



SAW Components

SAW Tx filter

WCDMA Band II (PCS-Band)

Series/type:	B9428
Ordering code:	B39192B9428K610
Date:	March 02, 2007
Version:	1.0



Preliminary data



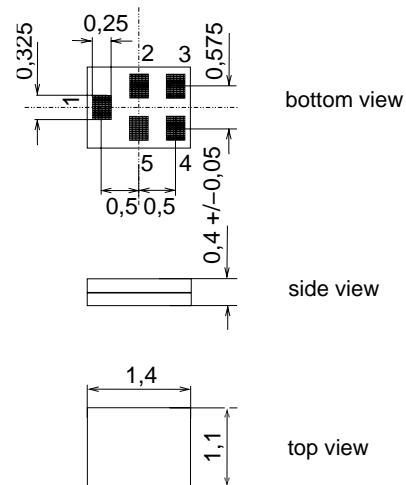
Application

- Low-loss RF filter for mobile telephone WCDMA system (Band II, PCS band), transmit path (TX)
- Usable passband 60 MHz
- Balanced to unbalanced operation
- Impedance transformation from 200 Ω to 50 Ω
- High RX suppression



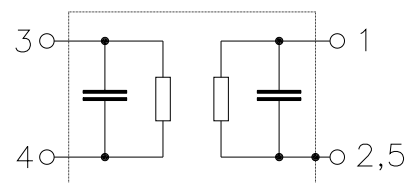
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5F
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

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





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1880.0 MHz

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Characteristics

Temperature range for specification: $T = -20\text{ °C to }+75\text{ °C}$
 Terminating source impedance: $Z_S = 200\ \Omega \parallel 27\text{ nH (balanced)}$
 Terminating load impedance: $Z_L = 50\ \Omega \text{ (unbalanced)}$

		LP05B ¹⁾			
		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1880.0	—	MHz
Maximum insertion attenuation	α_{\max}	—	2.7	4.2 ²⁾	dB
1850.625 ... 1909.375 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.7	2.3 ³⁾	dB
1850.625 ... 1909.375 MHz					
Input VSWR		—	1.9	2.2	
1850.625 ... 1909.375 MHz					
Output VSWR		—	1.8	2.1	
1850.625 ... 1909.375 MHz					
Input amplitude balance (S_{31}/S_{21})		-1.4	-0.7/+0.6	1.4	dB
1850.625 ... 1909.375 MHz					
Input phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	-5/+0	10	°
1850.625 ... 1909.375 MHz					
Attenuation	α				
0.0 ... 1570.0 MHz		30	52	—	dB
1570.0 ... 1770.0 MHz		30	40	—	dB
1770.0 ... 1830.0 MHz		22	36	—	dB
1930.625 ... 1989.4 MHz		28	30	—	dB
1989.4 ... 2500.0 MHz		28	31	—	dB
2500.0 ... 6000.0 MHz		25	41	—	dB

¹⁾ Values in columns min, typ and max indicate the development status of the current version.

²⁾ 4.7 dB max. at -30 °C ... 85 °C

³⁾ 2.8 dB max. at -30 °C ... 85 °C



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1990.0 ... 2500.0	MHz	28	32	—	dB
2500.0 ... 6000.0	MHz	25	41	—	dB

¹⁾ Values in columns min, typ and max indicate the development status of the current version.

²⁾ 5.2 dB max. at -30 °C ... 85 °C

³⁾ 3.3 dB max. at -30 °C ... 85 °C



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Maximum ratings

Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input power	P _{IN}	12	dBm	@ 55 °C ambient

