



SAW Components

Data Sheet B7840

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background. In the background, there is a faint, stylized globe and a wavy, ribbon-like shape that flows across the scene, adding a sense of motion and technology.



SAW Components

B7840

Low-Loss Filter

1575,42 MHz

Data Sheet

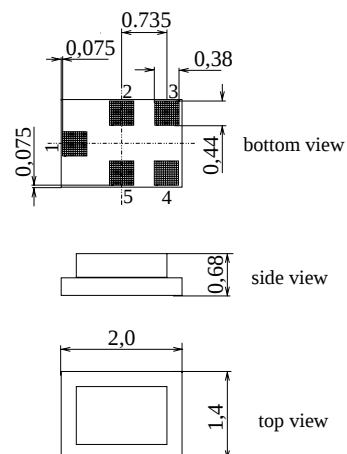
Chip Sized SAW Package

Features

- Low loss RF filter for GPS receivers
- Unbalanced to balanced operation
- Low amplitude ripple
- Impedance transformation from 50 Ω to 100 Ω
- Package for **Surface Mounted Technology (SMT)**

Terminals

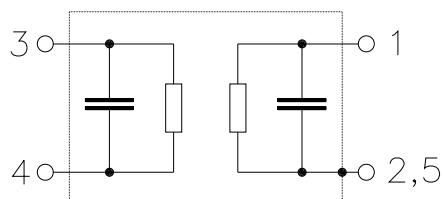
- Ni, gold-plated



Dimensions 2,0x1,4 mm², approx. weight 0,007 g

Pin configuration

- | | |
|------|-------------------|
| 1 | Input, unbalanced |
| 3, 4 | Output, balanced |
| 2, 5 | Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B7840	B39162-B7840-C710	C61157-A7-A82	F61074-V8151-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40/+ 85	°C	824...1525, 1710...2500 MHz elsewhere
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	3	V	
Source power		10		
source 50 Ω , load 100 Ω	P_s	5	dBm	



SAW Components	B7840
Low-Loss Filter	1575,42 MHz

Data Sheet

Characteristics

Operating temperature range:	$T_A = -30 \dots +85 \text{ } ^\circ\text{C}$
Terminating source impedance:	$Z_S = 50 \text{ } \Omega \text{ unbal.}$
Terminating load impedance:	$Z_L = 100 \text{ } \Omega \text{ bal.}$

		min.	typ.	max.	
Nominal frequency	f_N	—	1575,42	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
1574,42MHz ... 1576,42MHz*)		—	1,2	1,6	dB
1574,42MHz ... 1576,42 MHz		—	1,2	1,7	dB
Amplitude ripple in passband (p-p)	$\Delta\alpha$				
1574,42MHz ... 1576,42 MHz		—	0,1	0,3	dB
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)					
1574,42MHz ... 1576,42 MHz		-10	6	10	°
Output amplitude balance (S_{31}/S_{21})					
1574,42MHz ... 1576,42 MHz		-1,0	0,2	1,0	dB
Return loss					
1574,42 ... 1576,42 MHz		11,0	21	—	dB
VSWR					
1574,42 ... 1576,42 MHz		—	1,2	1,8	
Absolute attenuation	α_{rel}				
100,0 MHz ... 960,0 MHz		40	48	—	dB
960,0 MHz ... 1425,0 MHz		35	42	—	dB
1425,0 MHz ... 1475,0 MHz		30	42	—	dB
1475,0 MHz ... 1515,0 MHz		20	32	—	dB
1515,0 MHz ... 1525,0 MHz		17	27	—	dB
1625,0 MHz ... 1635,0 MHz		12	30	—	dB
1635,0 MHz ... 1675,0 MHz		20	30	—	dB
1675,0 MHz ... 1750,0 MHz		30	34	—	dB
1750,0 MHz ... 1805,0 MHz		35	44	—	dB
1805,0 MHz ... 1980,0 MHz		40	47	—	dB
1980,0 MHz ... 2400,0 MHz		35	39	—	dB
2400,0 MHz ... 3155,0 MHz		40	52	—	dB
3155,0 MHz ... 6000,0 MHz		35	44	—	dB

