



SAW Components

Data Sheet B3873





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B3873

Low-Loss Filter

240,0 MHz

Data Sheet

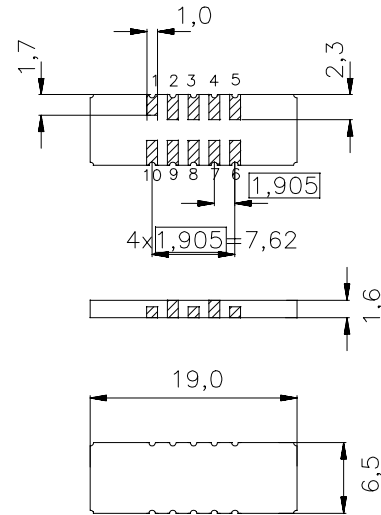
Features

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

Terminals

- Gold plated

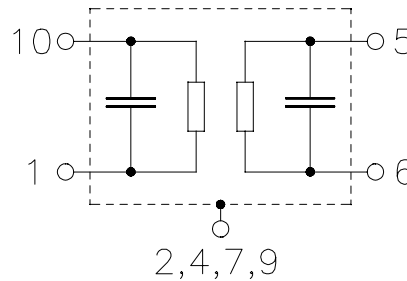
Ceramic package DCC18



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: $Z_S=50\ \Omega$ and matching network
 Terminating load impedance: $Z_S=50\ \Omega$ and matching network

			min.	typ.	max.	
Nominal frequency	f_N		—	240,0	—	MHz
Minimum insertion attenuation (including matching network)	α_{\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)		$\Delta\varphi$				
	$f_N \pm 0,55\ \text{MHz}$		—	5	6	$^{\circ}$
Relative attenuation (relative to α_{\min})		α_{rel}				
	$f_N \pm 0,9\ \text{MHz} \dots f_N \pm 1,25\ \text{MHz}$		10	15	—	dB
	$f_N \pm 1,25\ \text{MHz} \dots f_N \pm 1,7\ \text{MHz}$		25	30	—	dB
	$f_N \pm 1,7\ \text{MHz} \dots f_N \pm 1,9\ \text{MHz}$		32	35	—	dB
	$f_N \pm 1,9\ \text{MHz} \dots f_N \pm 2,5\ \text{MHz}$		35	40	—	dB
	$f_N \pm 2,5\ \text{MHz} \dots f_N \pm 7,0\ \text{MHz}$		38	42	—	dB
	$f_N \pm 7,0\ \text{MHz} \dots f_N \pm 70\ \text{MHz}$		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	—	$^{\circ}\text{C}$

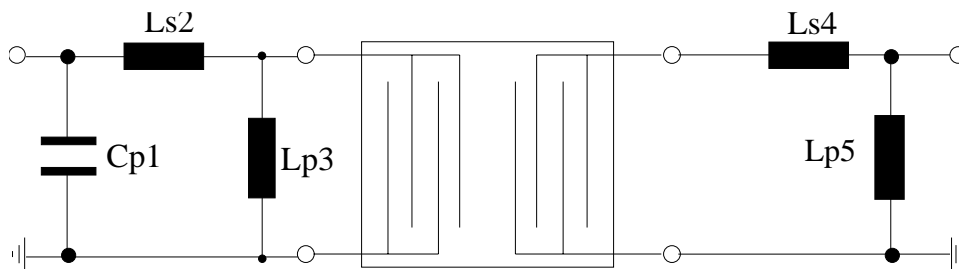
¹⁾ Temperature dependence of f_c : $f_c(T_A) = f_c(T_0)(1 + TC_f(T_A - T_0)^2)$



Data Sheet

Matching network to 50 Ω

(Element values depend upon PCB layout)