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



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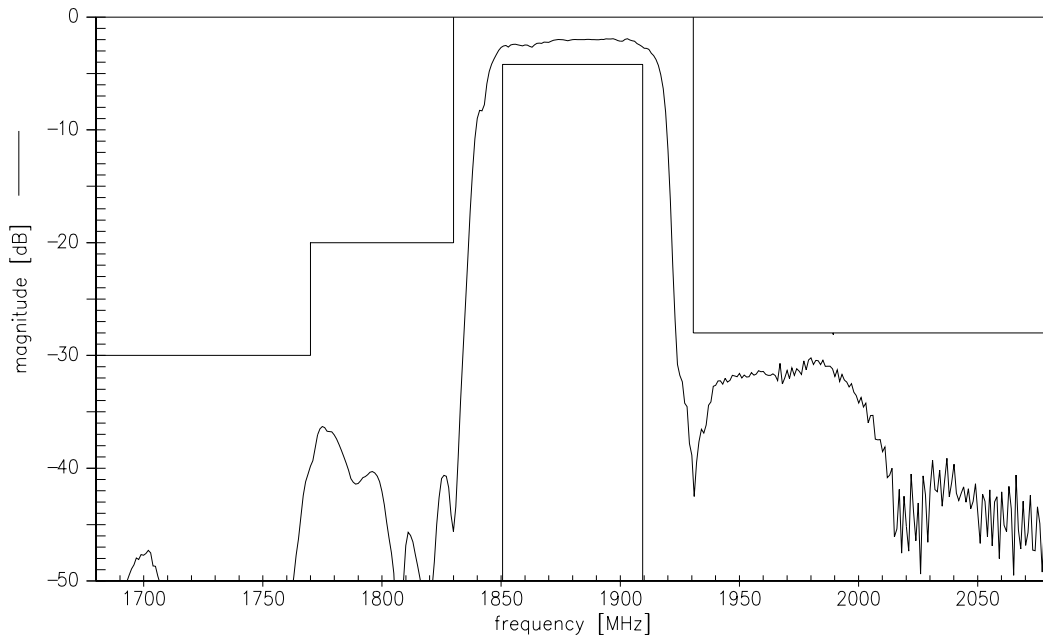
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1880.0 MHz

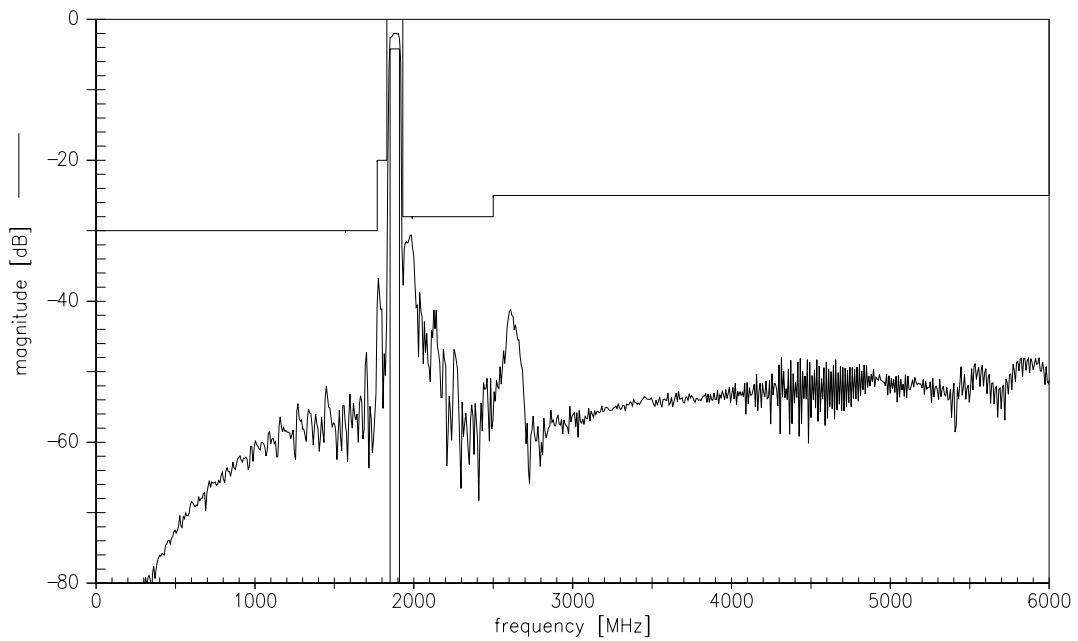
Preliminary data



Transfer function



Transfer function (wideband)



