{ dB}$	$B_{40\text{dB}}$	—	4,75	4,8	MHz
Absolute group delay (at f_C)	τ	—	1,75	1,8	μs
Amplitude ripple (p-p) $f_C \pm 1,2 \text{ MHz}$	$\Delta\alpha$	—	0,8	1,1	dB
Group delay ripple (p-p) $f_C \pm 1,6 \text{ MHz}$	$\Delta\tau$	—	125	200	ns
Phase ripple (p-p) $f_C \pm 1,6 \text{ MHz}$	$\Delta\varphi$	—	5	10	$^\circ$
Return loss (Input and Output) $f_C \pm 1,6 \text{ MHz}$		10	12	—	dB
Triple Transit Suppression		37	38	—	dB
Relative attenuation (relative to α_{\min})²⁾ $f_C \pm 6 \text{ MHz} \dots f_C \pm 40 \text{ MHz}$	α_{rel}	45	50	—	dB
Temperature coefficient of frequency³⁾	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	20	—	$^\circ\text{C}$

1) all bandwidths are centered at f_C

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

3) Temperature dependence of f_C : $f_C(T_A) = f_C(T_0)(1 + TC_f(T_A - T_0)^2)$



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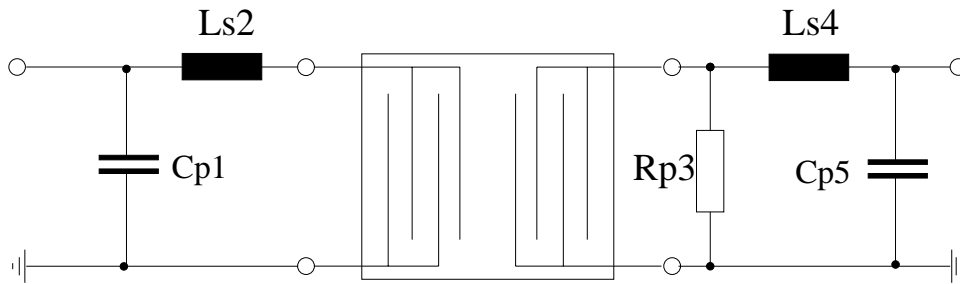
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Matching network (Element values depend upon PCB layout):



$$C_{p1} = 22 \text{ pF}$$

$$L_{s2} = 33 \text{ nH}$$

$$R_{p3} = 150 \text{ Ohm}$$

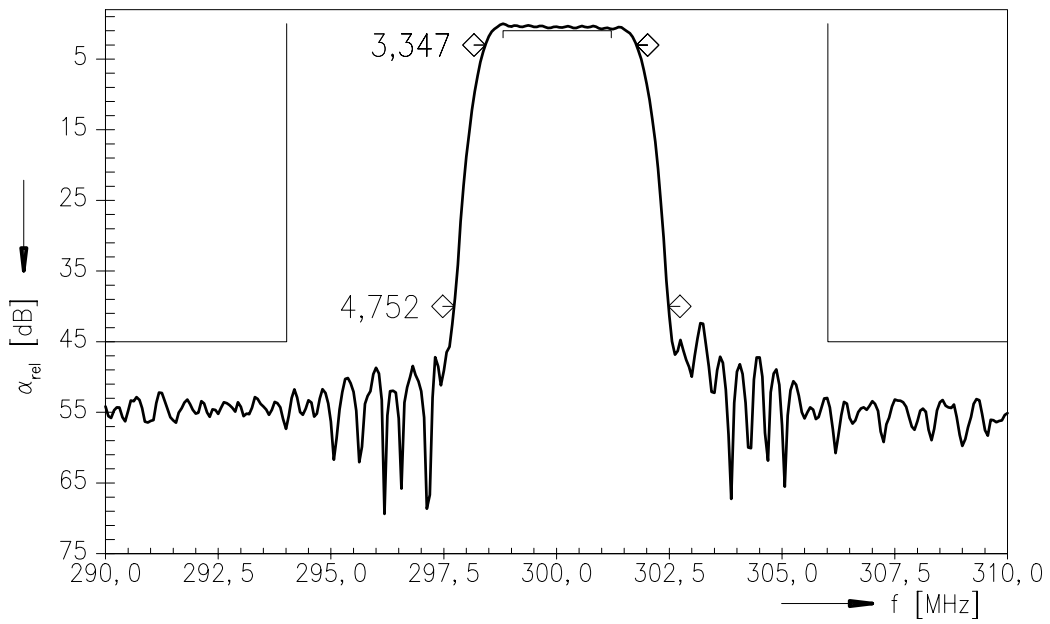
$$L_{s4} = 18 \text{ nH}$$

$$C_{p5} = 22 \text{ pF}$$

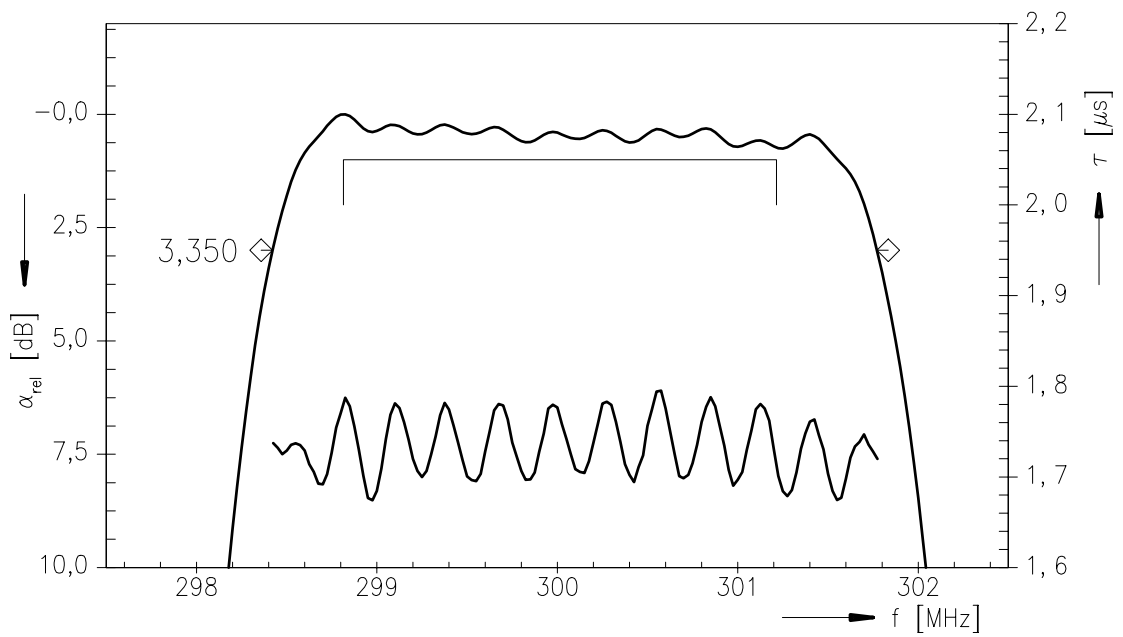


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Transfer function



Transfer function (pass band)





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