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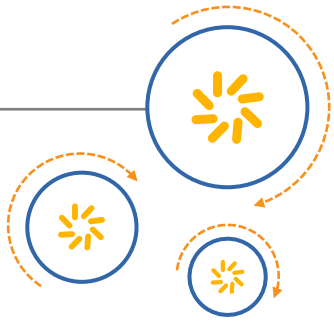

SAW Components

SAW filter

GPS + GALILEO + COMPASS + GLONASS Band

Series/type:	B8828
Ordering code:	B39162B8828P810
Date:	2015
Version:	2.2

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RF360 Europe GmbH, Anzinger Str. 13, München, Germany

SAW Components

SAW filter

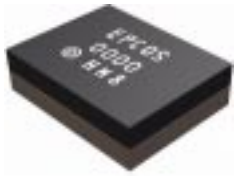
GPS + GALILEO + COMPASS + GLONASS Band

Series/Type:	**B8828**
Ordering code:	**B39162B8828P810**
Date:	2015
Version:	2.2

Design goal SMD

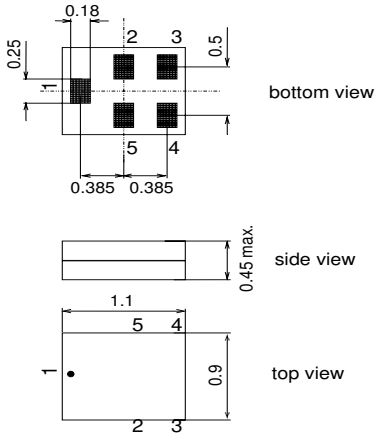
Application

- Low-loss RF GPS + GALILEO + COMPASS + GLONASS filter
- Simultaneous usage of GPS, COMPASS and GLONASS bands
- Usable passbands: 2.0 MHz for GPS, 4.092 MHz for COMPASS and 8.34 MHz for GLONASS
- Very low insertion attenuation
- High out of band selectivity
- Filter impedance 50 Ω
- Unbalanced to unbalanced operation
- No matching network required for operation at 50 Ω



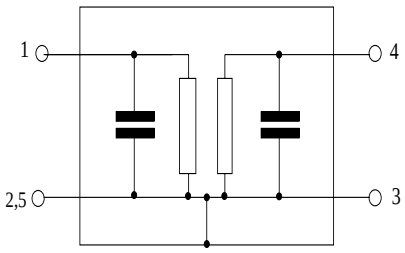
Features

- Package size 1.1 x 0.9 mm²
- Maximum package height 0.45 mm
- RoHS compatible
- Approximate weight 0.0012 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)
- **M**oisture **S**ensitive **L**evel 3 (**MSL3**)



Pin configuration

- 1 Input, unbalanced
- 4 Output, unbalanced
- 2,3,5 To be grounded



Design goal SMD

Characteristics of filter

Temperature range for specification: T = –30 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ. @ 25˚C	max.	
Center frequency	f_C	—	1582.47	—	MHz
Maximum insertion attenuation	α_{max}				
1559.052... 1563.144 MHz		—	1.2	1.5	dB
1574.420... 1576.420 MHz		—	1.0	1.3	dB
1573.370... 1577.470 MHz		—	1.0	1.3	dB
1597.550... 1605.890 MHz		---	1.3	1.6	dB
Input VSWR					
1559.052... 1563.144 MHz		—	1.7	2.0	
1574.420... 1576.420 MHz		—	1.3	1.9	
1573.370... 1577.470 MHz		---	1.3	1.9	
1597.550... 1605.890 MHz		---	1.6	1.9	
Output VSWR					
1559.052... 1563.144 MHz		—	1.7	2.0	
1574.420... 1576.420 MHz		—	1.4	1.9	
1573.370... 1577.470 MHz		---	1.4	1.9	
1597.550... 1605.890 MHz		---	1.6	1.9	
Group Delay ripple [1] (p-p)	$\Delta\tau$				
1597.550... 1605.890 MHz		—	4	12	ns
Attenuation	α				
10.0 ... 960.0 MHz		46	49	—	dB
960.0 ... 1463.0 MHz		40	45	—	dB
1710.0 ... 1785.0 MHz		38	43	—	dB
1785.0 ... 1990.0 MHz		39	46	—	dB
1990.0 ... 2280.0 MHz		38	41	—	dB
2280.0 ... 2400.0 MHz		47	52	—	dB
2400.0 ... 2500.0 MHz		48	52	—	dB
2500.0 ... 2700.0 MHz		47	50	—	dB
2700.0 ... 3000.0 MHz		42	46	—	dB
3000.0 ... 6000.0 MHz		27	38	—	dB

