SAW Components

SAW Diversity filter

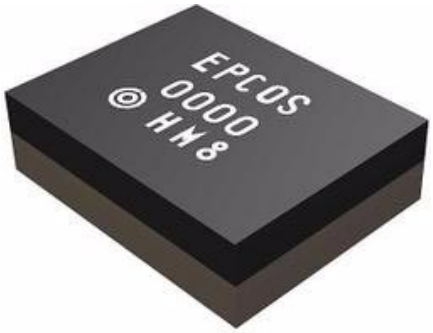
LTE Band 20

Series/type:	**B8302**
Ordering code:	**B39811B8302P810**
Date:	June 27, 2012
Version:	2.0

EPCOS AG is a TDK Group Company.

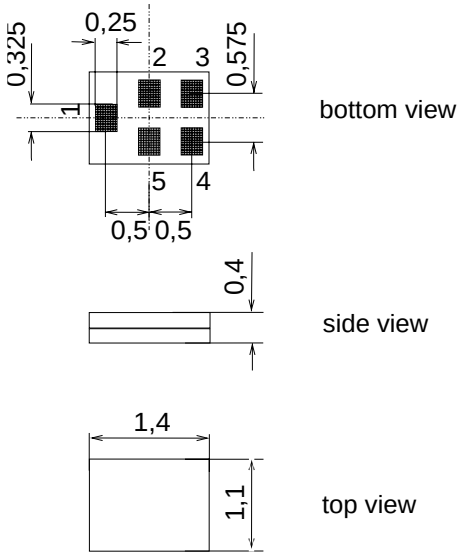
Application

- Low Loss RF filter for LTE band 20, RX path
- Usable band width 30 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 100 Ω
- Very small size and low height



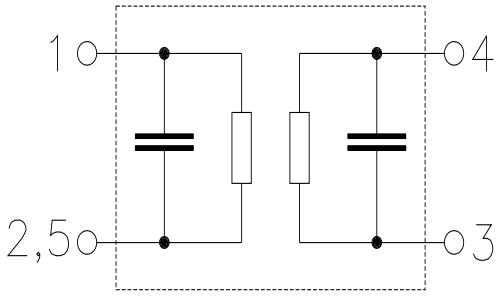
Features

- Package size 1.4 x 1.1 mm², package height 0.4 mm
- RoHS compatible
- Approx. 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**ensitivity **L**evel 3



Pin configuration

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



Data sheet SMD

Characteristics

Temperature range for specification: T = –20 ˚C to 85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 100 Ω || 56 nH

		min.	typ. @ 25 ˚C	max.	
Nominal frequency	f_N	—	806.0	—	MHz
Maximum insertion attenuation	α_{max}				
791.25 ... 820.75 MHz		—	2.6	3.9	dB
@$f_{Carrier}$ 793.50 ... 818.50 MHz	α_{LTE} [1]	—	2.3	2.9	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
791.25 ... 820.75 MHz		—	1.5	2.8	dB
@$f_{Carrier}$ 793.50 ... 818.50 MHz	α_{LTE} [1]	—	0.8	1.5	dB
Input VSWR					
791.25 ... 820.75 MHz		—	1.9	2.2	
Output VSWR					
791.25 ... 820.75 MHz		—	1.9	2.2	
Common mode rejection ratio					
791.25 ... 820.75 MHz		25	30	—	dB
Absolute attenuation	α				
0.3 ... 770.0MHz		40.0	46	—	dB
832.25 ... 861.75MHz		40.0	43	—	dB
862.0 ... 4000.0MHz		40.0	55	—	dB
4000.0 ... 6000.0MHz		30.0	50	—	dB

