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RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW filter

GPS + GALILEO + COMPASS + GLONASS Band

Series/type: B8828 Ordering code: B39162B8828P810

Date: Version: 2015

2.2

sion:

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SAW Components

SAW filter GPS + GALILEO + COMPASS + GLONASS Band

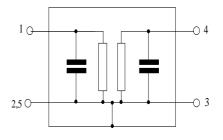
Series/Type:	B8828
Ordering code:	B39162B8828P810
Date:	2015
Version:	2.2

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SAW Components		B8828
Low-Loss Filter for Mobile Co	mmunication	1582.47 MHz
Design goal	SMD	
Application		
 Low-loss RF GPS + GALIL + GLONASS filter Simultaneous usage of GPS, CONASS bands Usable passbands: 2.0 MHz for COMPASS and 8.34 MHz for GI Very low insertion attenuation High out of band selectivity Filter impedance 50 Ω Unbalanced to unbalanced oper No matching network required for 	DMPASS and GLO- GPS, 4.092 MHz for LONASS ation	19785 19785 1978 1978 1978 1978 1978 1978 1978 1978
 Features Package size 1.1 x 0.9 mm² Maximum package height 0.45 r RoHS compatible Approximate weight 0.0012 g Package for Surface Mount Tecl Ni, gold-plated terminals Electrostatic Sensitive Device (E Moisture Sensitive Level 3 (MSL 	nnology (SMT) S D)	bottom view 1.1 5 1.1 5 5 1.1 5 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 5 1.1 1.1 5 1.1

Pin configuration

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



Terminating source impedance: Terminating load impedance:

Temperature range for specification:

Low-Loss Filter for Mobile Communication

1559.052... 1563.144 MHz

1574.420... 1576.420 MHz

1573.370... 1577.470 MHz

1559.052... 1563.144 MHz

1574.420... 1576.420 MHz

1573.370... 1577.470 MHz

1597.550... 1605.890 MHz

1559.052... 1563.144 MHz

SAW Components

Characteristics of filter

Design goal

Center frequency		
Maximum insertion attenuation		

	1597.550	1605.890	MHz
Input VSWR			

Output VSWR

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
Attenuation a			
10.0 960.0 MHz	46	49	
960.0 1463.0 MHz	40	45	
1710.0 1785.0 MHz	38	43	
1785.0 1990.0 MHz	39	46	
1990.0 2280.0 MHz	38	41	
2280.0 2400.0 MHz	47	52	
2400.0 2500.0 MHz	48	52	
2500.0 2700.0 MHz	47	50	
2700.0 3000.0 MHz	42	46	
3000.0 6000.0 MHz	27	38	—

1) Measured with an aperture of 2 MHz

$Z_{\rm S}$	=	50 9
7		ΕO

f_C

 α_{max}

Т

SMD

Ω 50 Ω $Z_{I} =$

= -30 °C to +85 °C

min.

February 09, 2015

3

typ.

@ 25°C

1582.47

1.2

1.0

1.0

1.3

1.7

1.3

1.3

1.6

1.7

max.

1.5

1.3

1.3

1.6

2.0

1.9

1.9

1.9

2.0

1582.47 MHz

MHz

dB

dB

dB

dB

ns

dB dB dB dB dB dB dB dB dB dB

B8828

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,
	' IN	.0	a Din	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.

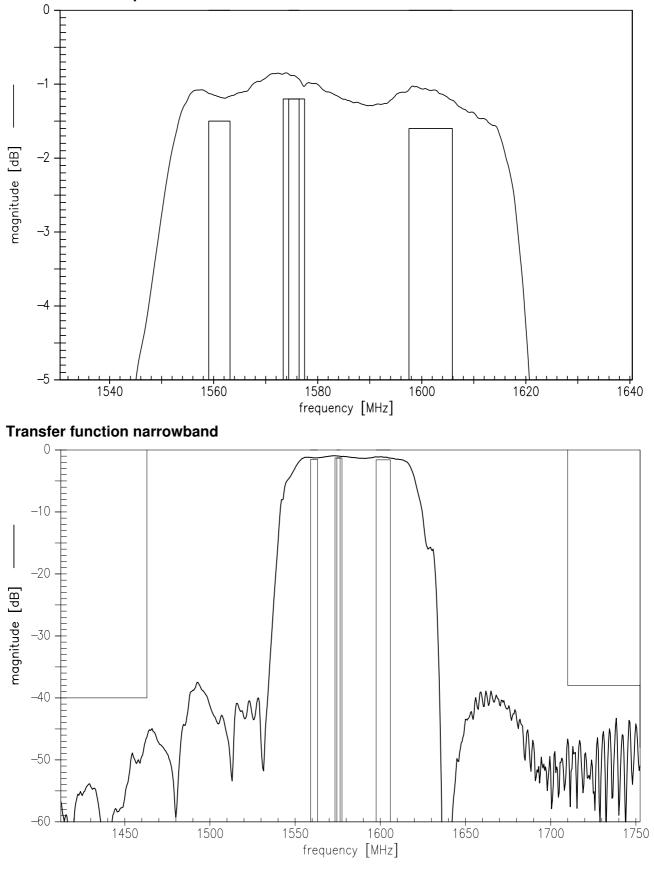
 $^{3)}\,$ acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.