[1] Measured with an aperture of 2 MHz

Maximum ratings

Storage temperature range	T_{stg}	–40/+85 [1]	˚C	
DC voltage	V_{DC}	5 [2]	V	
ESD voltage	V_{ESD}	50 [3]	V	machine model, 10 pulse
Input Power (5000h, 50˚C)				
777 to 915 MHz	P_{IN}	25	dBm	1/8 duty cycle, effective power in the on-state
1710 to 1710 MHz	P_{IN}	15	dBm	1/8 duty cycle, effective power in the on-state

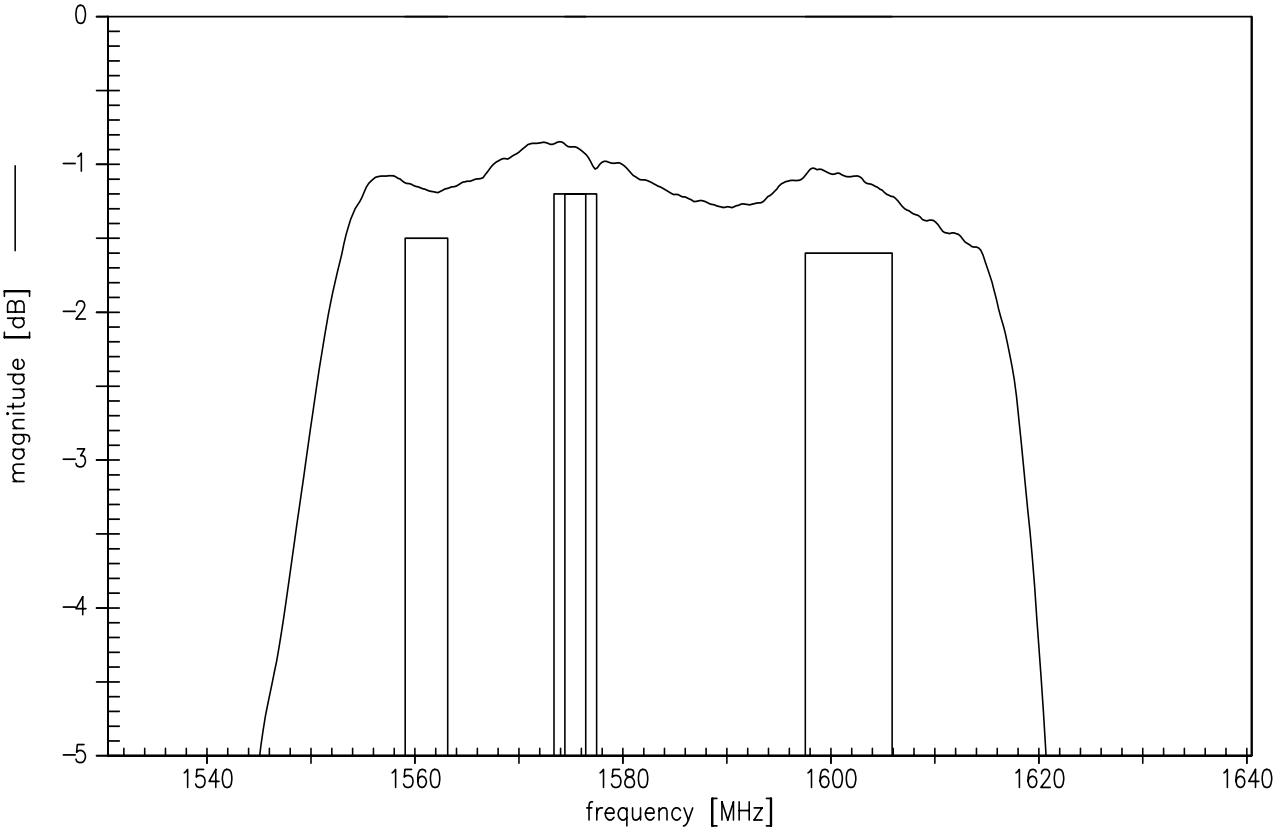
[1] extended upperlimit: 168@125˚C acc. to IEC 60068-202 Bb

[2] 168h Damp Heat Steady State acc. to IEC60068-2-67 Cy.

