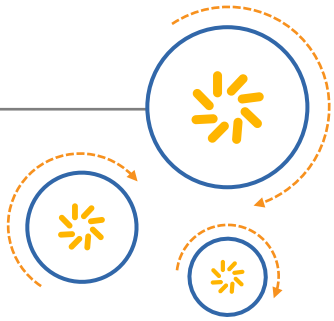
RF360 Europe GmbH

A Qualcomm – TDK Joint Venture



SAW Components

SAW filter for base station

TD-LTE Band F

Series/type:	B5305
Ordering code:	B39192B5305U410
Date:	October 21, 2013
Version:	2.0

RF360 Europe GmbH, Anzinger Str. 13, München, Germany

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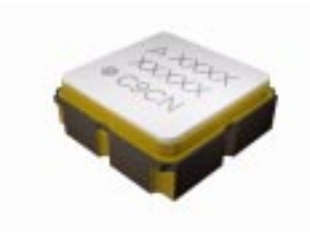
EPCOS AG is a TDK Group Company.

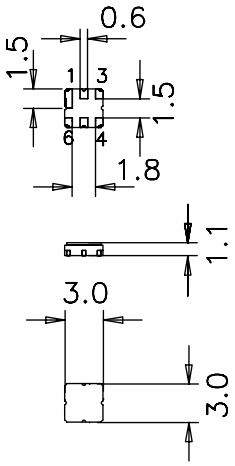
Application

- Low-loss RF filter for TD-LTE Band F base station
- Usable passband 40 MHz
- Unbalanced to unbalanced operation



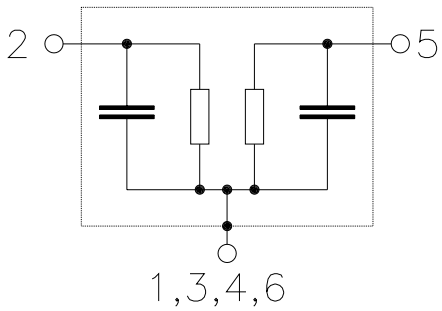
Features

- Package size 3.0 x3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Ceramic 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 1
- Filter surface passivated



Pin configuration

- 2 Input
- 5 Output
- 1,3,4,6 Case grounded



Data sheet

Characteristics

Temperature range for specification: T = –40 ˚C to +95 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

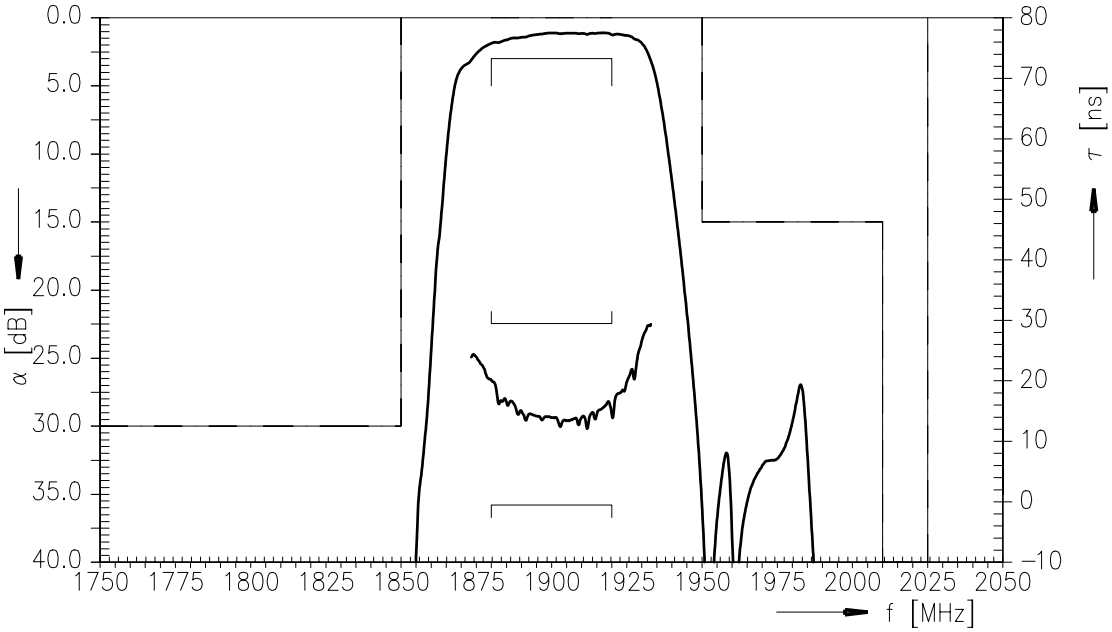
		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	1900.00	—	MHz
1880.0 ... 1920.0 MHz					
Maximum insertion attenuation	α_{max}				
1880.0 ... 1920.0 MHz		—	1.9	3.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1880.0 ... 1920.0 MHz		—	0.8	1.3	dB
Group delay ripple (p-p)					
1880.0 ... 1920.0 MHz		—	7	30	ns
VSWR					
1880.0 ... 1920.0 MHz		—	1.5	2.0	
Absolute Attenuation	α_{abs}				
50.0 ... 960.0 MHz		30	37	—	dB
960.0 ... 1805.0 MHz		30	37	—	dB
1805.0 ... 1830.0 MHz		30	51	—	dB
1830.0 ... 1850.0 MHz		30	42	—	dB
1950.0 ... 2010.0 MHz		15	27	—	dB
2010.0 ... 2025.0 MHz		48	55	—	dB
2110.0 ... 2170.0 MHz		35	48	—	dB
2300.0 ... 2400.0 MHz		35	51	—	dB
2400.0 ... 3000.0 MHz		28	43	—	dB