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

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

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

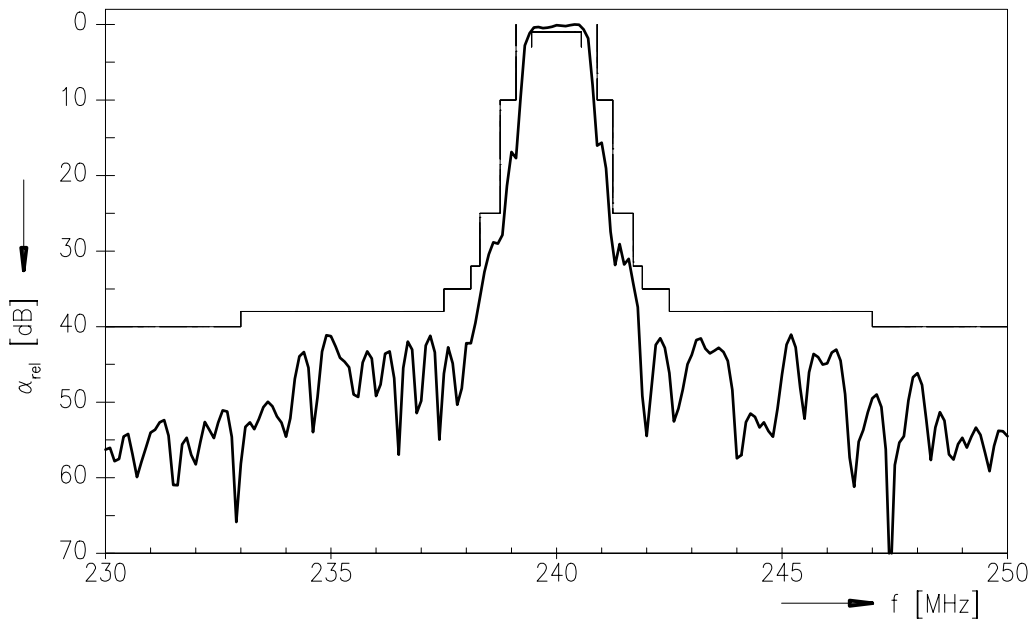
$$L_{s4} = 10 \text{ nH}$$

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

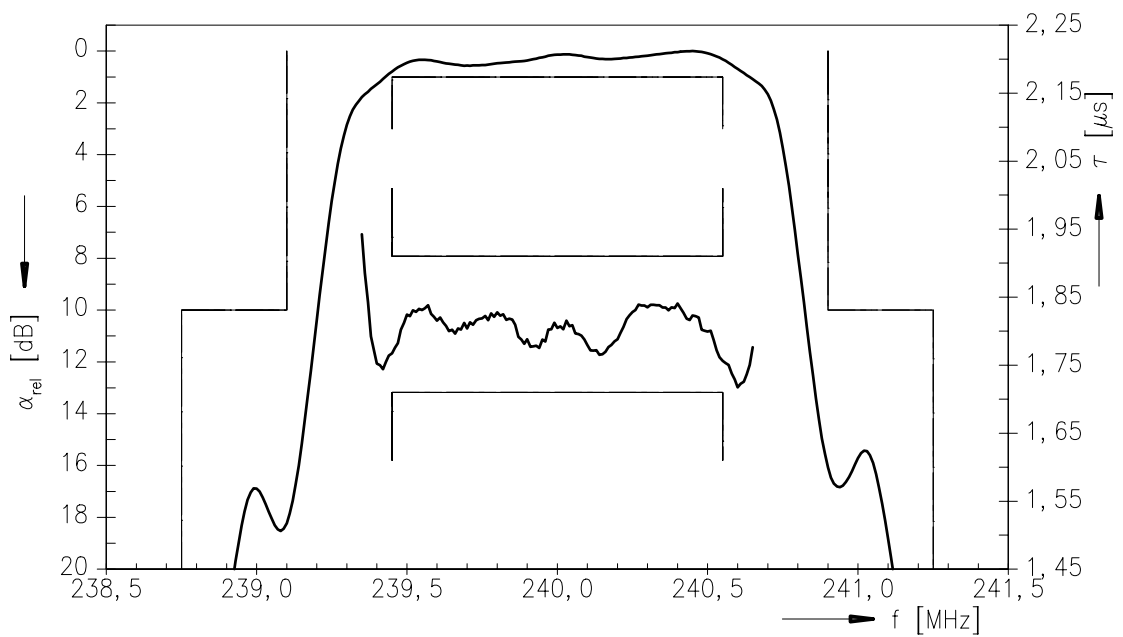


Data Sheet

Normalized frequency response



Normalized frequency response (pass band)





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