SAW Components	B8828
Low-Loss Filter for Mobile Communication	1582.47 MHz

SMD

Design goal

Transfer function passband



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B8828

SAW Components

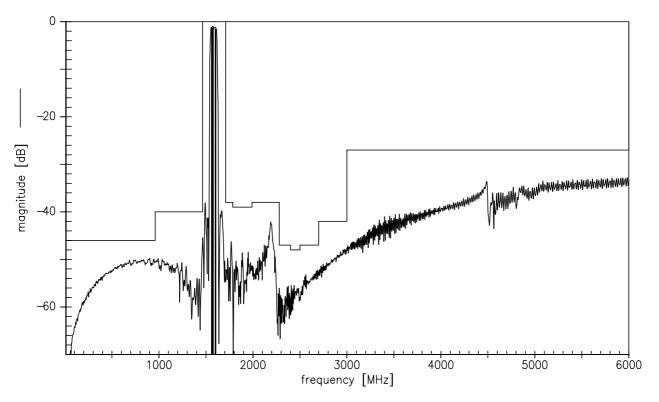
Low-Loss Filter for Mobile Communication

1582.47 MHz

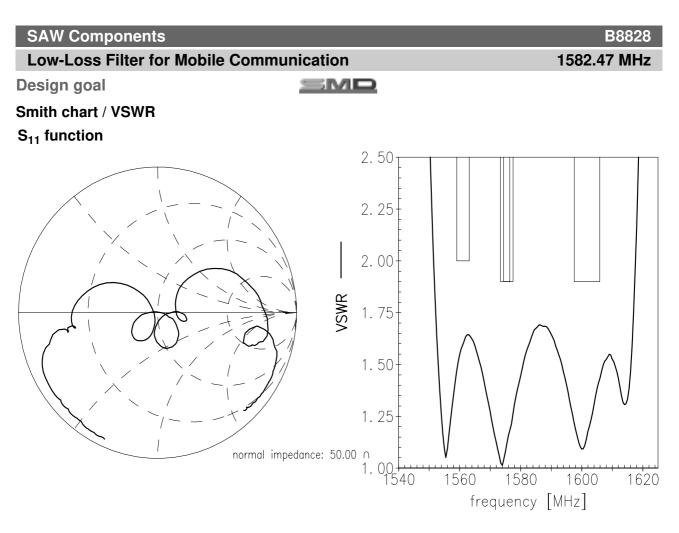
Design goal

SMD

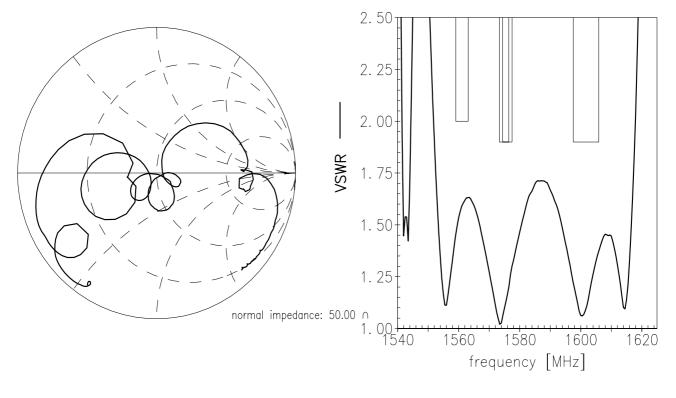
Transfer function passband



②TDK



S₂₂ function



Please read *cautions and warnings and important notes* at the end of this document.

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SAW Components

Low-Loss Filter for Mobile Communication

1582.47 MHz

Design goal

References

Туре	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 8 th , 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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Matching coils	See Inductor pdf-catalog <u>http://www.tdk.co.jp/tefe02/coil.htm#aname1</u> and Data Library for circuit simulation <u>http://www.tdk.co.jp/etvcl/index.htm</u>

SMD

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Published by EPCOS AG Surface Acoustic Wave Components Division P.O. Box 80 17 09, 81617 Munich, GERMANY

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