



SAW Components

Data Sheet B3873

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a blue glow and are positioned diagonally across the frame. In the background, there is a faint, stylized globe and some circuitry patterns, all in a dark, monochromatic color scheme.



SAW Components

B3873

Low-Loss Filter

240,0 MHz

Data Sheet

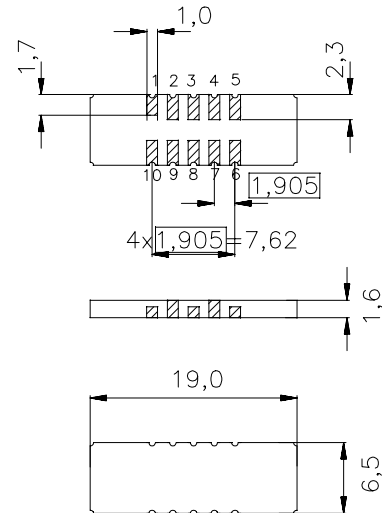
Features

- High performance IF bandpass filter
- Temperature stable
- Hermetically sealed ceramic package

Terminals

- Gold plated

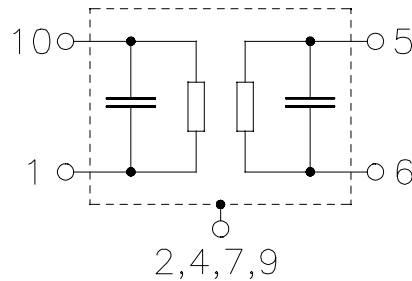
Ceramic package DCC18



Dimensions in mm, approx. weight 0,7 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
B3873	B39241-B3873-U210	C61157-A7-A54	F61074-V8166-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	-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:

$T = -10..+85\text{ }^{\circ}\text{C}$

Terminating source impedance:

$Z_S=50\text{ }\Omega$ and matching network

Terminating load impedance:

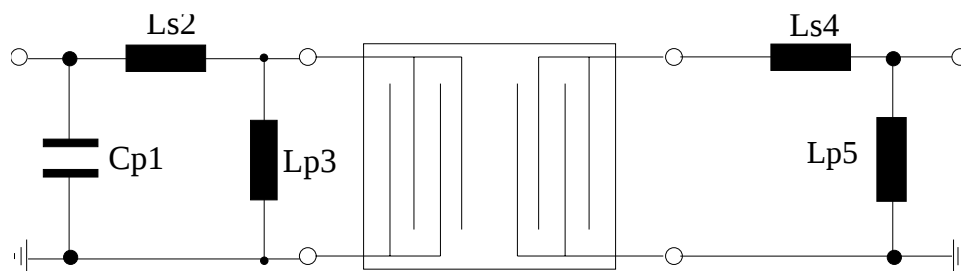
$Z_S=50\text{ }\Omega$ and matching network

		min.	typ.	max.	
Nominal frequency	f_N	—	240,0	—	MHz
Minimum insertion attenuation (including matching network)	$\alpha_{\min}$	12,0	14,0	16,0	dB
Passband width	$\alpha_{\text{rel}} \leq 1\text{ dB}$	$B_{1\text{dB}}$	1,1	1,25	— MHz
Amplitude ripple (p-p)	$\Delta\alpha$				
	$f_N \pm 0,55\text{ MHz}$	—	0,7	1,0	dB
Absolute group delay (at f_N)	τ	—	1,8	3,5	μs
Group delay ripple (p-p)	$f_N \pm 0,55\text{ MHz}$	$\Delta\tau$	—	120	200 ns
Deviation of linear phase (p-p)	$\Delta\phi$				
	$f_N \pm 0,55\text{ MHz}$	—	5	6	$^{\circ}$
Relative attenuation (relative to $\alpha_{\min}$)	α_{rel}				
$f_N \pm 0,9\text{ MHz}$... $f_N \pm 1,25\text{ MHz}$		10	15	—	dB
$f_N \pm 1,25\text{ MHz}$... $f_N \pm 1,7\text{ MHz}$		25	30	—	dB
$f_N \pm 1,7\text{ MHz}$... $f_N \pm 1,9\text{ MHz}$		32	35	—	dB
$f_N \pm 1,9\text{ MHz}$... $f_N \pm 2,5\text{ MHz}$		35	40	—	dB
$f_N \pm 2,5\text{ MHz}$... $f_N \pm 7,0\text{ MHz}$		38	42	—	dB
$f_N \pm 7,0\text{ MHz}$... $f_N \pm 70\text{ MHz}$		40	45	—	dB
Input and output return loss		12	17	—	dB
Temperature coefficient of frequency ¹⁾	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	40	—	$^{\circ}\text{C}$

