

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

SAW Components

SAW Filter

BC10 UpLink Filter

Series/type:	B8304
Ordering code:	B39831B8304P810
Date:	September 11,2012
Version:	2.1

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SAW Components

SAW Filter

BC10 UpLink Filter

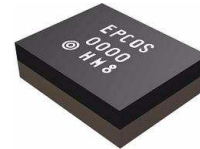
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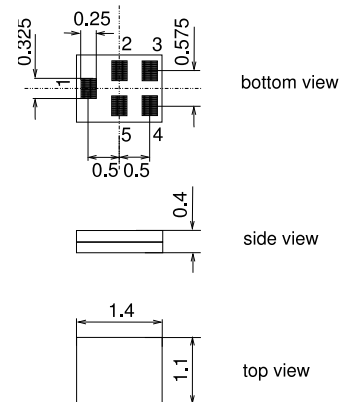
EPCOS AG is a TDK Group Company.


Application

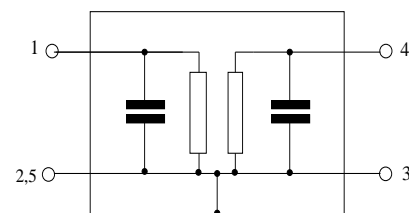
- Low-loss filter for CDMA smallcells applications.
- Unbalanced operation (50 Ohm)
- Low insertion attenuation
- High Rx suppression
- Useable passband 32 MHz


Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**


Pin configuration

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



Data sheet

Characteristics

Temperature range for specification: $T = -30\text{ }^{\circ}\text{C to }+85\text{ }^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

				min.	typ. @ 25°C	max.	
Center frequency	f_C			—	833.0	—	MHz
Maximum insertion attenuation	α_{\max}						
		817.0 ... 849.0	MHz	—	2.3	3.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$						
		817.0 ... 849.0	MHz	—	1.2	2.5	dB
Input VSWR							
		817.0 ... 849.0	MHz	—	1.9	2.2	
Output VSWR							
		817.0 ... 849.0	MHz	—	1.9	2.2	
Attenuation	α						
		50 ... 800.0	MHz	30	43	—	dB
		855.5 ... 862.0	MHz	2	8	—	dB
		862.0 ... 894.0	MHz	33	37	—	dB
		1574.42 ... 1576.42	MHz	35	47	—	dB
		1624.0 ... 1708.0	MHz	30	44	—	dB
		1930.0 ... 1990.0	MHz	35	39	—	dB
		2110.0 ... 2170.0	MHz	32	38	—	dB
		2441.0 ... 2557.0	MHz	20	36	—	dB
		3258.0 ... 3406.0	MHz	20	33	—	dB
		3500.0 ... 6000.0	MHz	20	26	—	dB

Maximum ratings

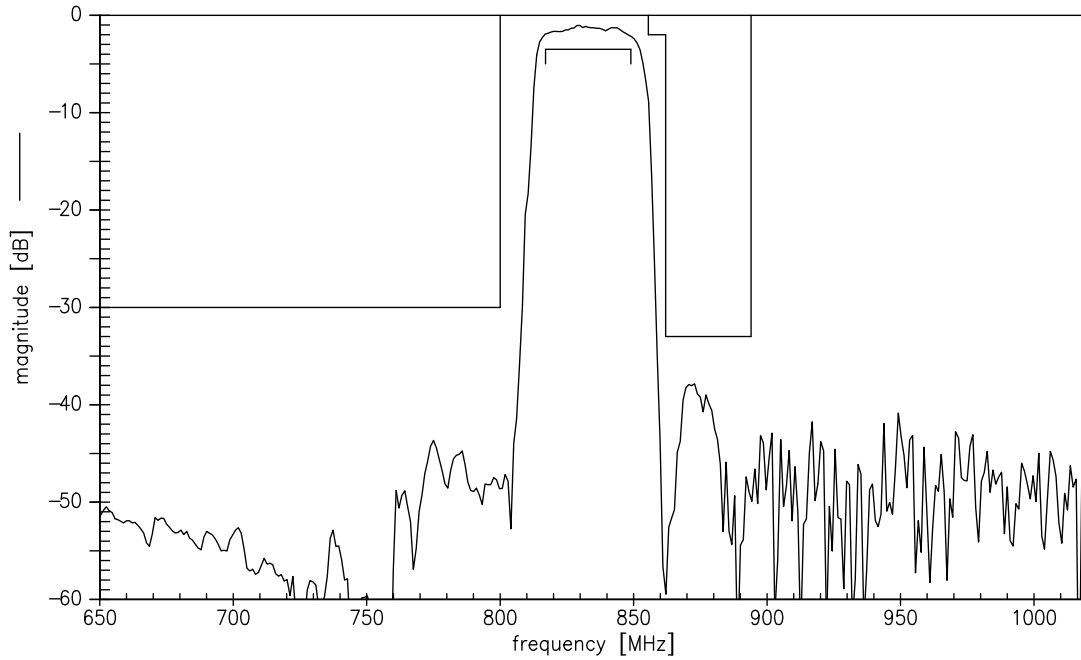
Operable temperature range	T	-30/+85	°C	
Storage temperature range	T_{stg}	-40/+85	°C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input Power	P_{IN}	13	dBm	cw signal

