RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW Diversity Rx Filter

WCDMA Band 25

Series/type:	B8823
Ordering code:	B39202B8823P810
DCN:	80-PA243-18 Rev. A
Date:	February 3, 2017
Version:	2.0

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SAW Diversity Rx Filter

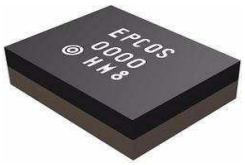
WCDMA Band 25

Series/type:	**B8823**
Ordering code:	**B39202B8823P810**
Date:	Feb 25, 2014
Version:	2.0

Data sheet SMD

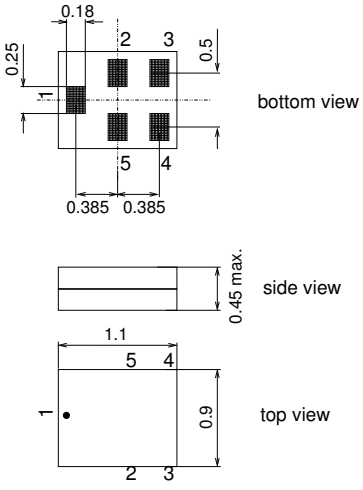
Application

- Low-loss RF filter for mobile telephone WCDMA Band 25 systems (diversity) receive path (Rx)
- Useable for diversity application
- Unbalanced to balanced operation
- Low amplitude ripple
- Useable passband: 65 MHz
- Impedance transformation from 50 Ω to 100 Ω
- Suitable for GPRS class 1 to 12



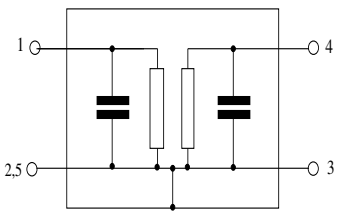
Features

- Package size 1.1 x 0.9 mm²
- Max. package height 0.45 mm
- RoHS compatible
- Approx. weight 0.001g
- 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



Pin configuration

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



Data sheet SMD

Characteristics

Temperature range for specification: T = –30 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 100 Ω || 33nH

		min.	typ. @ 25˚C	max.	
Center frequency	f_C	—	1962.5	—	MHz
Average insertion attenuation	α				
1930.0 ... 1995.0MHz		—	1.8[1)]	—	dB
Maximum insertion attenuation	α_{max}				
1930.0 ... 1995.0MHz		—	2.5	4.6	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1930.0 ... 1995.0MHz		—	1.2	3.3	dB
Error Vector Magnitude	EVM[2)]				
@$f_{carrier}$ 1932.4 ... 1992.6MHz		—	3.0	4.5	%
Input VSWR					
1930.0 ... 1995.0MHz		—	1.9	2.3	
Output VSWR					
1930.0 ... 1995.0MHz		—	2.1	2.5	
CMRR ($\|S_{21}-S_{31}\| / \|S_{21}+S_{31}\|$)					
1930.0 ... 1995.0MHz		20	25	—	dB
Attenuation	α				
10.0 ... 1850.0MHz		45	50	—	dB
1850.0 ... 1910.0MHz		40	46	—	dB
1910.0 ... 1915.0MHz		12	44	—	dB
2055.0 ... 2400.0MHz		43	47	—	dB
2400.0 ... 2484.0MHz		56	62	—	dB
2484.0 ... 6000.0MHz		40	45	—	dB

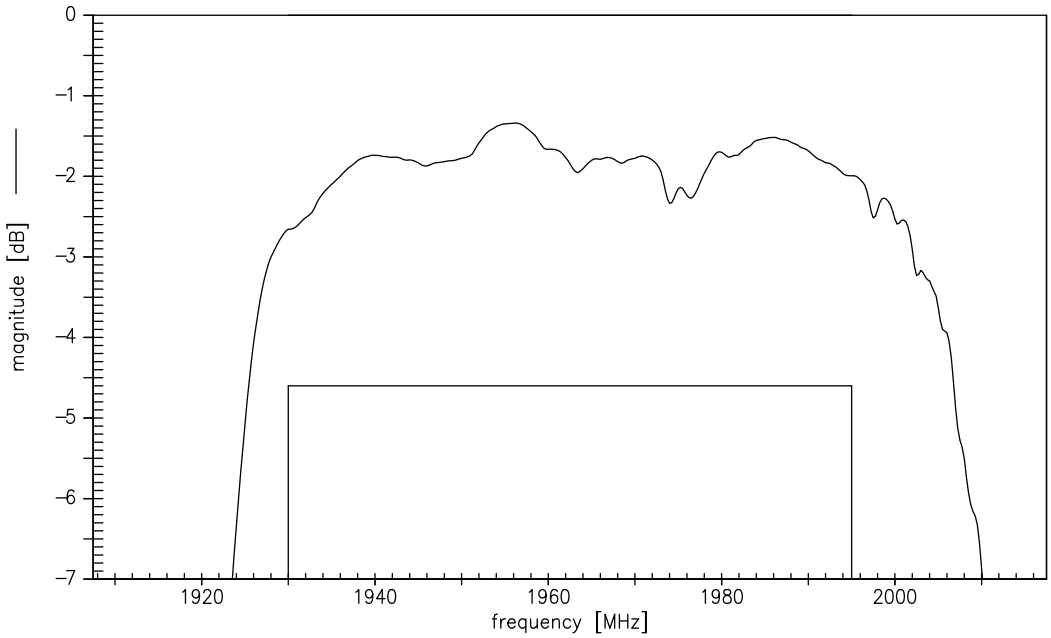
1) Average value of the parameter over the indicated band. The average value may vary over time.
2) Error Vector Magnitude (EVM) based on definition given in 3GPP TS 25.141.