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

**SAW Components****B3873****Low-Loss Filter****240,0 MHz****Data Sheet****Matching network to 50 Ω**

(Element values depend upon PCB layout)



$$C_{p1} = 15 \text{ pF}$$

$$L_{s2} = 27 \text{ nH}$$

$$L_{p3} = 7,8 \text{ nH}$$

$$L_{s4} = 10 \text{ nH}$$

$$L_{p5} = 10 \text{ nH}$$



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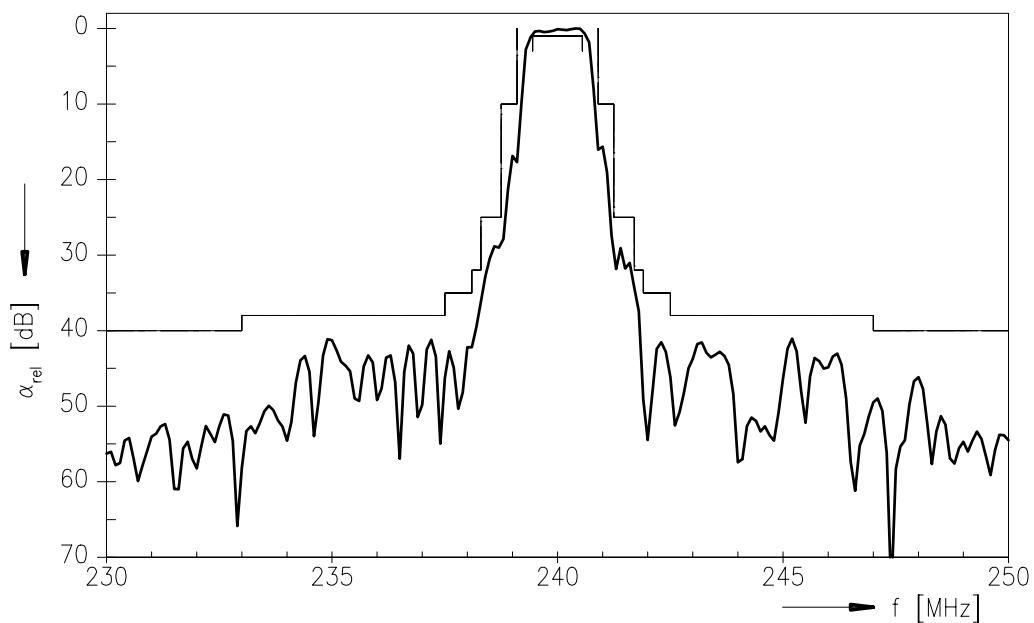
B3873

Low-Loss Filter

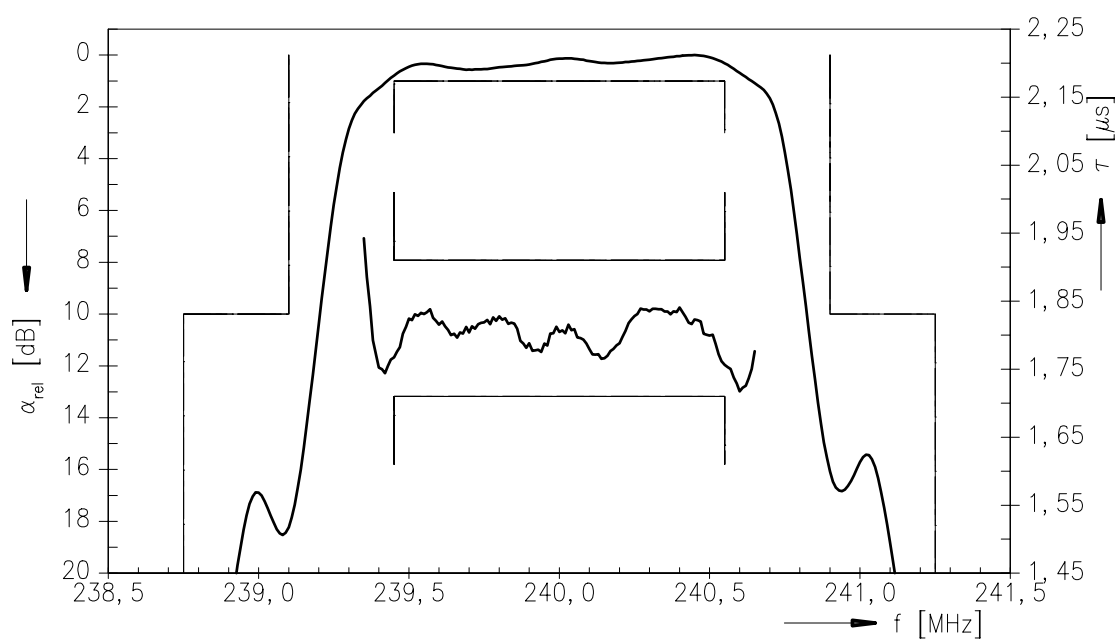
240,0 MHz

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Normalized frequency response



Normalized frequency response (pass band)





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Low-Loss Filter

240,0 MHz

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