



IF Filters for Cordless Phones and ISM-Band Application

Series/Type: B8103

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39111B8103L100		2004-05-19	2004-12-31	2005-03-31

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.

Withdrawn Products

The following products presented in this data sheet are being withdrawn:

B39111B8103L100

Date of withdrawal: 19-MAY-04

Deadline for last orders: 31-DEC-04

Last shipments: 31-MAR-05

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of the sales offices are given on the Internet at www.epcos.com/sales.



SAW Components

Data Sheet B 8103

Data Sheet



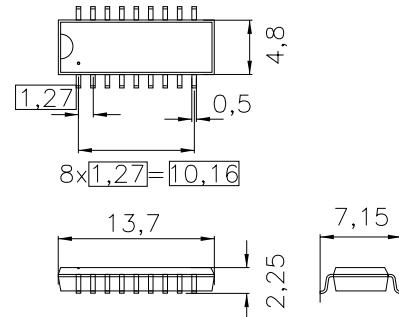
SAW Components
B 8103
Bandpass Filter
110,59 MHz
Data Sheet

duroplast package **DIP18D**
Features

- IF filter for cordless phone
- Channel selection in ISM system
- **Surface Mounted Technology (SMT)**
- Standard IC small outline (SO) package
- Balanced and unbalanced operation possible

Terminals

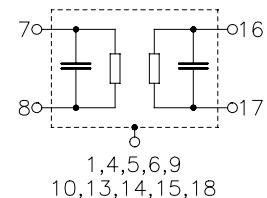
- Tinned CuFe alloy



Dimensions in mm, approx. weight 0,4 g

Pin configuration

8	Input
7	Input ground or balanced input
16	Output
17	Output ground or balanced output
1,4,5,6,9,10,	Chip-carrier ground
13,14,15,18	
2,3,11,12	not connected



Type	Ordering code	Marking and Package according to	Packing according to
B8103	B39111-B8103-L100	C61157-A2-A4	F61074-V8058-Z000

Electrostatic Sensitive Device (ESD)
Maximum ratings

Operable temperature range	T	0/+55	°C	
Storage temperature range	T_{stg}	-40/+85	°C	
DC voltage	V_{DC}	0	V	
Source power	P_s	10	dBm	

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Characteristics

Reference temperature:

 $T = +25^\circ\text{C}$

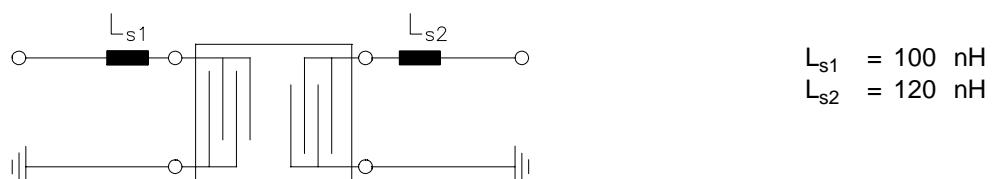
Terminating source impedance:

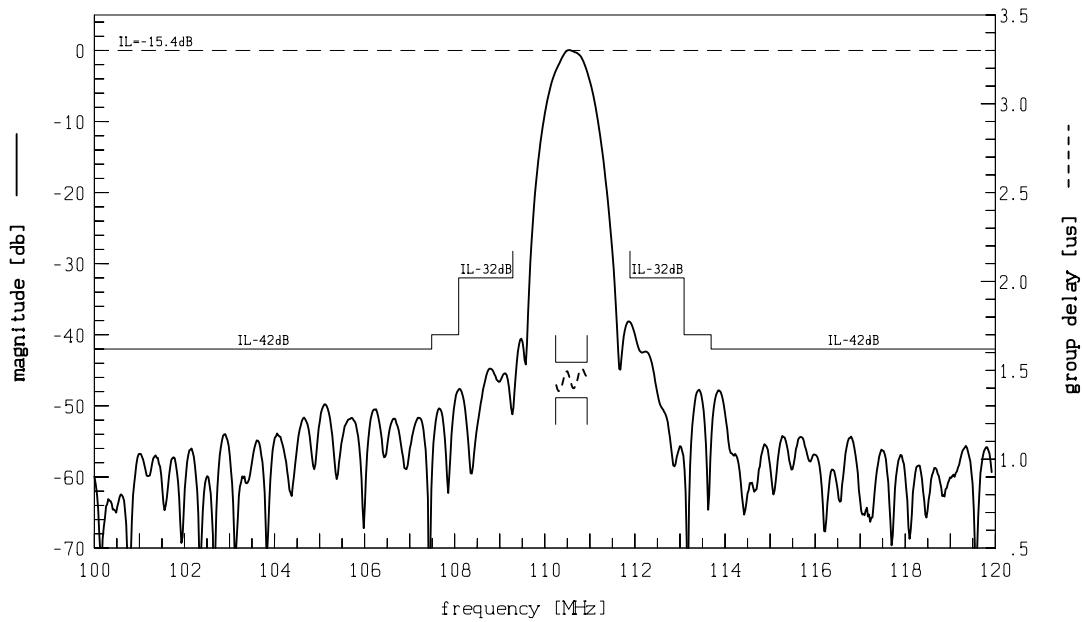
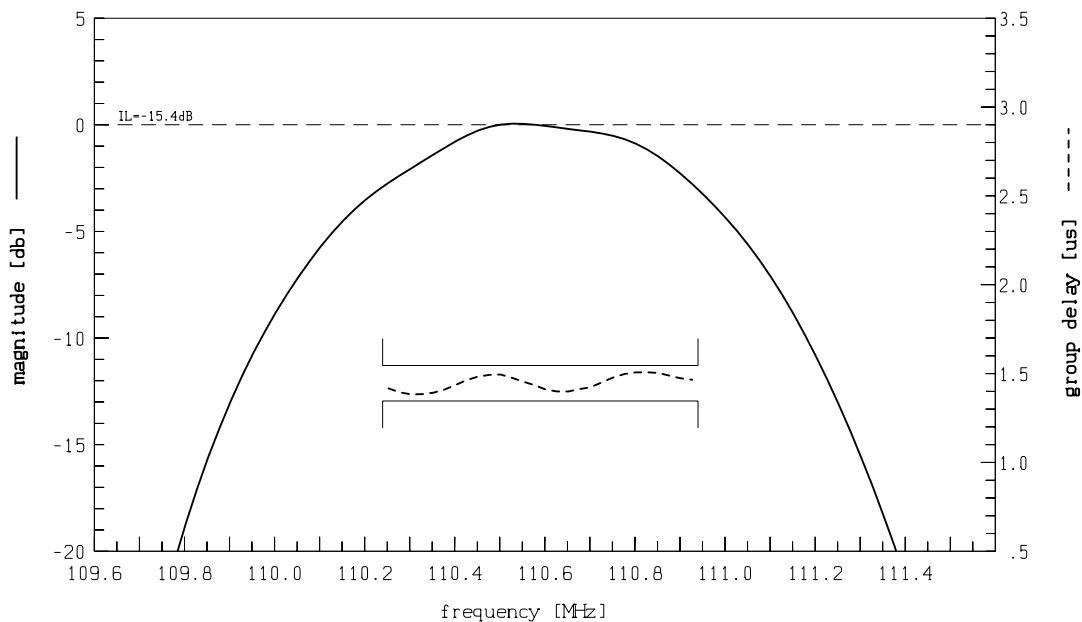
 $Z_S = 50 \Omega (190 \Omega \parallel 160 \text{ nH}^*)$

Terminating load impedance:

 $Z_L = 50 \Omega (180 \Omega \parallel 150 \text{ nH}^*)$

		min.	typ.	max.	
Nominal frequency	f_N	110,53	110,59	110,65	MHz
Insertion attenuation at f_N (including losses in matching network)	α_N	14,0 (11,1*)	15,5 (12,6*)	17,0 (14,1*)	dB dB
Pass bandwidth	$B_{3\text{dB}}$ $B_{30\text{dB}}$	0,66 —	0,70 1,9	0,74 —	MHz MHz
Group delay ripple (p-p) $f_N - 350 \text{ kHz} \dots f_N + 350 \text{ kHz}$	$\Delta\tau$	— —	130 (350*)	200 (450*)	ns ns
Relative attenuation (relative to α_N)	α_{rel}				
$f_N \pm 20,0 \text{ MHz} \dots f_N \pm 3,1 \text{ MHz}$		42	48	—	dB
$f_N \pm 3,1 \text{ MHz} \dots f_N \pm 2,5 \text{ MHz}$		40	48	—	dB
$f_N \pm 2,5 \text{ MHz} \dots f_N \pm 1,3 \text{ MHz}$		32	38	—	dB
Impedance at f_N					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	190 \parallel 12	—	$\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	180 \parallel 16	—	$\Omega \parallel \text{pF}$
Temperature coefficient of frequency	TC_f	—	- 18	—	ppm/K

*) with matching network to 50Ω (element values depend on PCB layout):


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Transfer function:

Transfer function (pass band):




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Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW CE MM PD

P.O. Box 80 17 09, D-81617 München

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