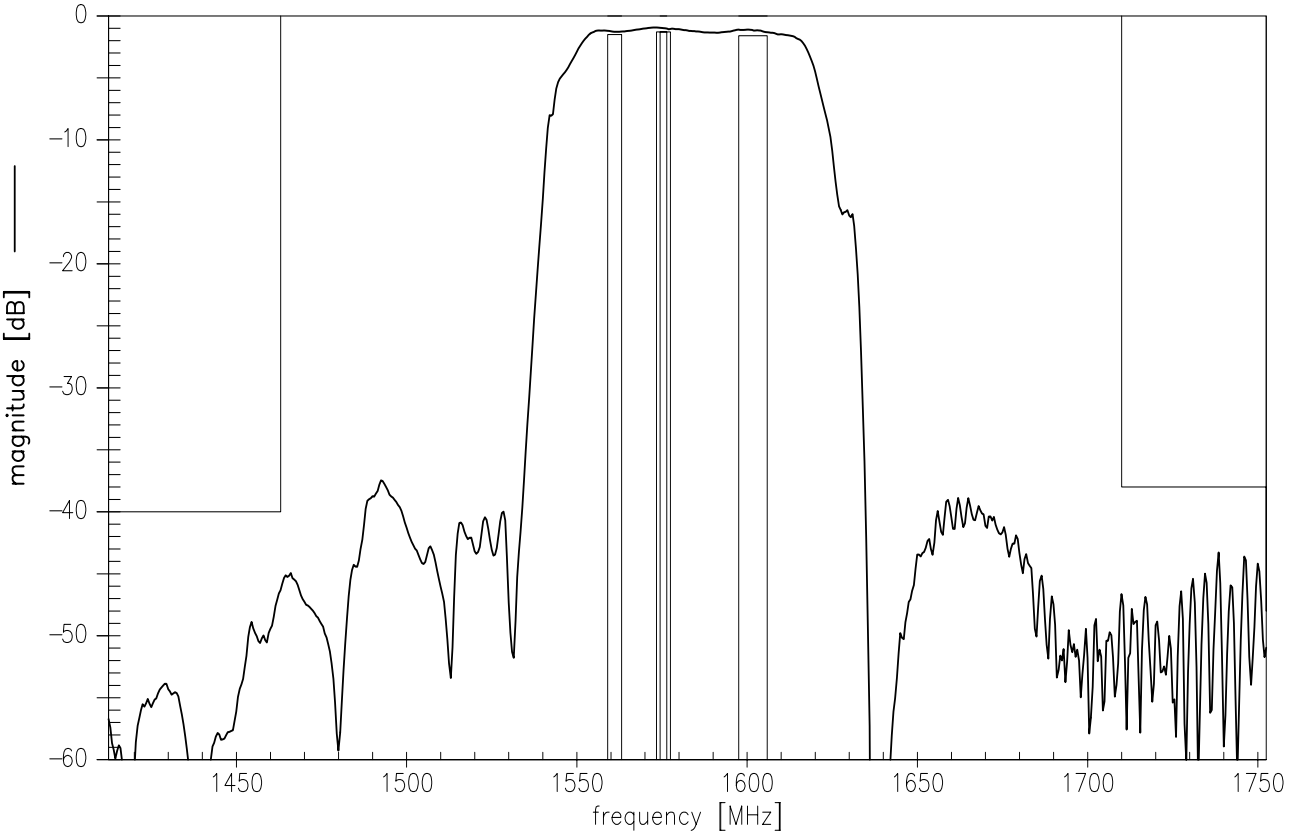
[3] acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.