Maximum ratings

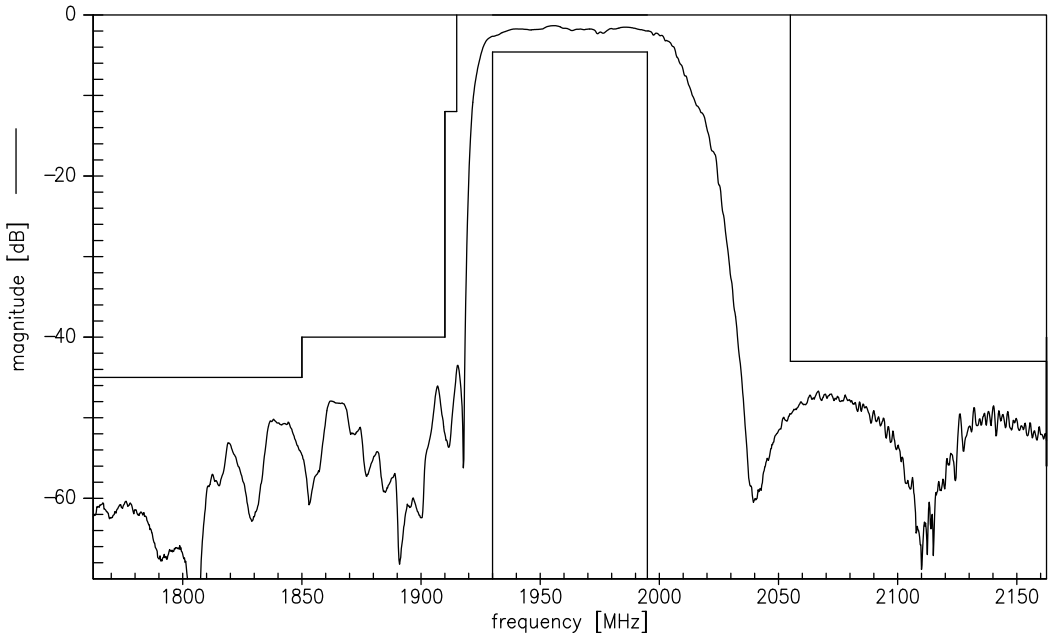
Storage temperature range	T_{stg}	–40/+85[1)]	˚C	
DC voltage	V_{DC}	5[2)]	V	
ESD voltage	V_{ESD}	50[3)]	V	Machine Model
Input Power at 1850.0 ... 1915.0MHz	P_{IN}	21	dBm	CW signal for 2000h at T = 55 ˚C

1) extended upperlimit: 96h@125˚C acc. to IEC 60068-2-2 Bb
2) 168h Damp Heat Steady State acc. to IEC 60068-2-67 Cy
3) acc. to JESD22-A115B (MM - Machine Model), 10 negative & 10 positive pulses

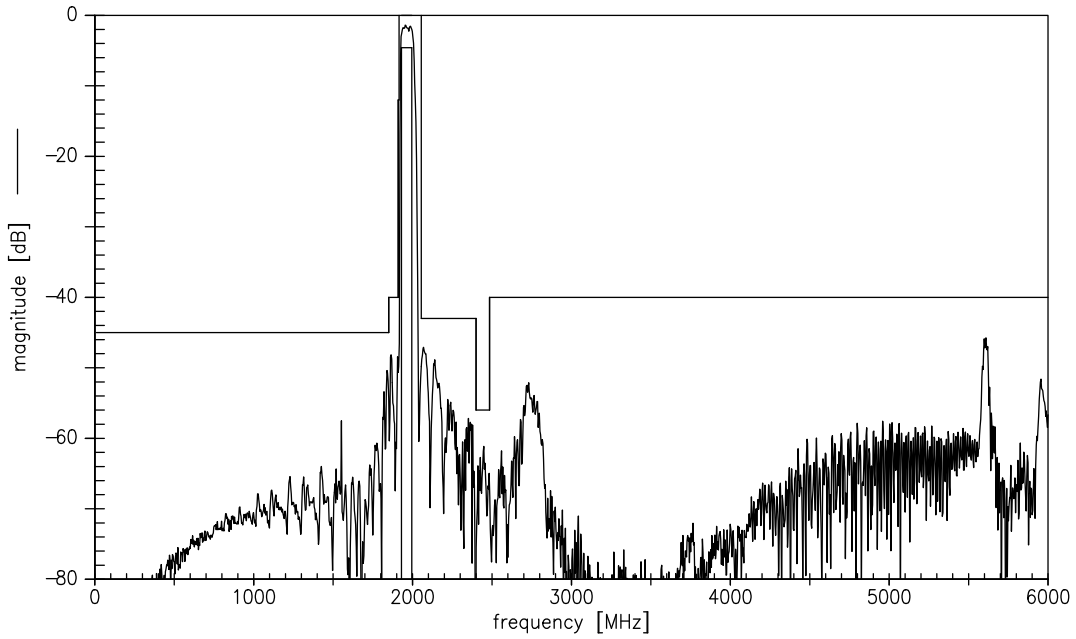
Transfer function (passband)