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

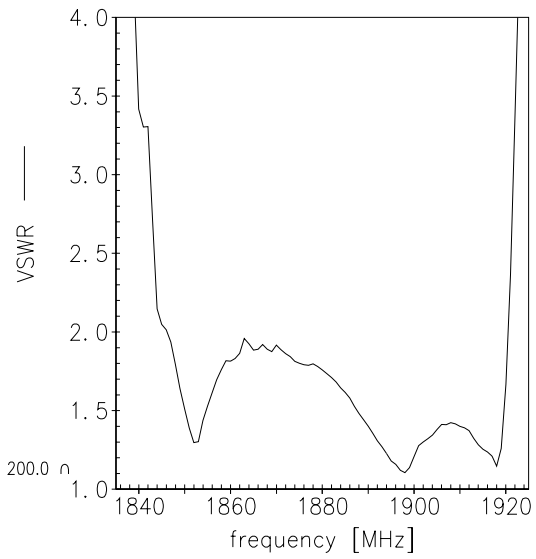
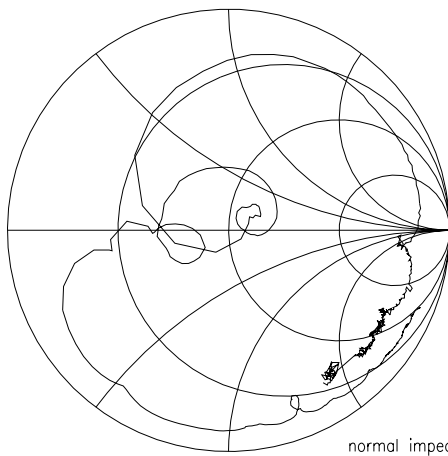


Preliminary data

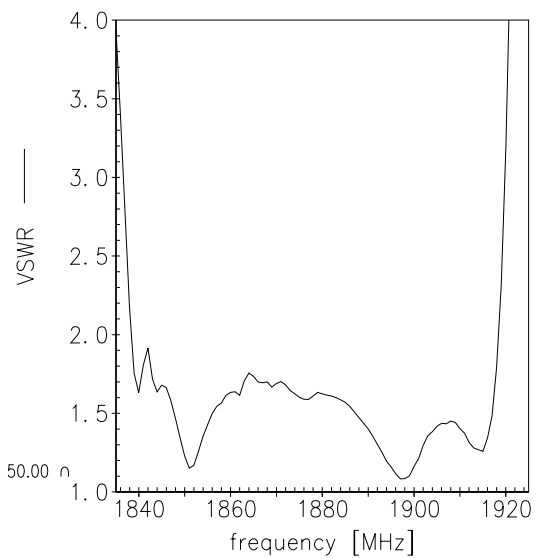
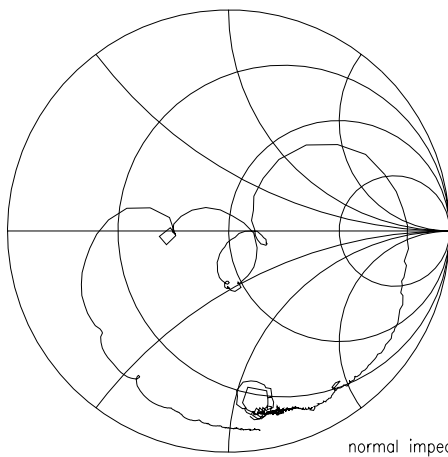


Smith charts

S₁₁ function



S₂₂ function





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References

Type	B9428
Ordering code	
Marking and package	C61157-A8-A1
Packaging	F61074-V8212-Z000
Date codes	L_1126
S-parameters	B9428_NB.s3p B9428_WB.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.

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

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