Design goal SMD

Transfer function passband



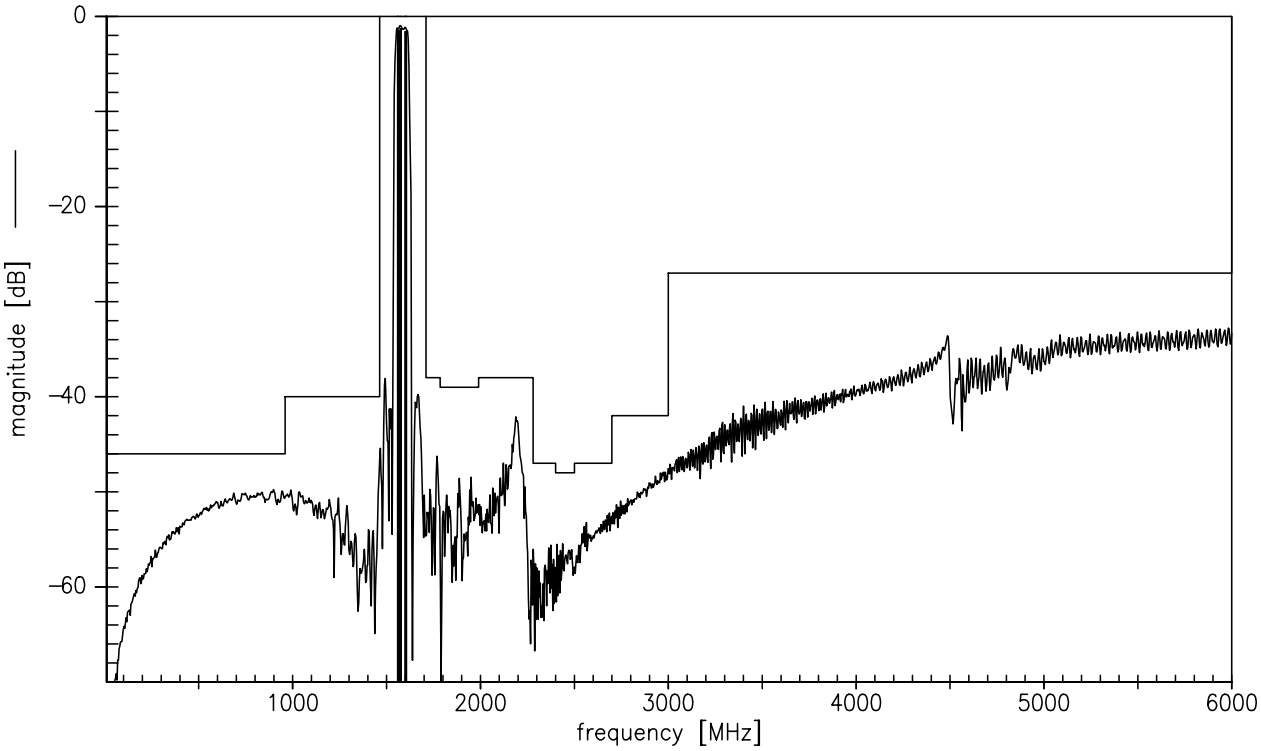
Transfer function narrowband



Design goal

SMD

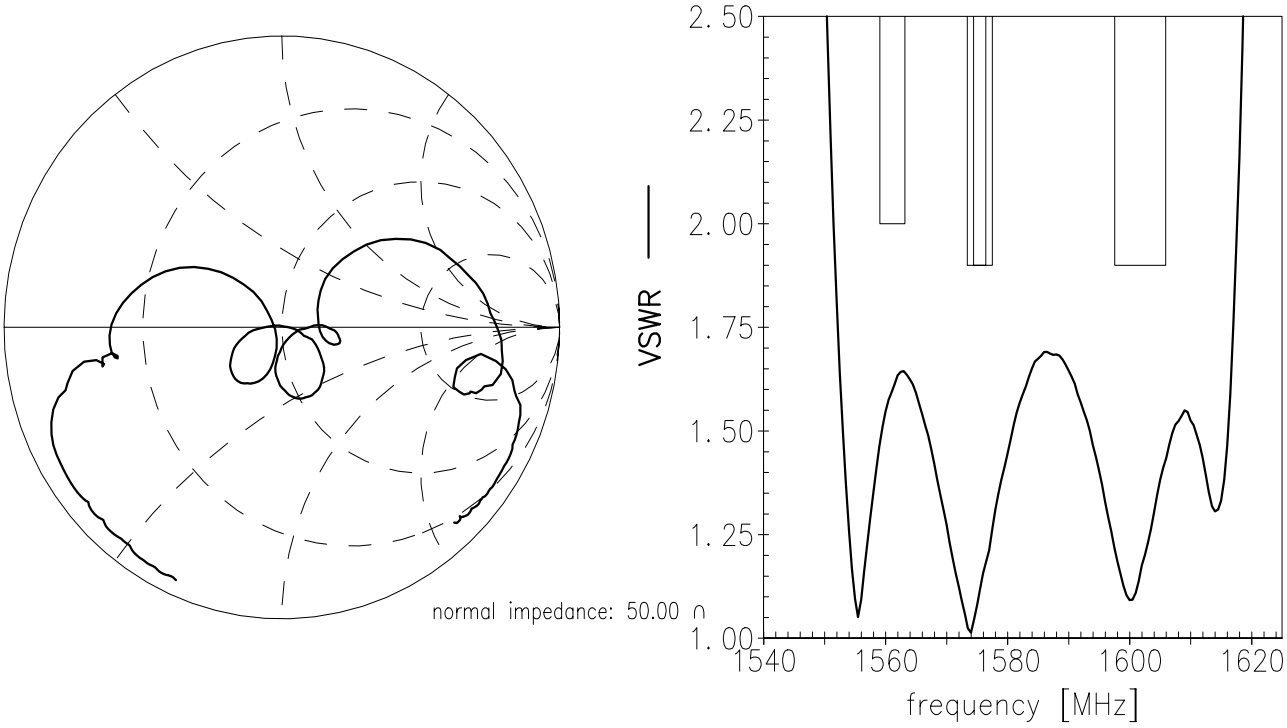
Transfer function passband



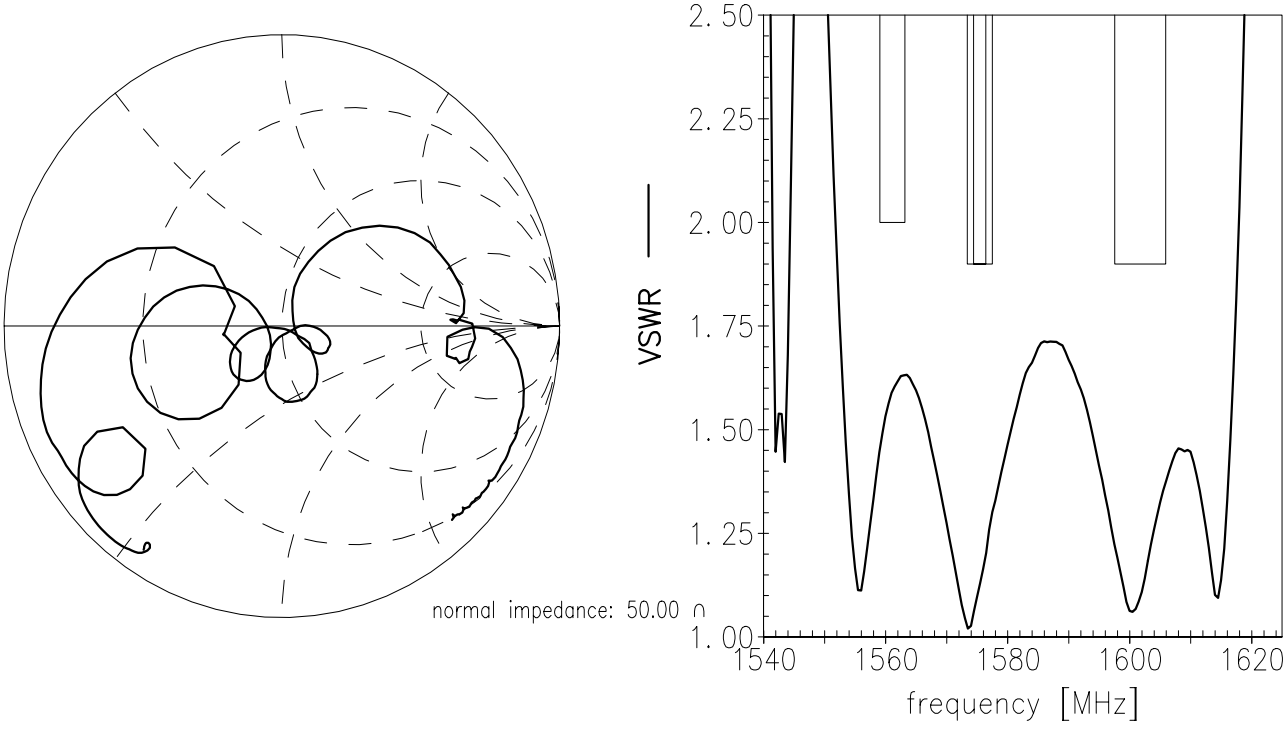
Design goal SMD

Smith chart / VSWR

S_{11} function



S_{22} function



Design goal SMD

References

Type	B8828
Ordering code	B39162B8828P810
Marking and package	C61157-A8-A30
Packaging	F61074-V8255-Z000
Date codes	L_1126
S-parameters	B8828_NB.s2p, B8828_WB.s2p see file header for port/pin assignment table
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
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