Transfer function (narrowband)

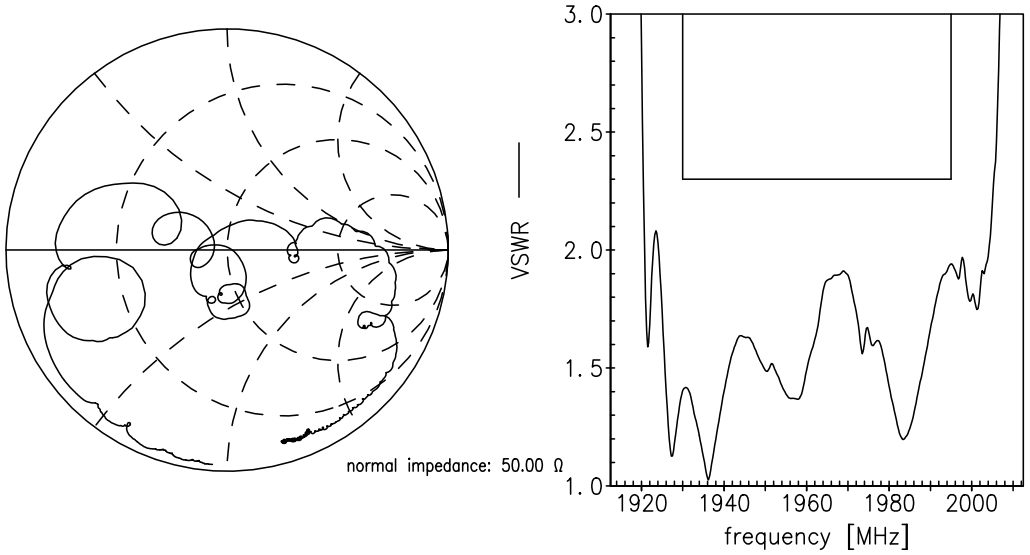


Transfer function (wideband)

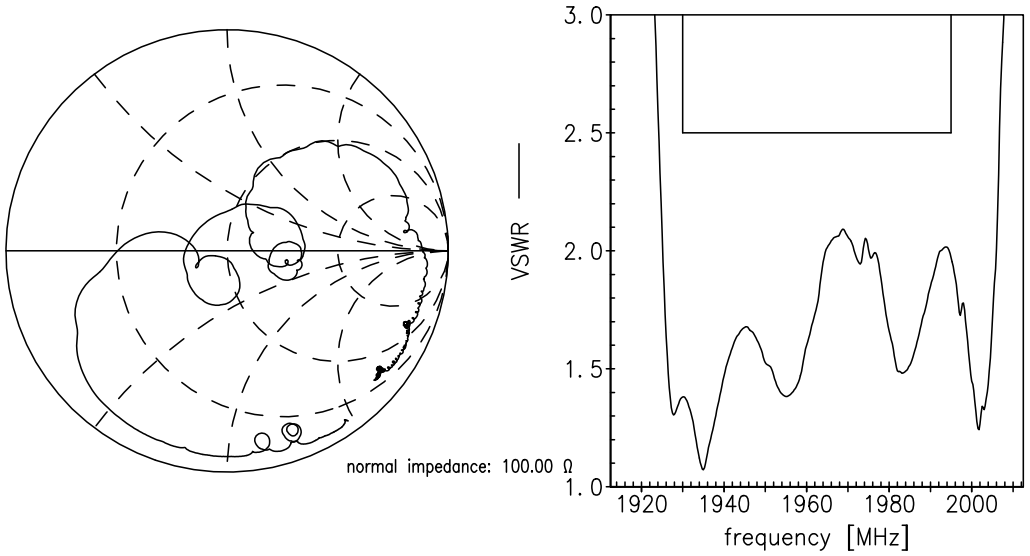


Smith Charts

S_{11} function



S_{22} function



References

Type	B8823
Ordering code	B39202B8823P810
Marking and package	C61157-A8-A56
Packaging	F61074-V8255-Z000
Date codes	L_1126
S-parameters	B8823_NB_UN.s3p, B8823_WB_UN.s3p 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.
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
Matching coils	See http://www.tdk.co.jp/tefe02/coil.htm#aname1 http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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