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# SAW filters for infrastructure systems

Series/Type: B3643

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39371B3643Z710		2012-01-13	2012-12-31	2013-03-30

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

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SAW Components	B3643
Low-Loss Filter	371,0 MHz

**Data Sheet** 

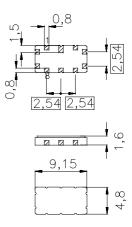
Ceramic package QCC10B

#### **Features**

- IF low-loss filter for wireless LAN systems
- Channel selection according to IEEE 802.11
- Temperature stable
- Ceramic SMD package

#### **Terminals**

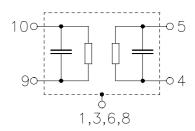
Gold plated



Dimensions in mm, approx. weight 0,23

# Pin configuration

10	Input
5	Output
9	Input ground
4	Output ground
2, 7	Ground
1, 3, 6, 8	Case ground



Туре	Ordering code	Marking and Package according to	Packing according to	
B3643	B39371-B3643-Z710	C61157-A7-A49	F61074-V8035-Z000	

Electrostatic Sensitive Device (ESD)

# **Maximum ratings**

Operable temperature range	$T_{A}$	-25 / +70	°C	
Storage temperature range	$T_{\rm stg}$	-40 / +85	°C	
DC voltage	$V_{\rm DC}$	0	V	
Source power	$P_{s}^{-}$	10	dBm	source impedance 50 $\Omega$



**SAW Components** B3643

371,0 MHz **Low-Loss Filter** 

**Data Sheet** 

#### **Characteristics**

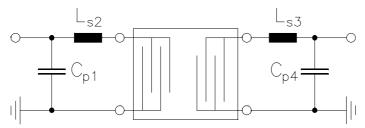
Operating temperature range:

 $T_{\rm A} = -20 \ldots +60 \, ^{\circ}{\rm C}$   $Z_{\rm S} = 50 \, \Omega$  and matching network  $Z_{\rm L} = 50 \, \Omega$  and matching network Terminating source impedance: Terminating load impedance:

		min.	typ.	max.	
Nominal frequency	f <sub>N</sub>	_	371,0	_	MHz
Insertion attenuation at $f_N$		_	10	11,5	dB
Pass bandwidth					
$\alpha_{rel}$ < 1 dB	$B_{1dB}$	1,3	1,6	_	MHz
$\alpha_{rel}$ < 3 dB	$B_{3dB}$		2,0	2,5	MHz
Amplitude ripple (p-p)					
$f_{N} - 0.5 \text{ MHz } \dots f_{N} + 0.5 \text{ MHz}$			0,3	1,0	dB
Amplitude slope in passband		_	0,0	±0,5	dB
Group delay ripple (p-p)					
$f_{\rm N}$ - 0,65 MHz $f_{\rm N}$ + 0,65 MHz	Δτ	_	80	120	ns
$f_{\rm N}$ - 1,00 MHz $f_{\rm N}$ + 1,00 MHz		_	90	_	ns
<b>Relative attenuation</b> (relative to $\alpha_N$ )					
f <sub>N</sub> - 50 MHz f <sub>N</sub> - 15 MHz	$lpha_{rel}$	45	60		dB
f <sub>N</sub> - 15 MHz f <sub>N</sub> - 5 MHz		40	55	_	dB
$f_{N}$ + 5 MHz $f_{N}$ + 25 MHz		40	45	_	dB
$f_{\rm N} + 25 \ {\rm MHz} \ \dots \ f_{\rm N} + 50 \ {\rm MHz}$		45	50		dB
Temperature coefficient of frequency 1)	$TC_{f}$	_	-0,036		ppm/K <sup>2</sup>
Turnover temperature $T_0$		_	16	_	°C

<sup>&</sup>lt;sup>1)</sup> Temperature dependance of  $f_C$ :  $f_C(T_A) = f_C(T_0)(1 + TC_f(T_A - T_0)^2)$ 

# Matching network (Element values depend upon PCB layout)



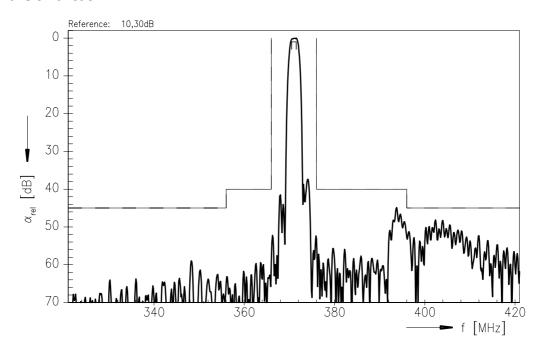
$$C_{p1} = 15 \text{ pF}$$
 $L_{s2} = 27 \text{ nH}$ 
 $L_{s3} = 22 \text{ nH}$ 
 $C_{p4} = 15 \text{ pF}$ 



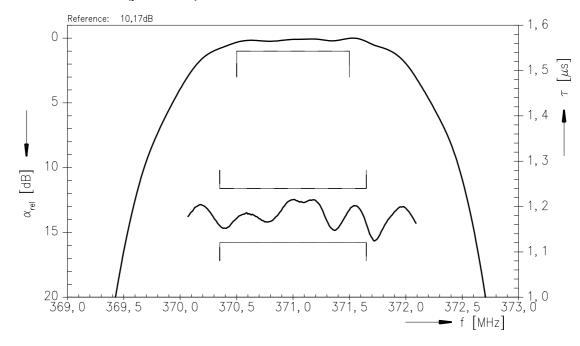
SAW Components B3643
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**Data Sheet** 

#### **Transfer function**



# Transfer function (pass band)





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**Data Sheet** 

### Published by EPCOS AG Surface Acoustic Wave Components Division, SAW MC IS P.O. Box 80 17 09, D-81617 München

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