



SAW Components

Data Sheet B7840

Data Sheet

EPCOS



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B7840

Low-Loss Filter

1575,42 MHz

Data Sheet

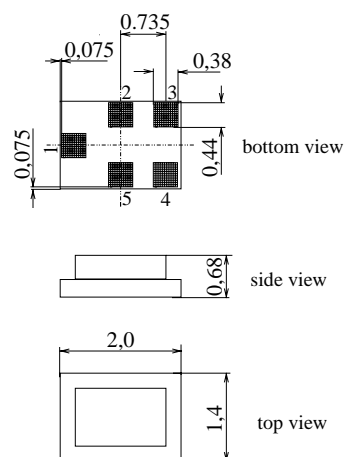
Chip Sized SAW Package

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

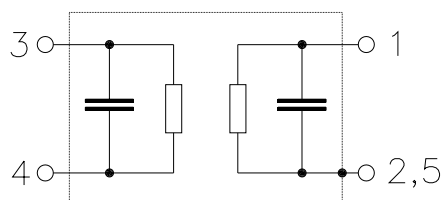
- Ni, gold-plated



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	



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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	α_{\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

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



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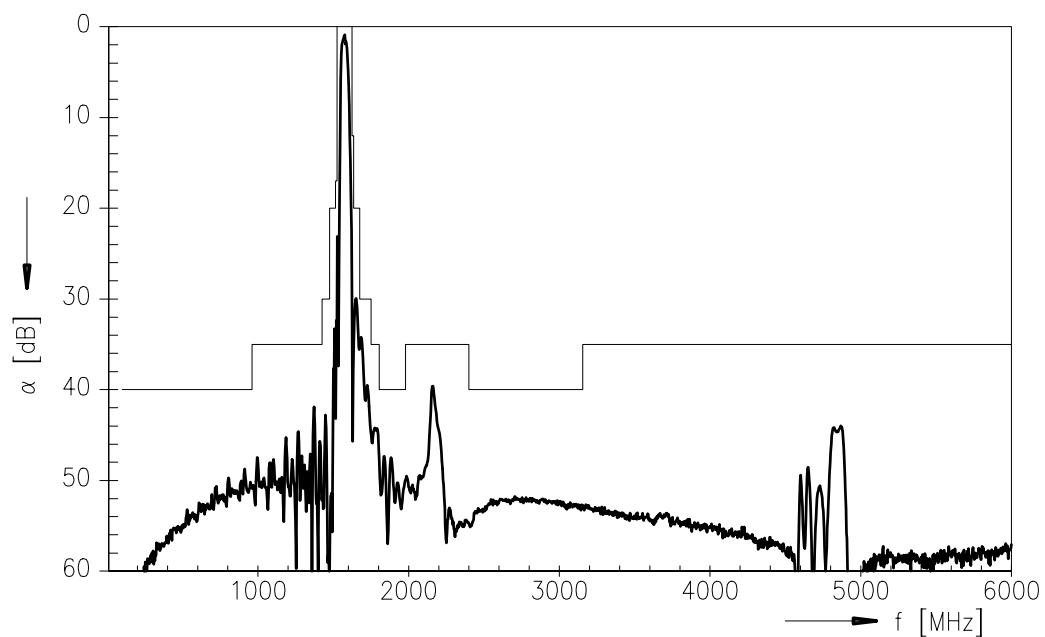
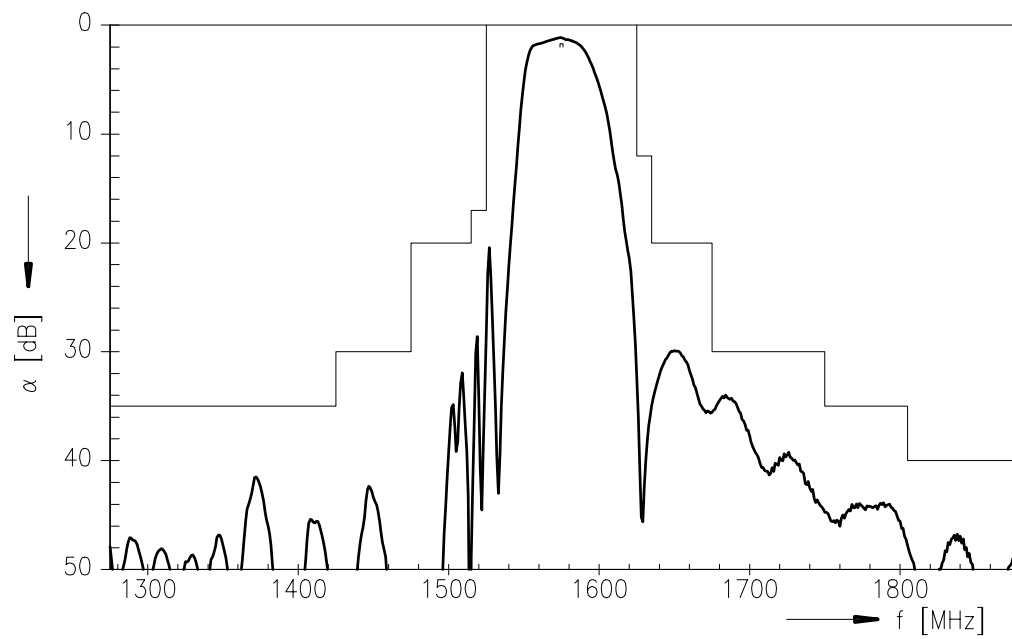
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Transfer function





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

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

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