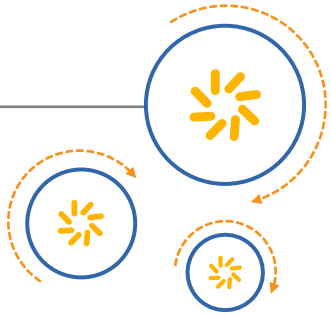
RF360 Europe GmbH

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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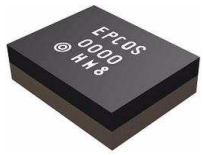
EPCOS AG is a TDK Group Company.

Data sheet SMD

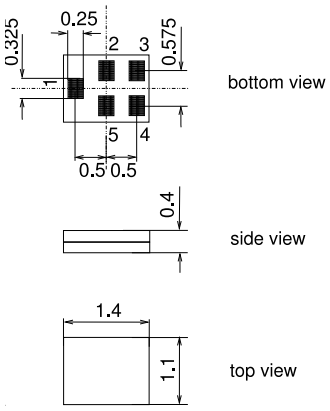
Application

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



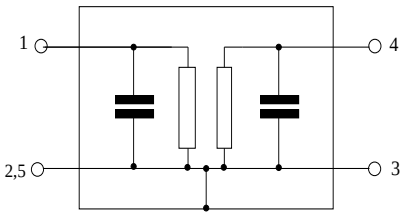
Features

- Package size 1.4 x 1.1 x 0.4 mm^3
- RoHS compatible
- Approximate weight 0.003 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



Pin configuration

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



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 = 50 Ω

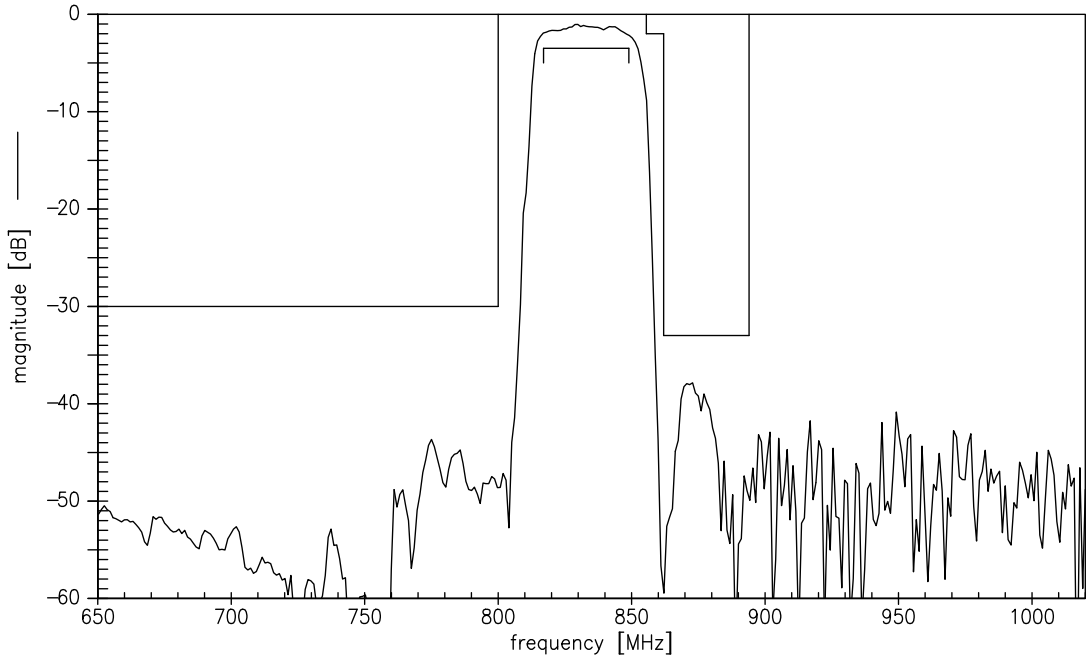
		min.	typ. @ 25˚C	max.	
Center frequency	f_C	—	833.0	—	MHz
Maximum insertion attenuation	α_{max}				
817.0 ... 849.0 MHz		—	2.3	3.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
817.0 ... 849.0 MHz		—	1.2	2.5	dB
Input VSWR					
817.0 ... 849.0 MHz		—	1.9	2.2	
Output VSWR					
817.0 ... 849.0 MHz		—	1.9	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

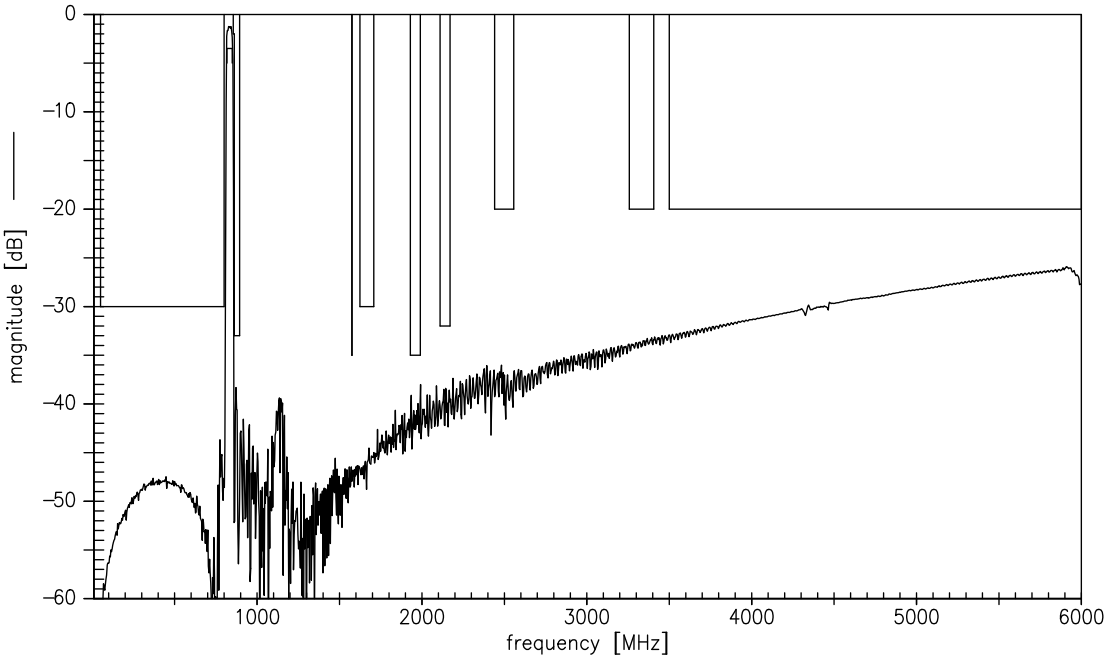
Operable temperature range	T	–30/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 10 pulses
Input Power	P_{IN}	13	dBm	cw signal