Maximum ratings

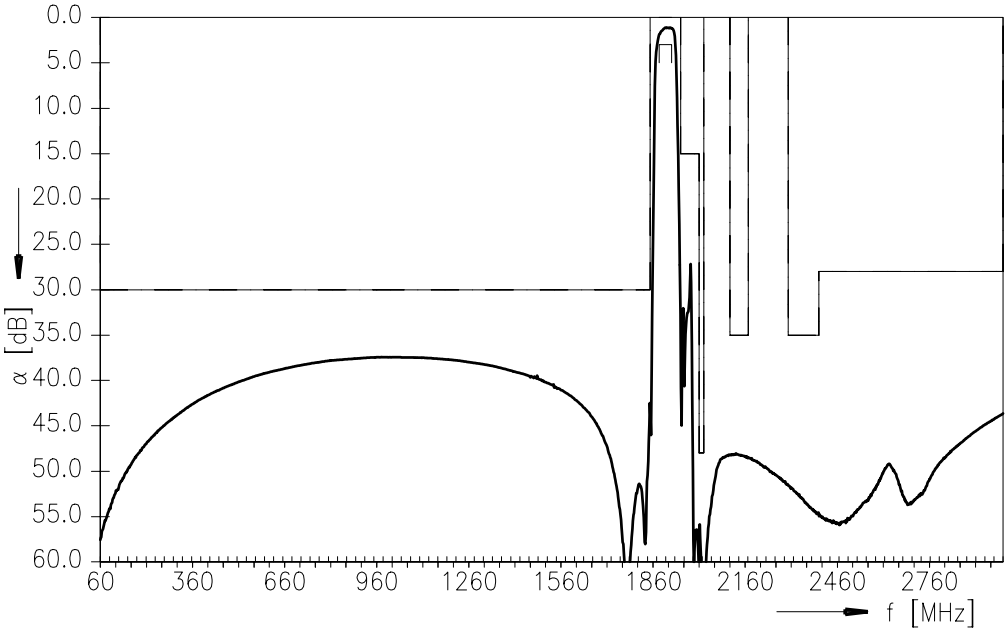
Operable temperature range	T	–45/+125	˚C	
Storage temperature range	T_{stg}	–45/+125	˚C	
DC voltage	V_{DC}	6	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 10 pulses
Input power at				
1880.0...1920.0MHz	P_{IN}	15	dBm	CW,100000 hrs @95deg
		23	dBm	CW, 24hrs @95deg

1) acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.

