EPCOS

SAW Components

Data Sheet B 8103

Data Sheet

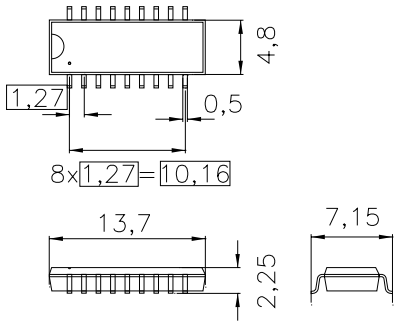
duroplast package **DIP18D**

Features

- IF filter for cordless phone
- Channel selection in ISM system
- **S**urface **M**ounted **T**echnology (**SMT**)
- Standard IC small outline (SO) package
- Balanced and unbalanced operation possible

Terminals

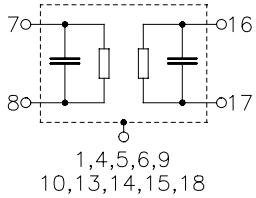
- Tinned CuFe alloy



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, 13,14,15,18	Chip-carrier ground
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 **S**ensitive **D**evice (**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	

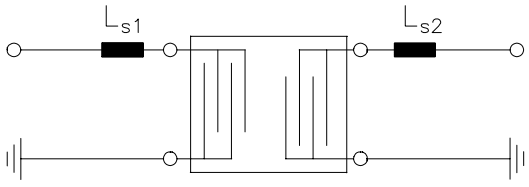
Data Sheet

Characteristics

Reference temperature: T = +25 °C
Terminating source impedance: Z_S = 50 Ω (190 Ω || 160 nH*)
Terminating load impedance: Z_L = 50 Ω (180 Ω || 150 nH*)

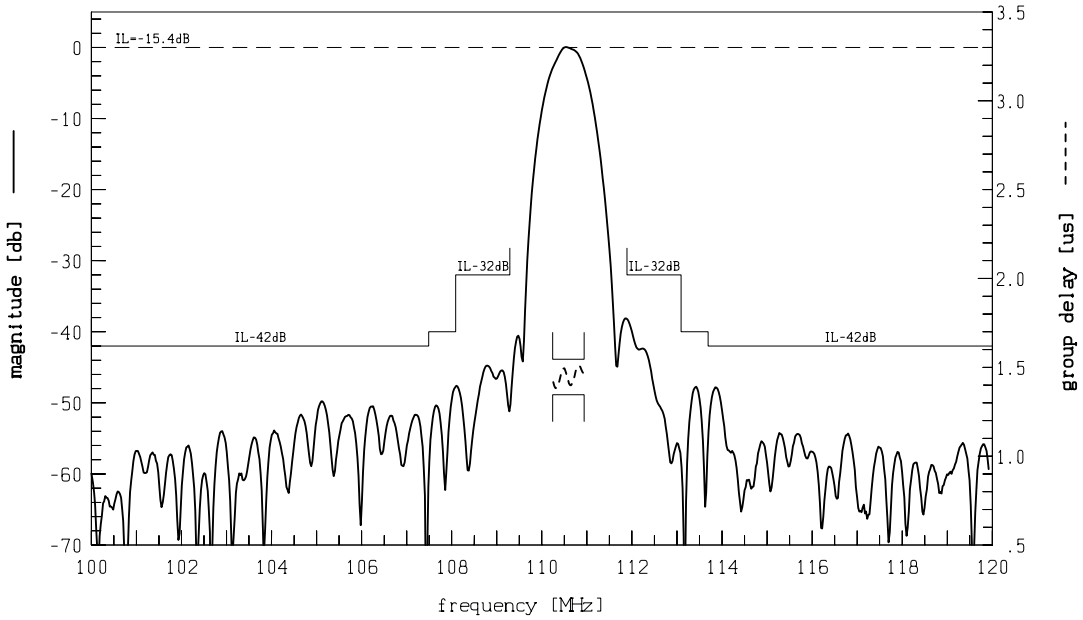
		min.	typ.	max.	
Nominal frequency	f_N	110,53	110,59	110,65	MHz
Insertion attenuationat f_N	α_N	14,0	15,5	17,0	dB
(including losses in matching network)		(11,1*)	(12,6*)	(14,1*)	dB
Pass bandwidth	B_{3dB}	0,66	0,70	0,74	MHz
	B_{30dB}	—	1,9	—	MHz
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 350 kHz ...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

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

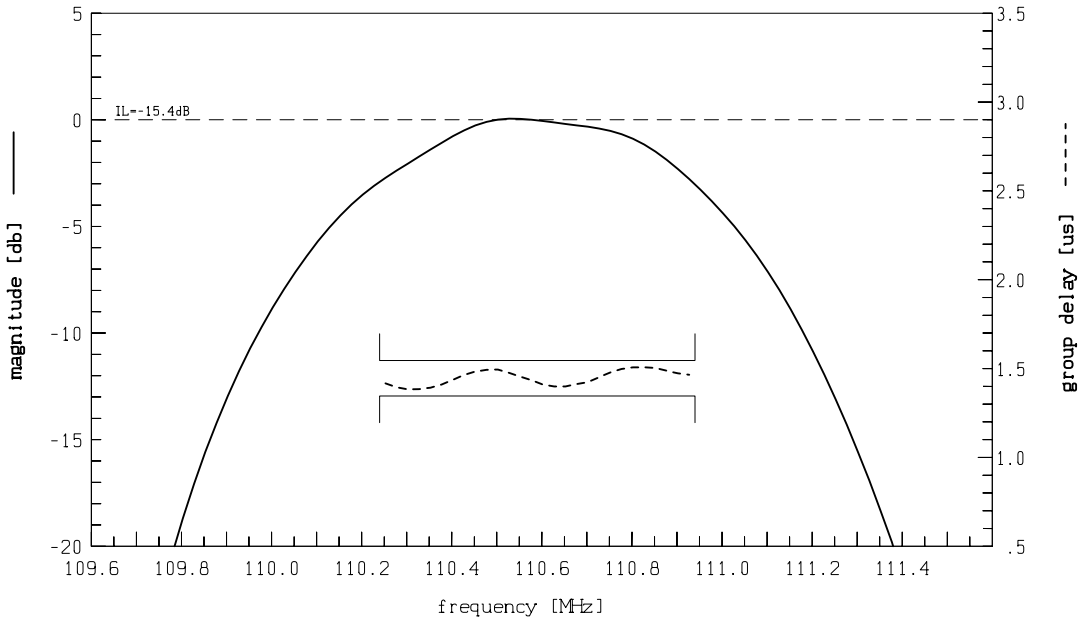


L_{s1} = 100 nH
L_{s2} = 120 nH

Transfer function:



Transfer function (pass band):



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