*) $T_A = +25 \text{ } ^\circ\text{C}$



SAW Components

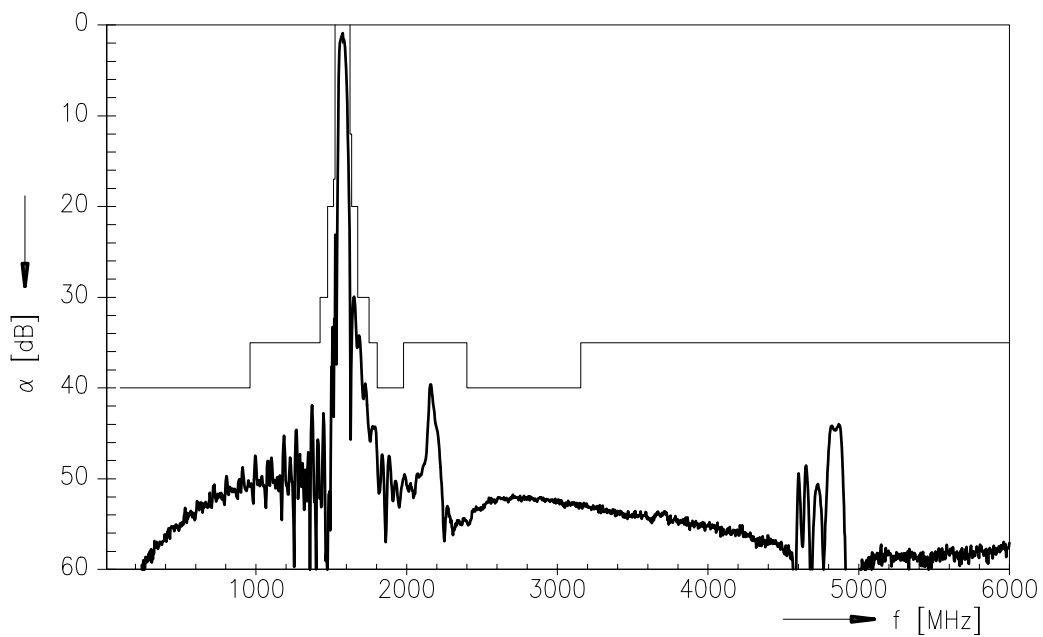
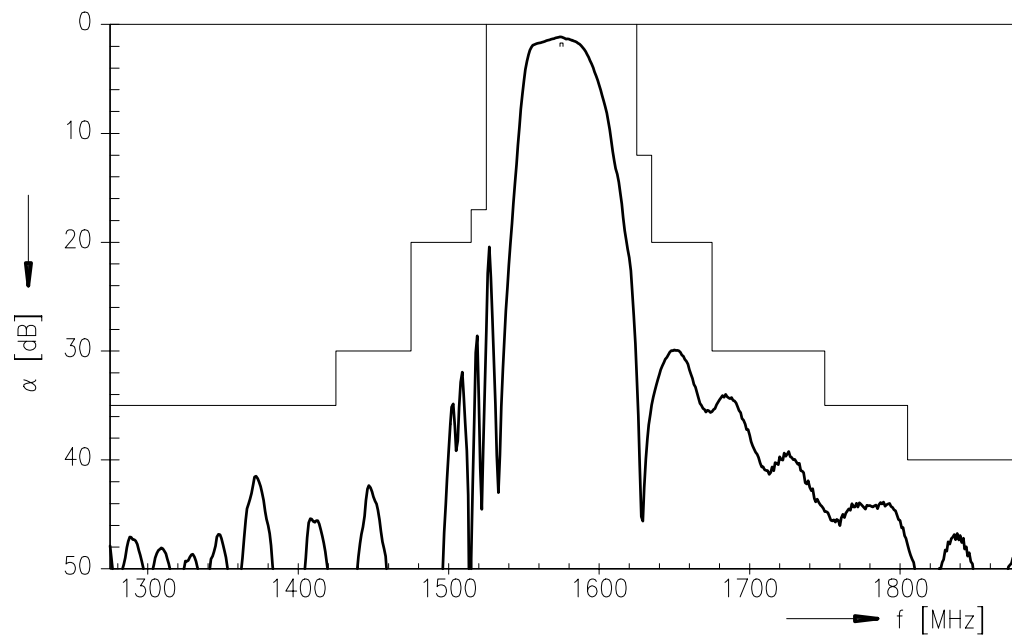
B7840

Low-Loss Filter

1575,42 MHz

Data Sheet

Transfer function





SAW Components

B7840

Low-Loss Filter

1575,42 MHz

Data Sheet

Published by EPCOS AG

SAW MC WT, P.O. Box 80 17 09, 81617 Munich, GERMANY

TEL ++49 89 636 09, FAX ++49 89 636 2 26 89

© EPCOS AG 2002. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.