



# SAW filters for infrastructure systems

## Series/Type: B3873

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39241B3873U210		2012-01-13	2012-12-31	2013-03-30

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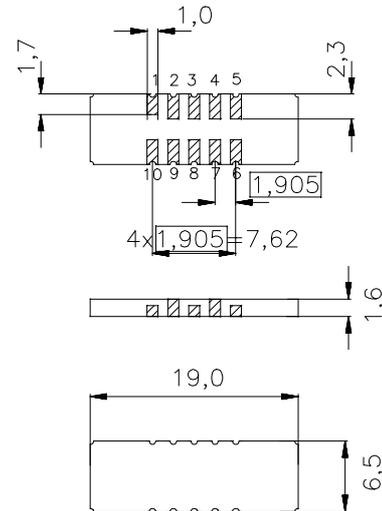
**Data Sheet**
**Features**

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

**Terminals**

- Gold plated

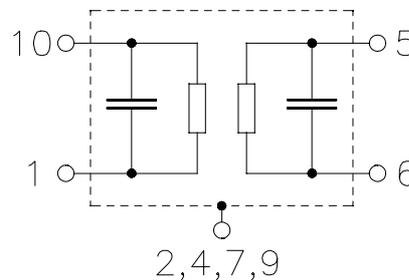
Ceramic package DCC18



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

**SAW Components**
**B3873**
**Low-Loss Filter**
**240,0 MHz**
**Data Sheet**
**Characteristics**

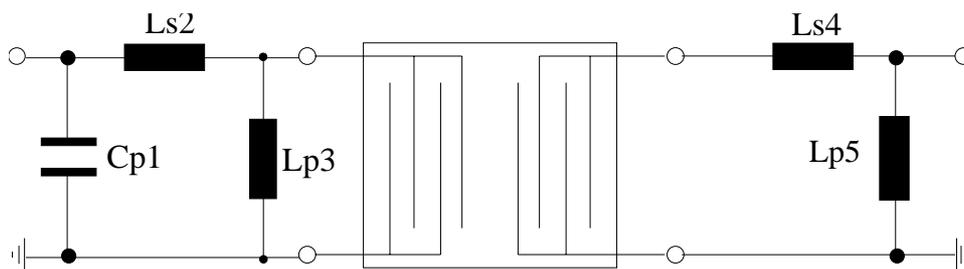
Operating temperature:	$T = -10..+85\text{ }^{\circ}\text{C}$
Terminating source impedance:	$Z_S=50\ \Omega$ and matching network
Terminating load impedance:	$Z_S=50\ \Omega$ and matching network

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

<sup>1)</sup> 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  $\Omega$** 

(Element values depend upon PCB layout)



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

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

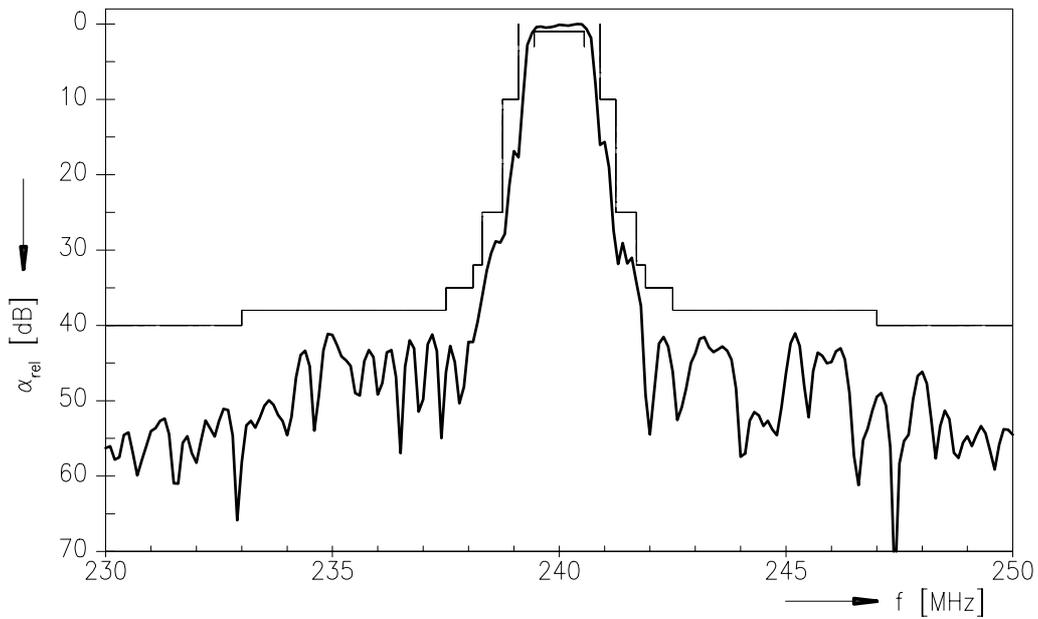
$$L_{p3} = 7,8 \text{ nH}$$

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

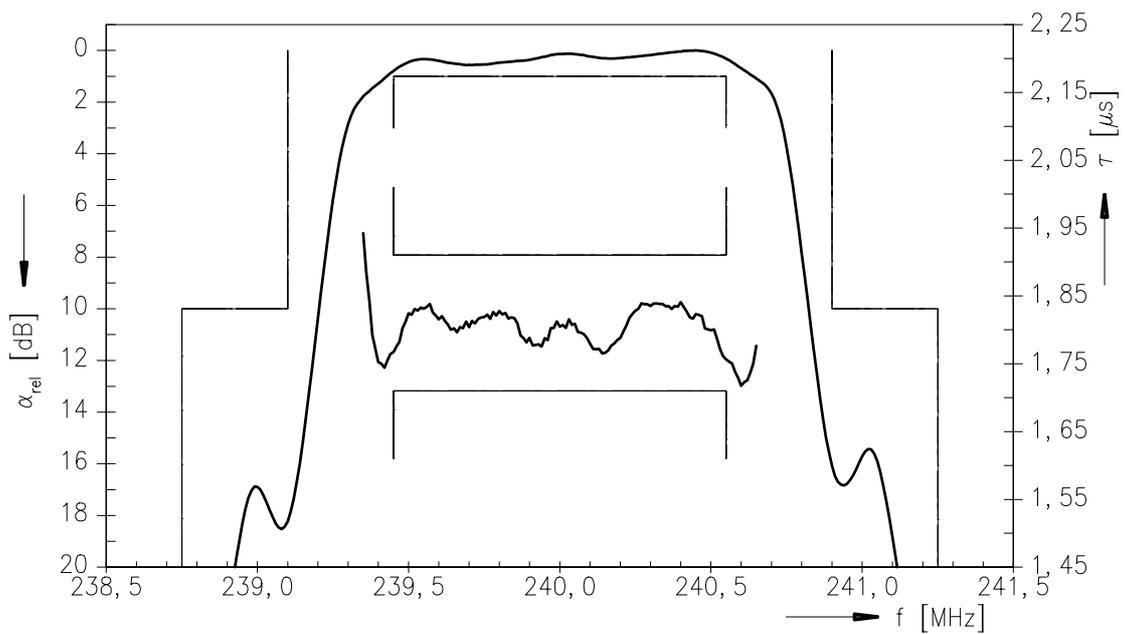
$$L_{p5} = 10 \text{ nH}$$

Data Sheet

Normalized frequency response



Normalized frequency response (pass band)



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