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

Transfer function (narrowband)

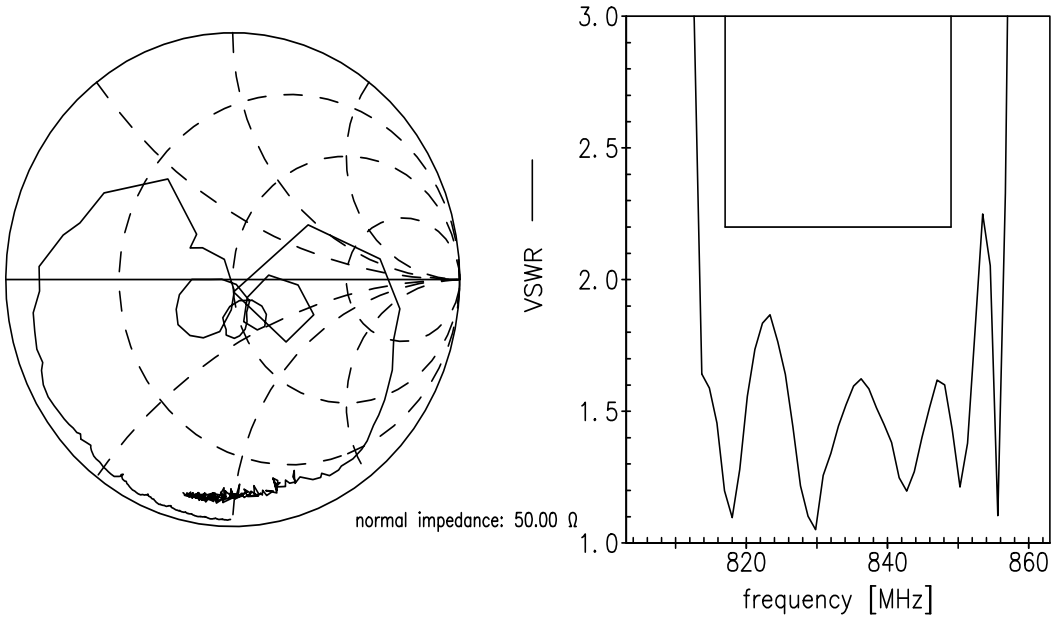


Transfer function (wideband)

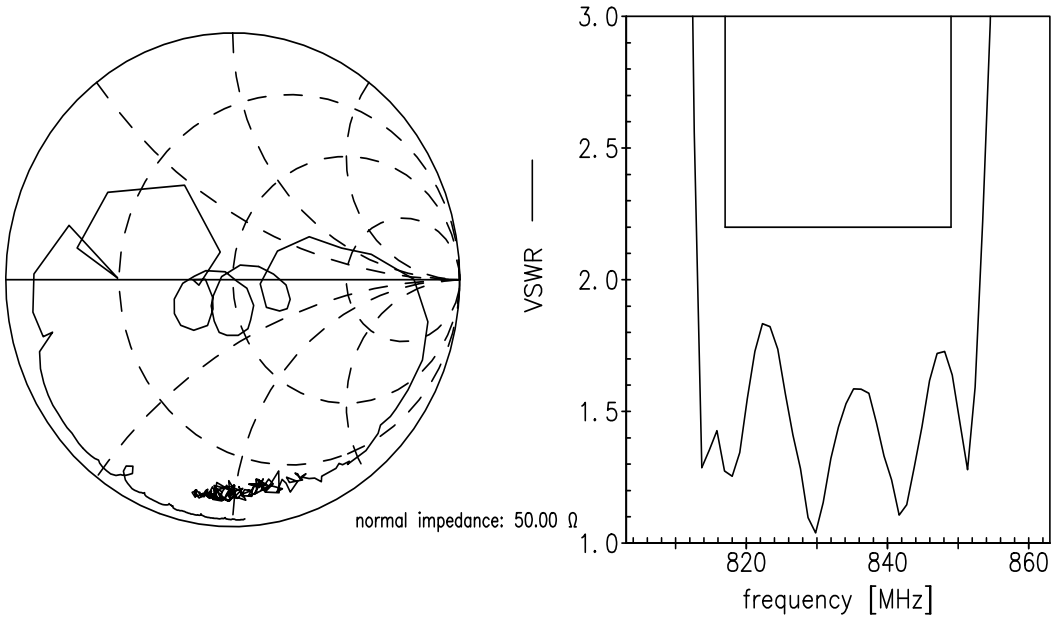


Smith Charts

S_{11} function



S_{22} function



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 .

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