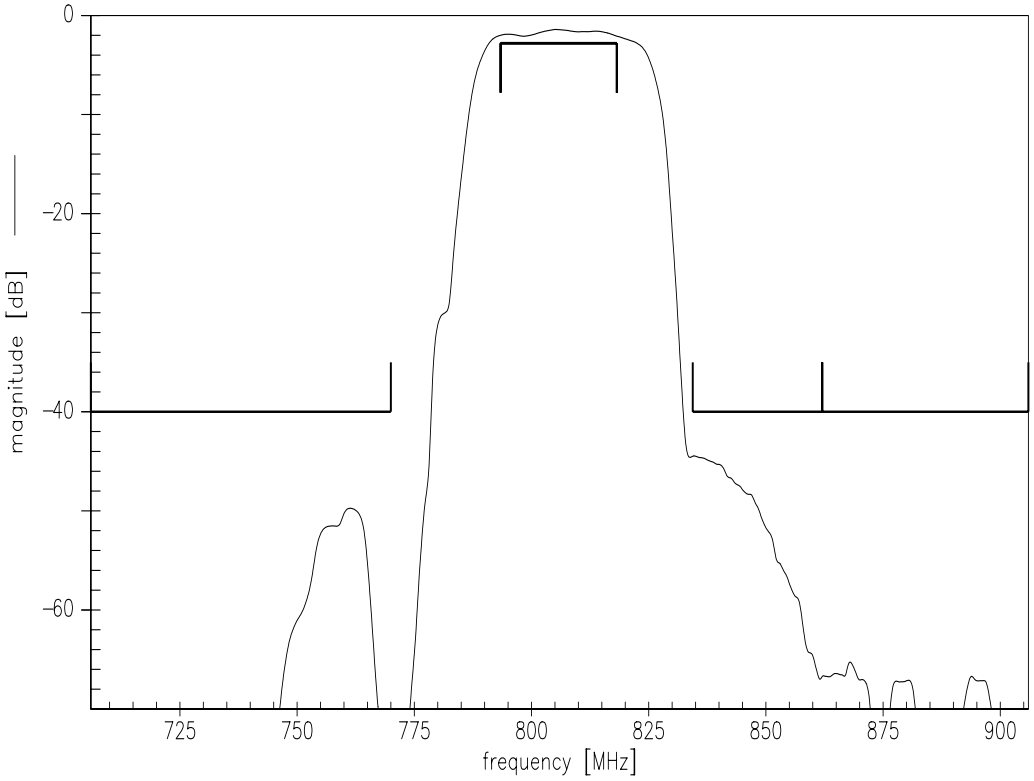
[1] Mean value in any 5MHz channel.

Maximum ratings

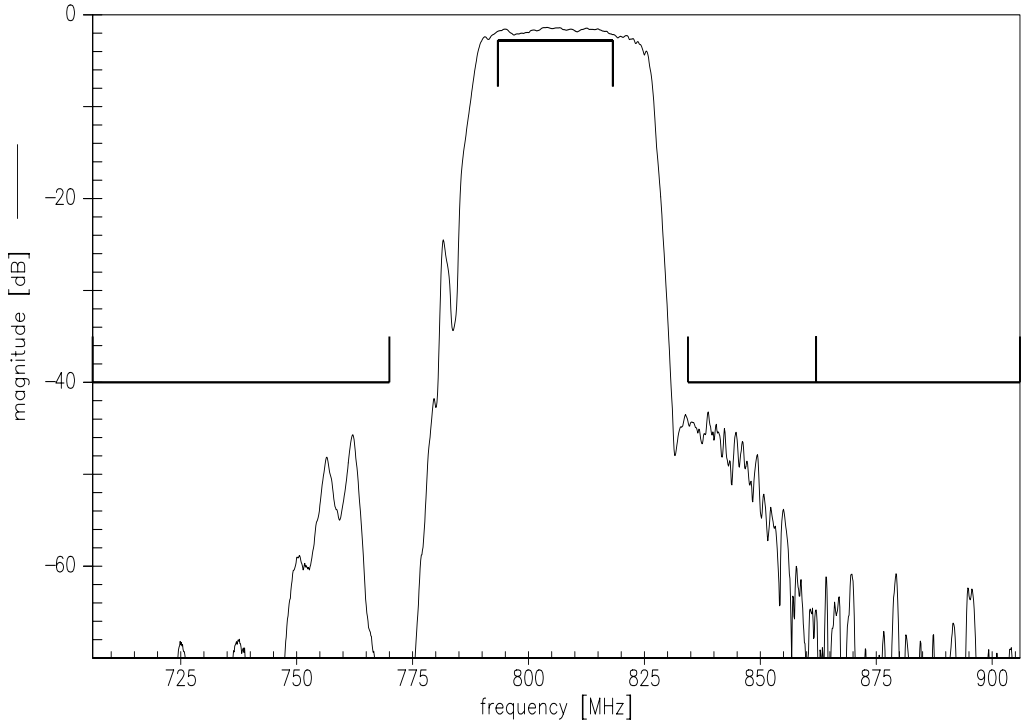
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100[1)]	V	machine model, 1 pulse
Input power	P_{IN}	10	dBm	continous wave, 55˚C , 50000h