¹⁾ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.

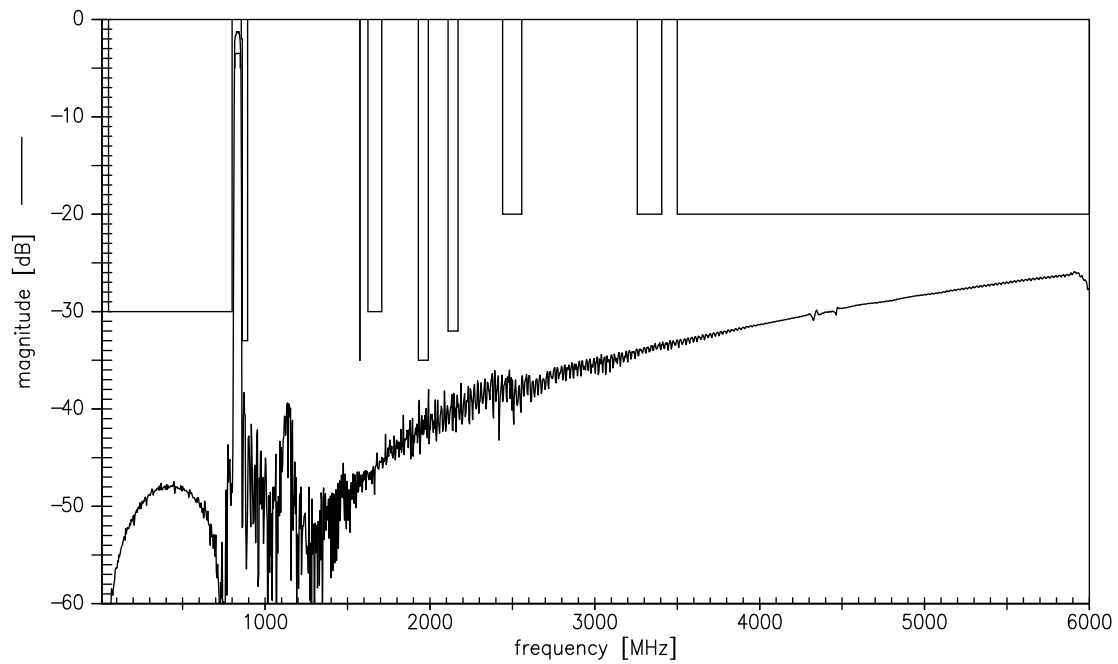
Data sheet



Transfer function (narrowband)



Transfer function (wideband)



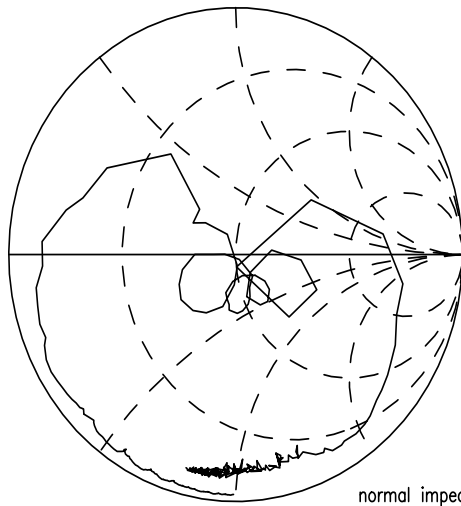
Please read *cautions and warnings* and *important notes* at the end of this document.