Transfer function

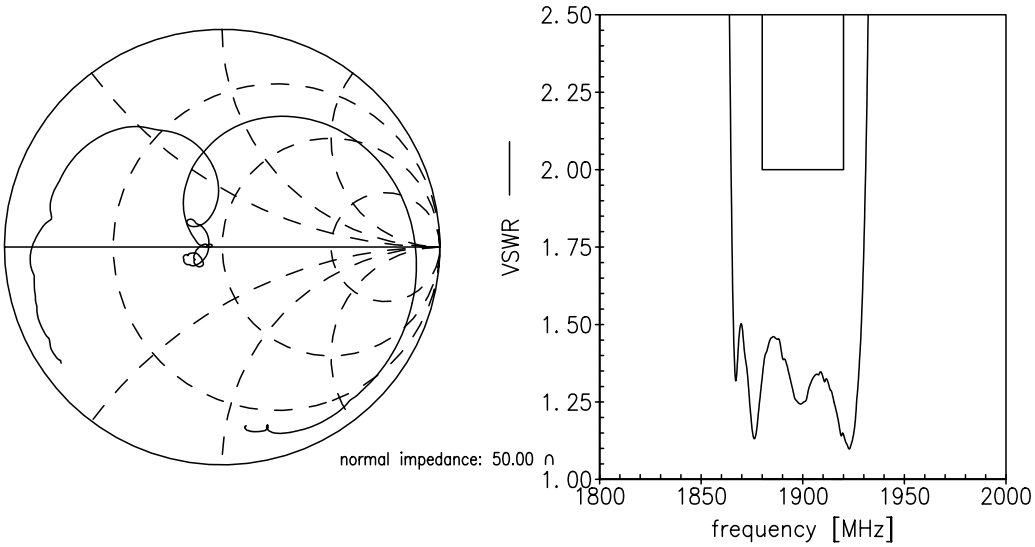


Transfer function (wideband)

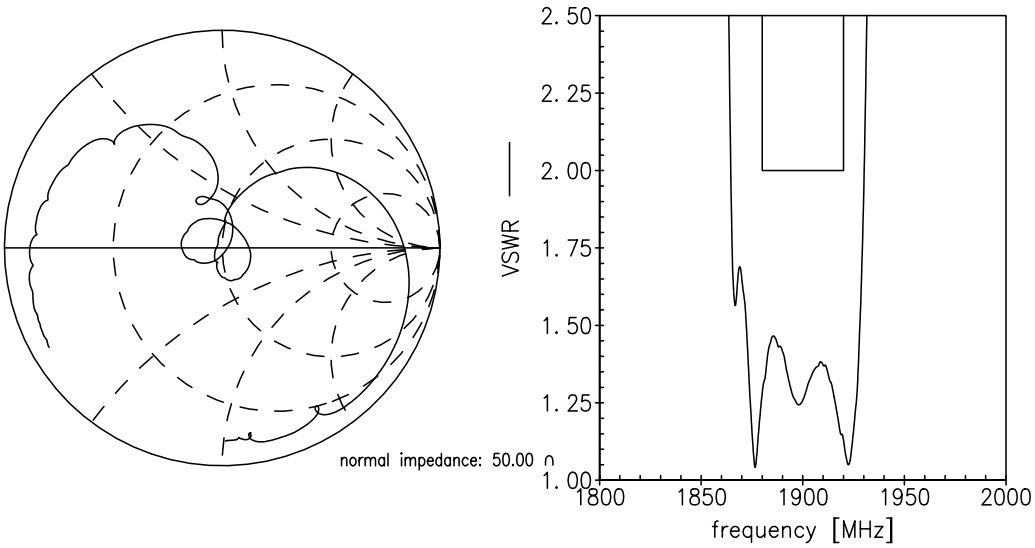


Smith charts

S_{11} function



S_{22} function



References

Type	B5305
Ordering code	B39192B5305U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8228-Z000
Date codes	L_1126
S-parameters	B5305_NB.s2p , B5305_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 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.
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.

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