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

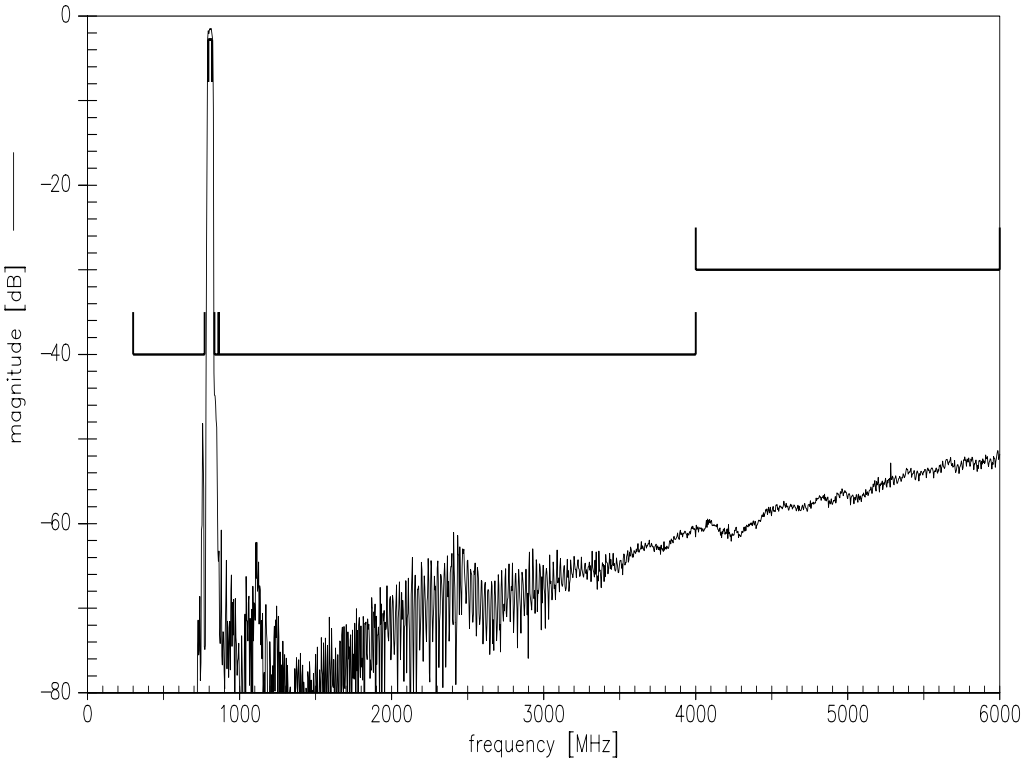
Transfer function for 5MHz LTE signal (Power transfert fonction)