Data sheet

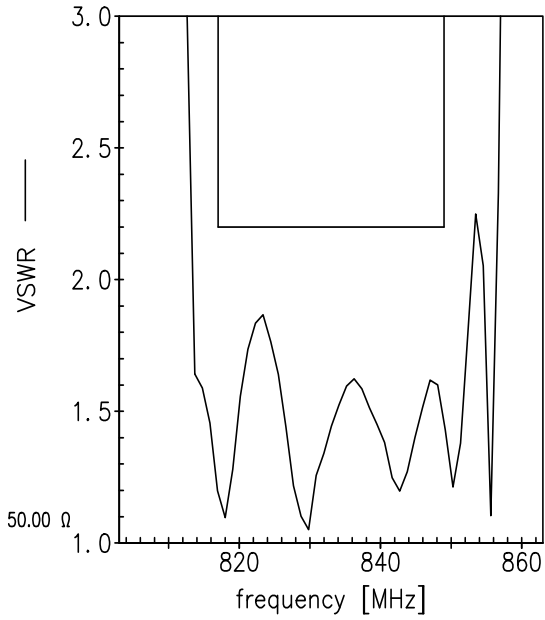


Smith Charts

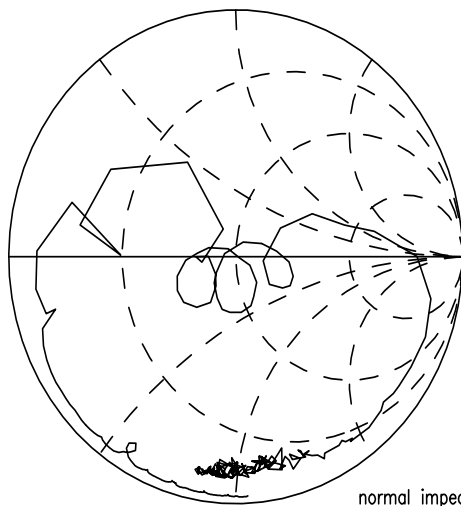
S₁₁ function



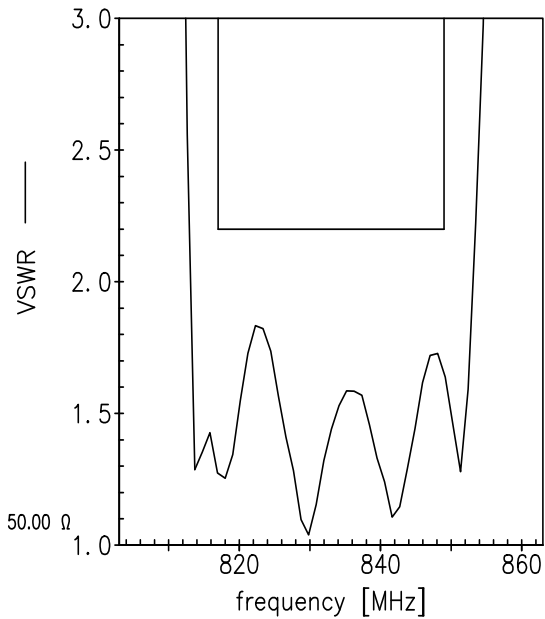
normal impedance: 50.00 Ω



S₂₂ function



normal impedance: 50.00 Ω



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SAW Components	B8304
SAW Filter	833.0 MHz

Data sheet



References

Type	B8304
Ordering code	B39831B8304P810
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B8304_NB.s2p, B8304_WB.s2p see file header for port/pin assignment table
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation 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 .

Published by EPCOS AG
Systems, Acoustics, Waves Business Group
P.O. Box 80 17 09, 81617 Munich, GERMANY

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

6 September 11,2012

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