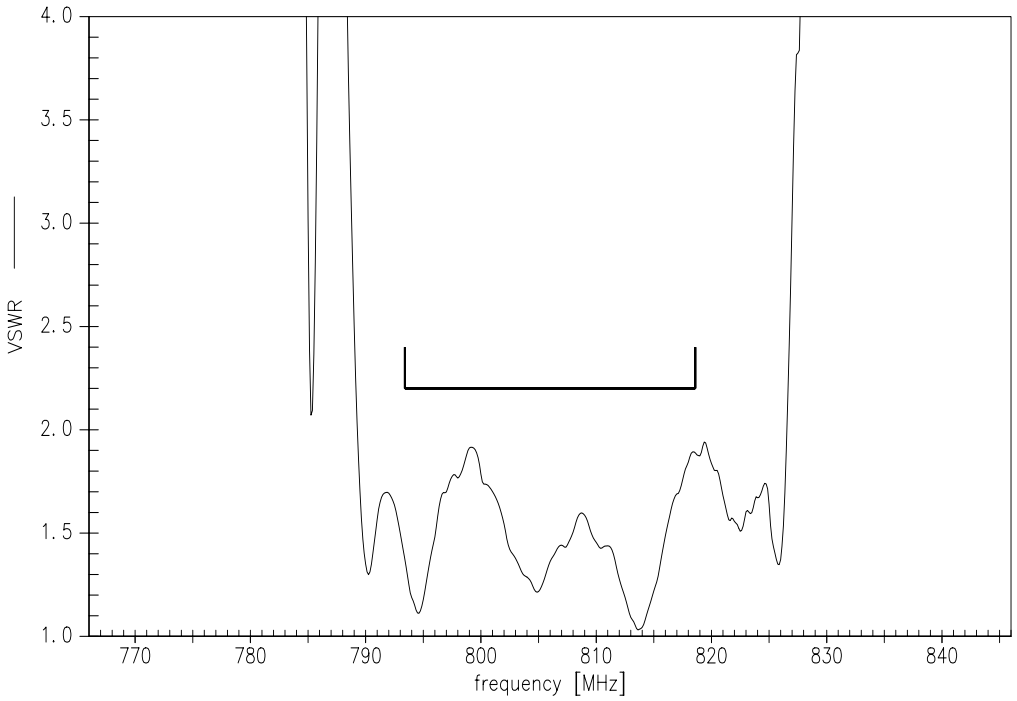
Transfer function for CW signal



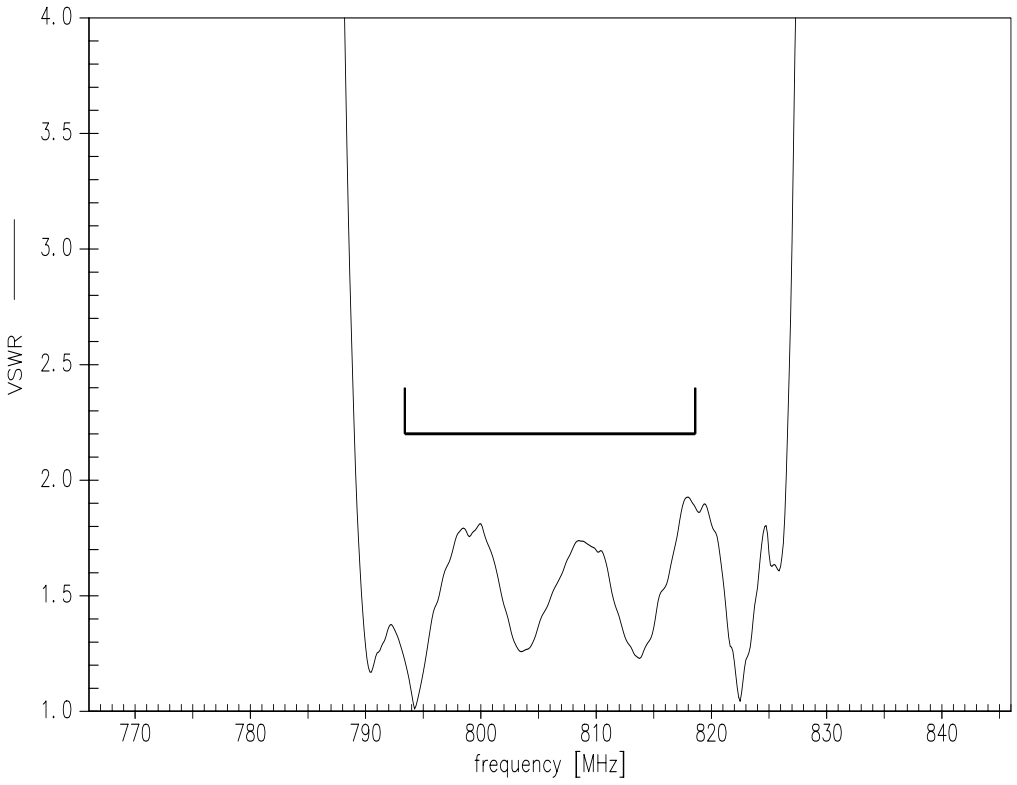
Transfer function for CW signal



VSWR 11



VSWR 22



References

Type	B8302
Ordering code	B39811B8302P810
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B8302_NB_UN.S3P see file header for port/pin assignment table B8302_WB_UN.S3P
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 coilss	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

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