



SAW Components

SAW Tx filter

WCDMA Band II (PCS-Band)

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

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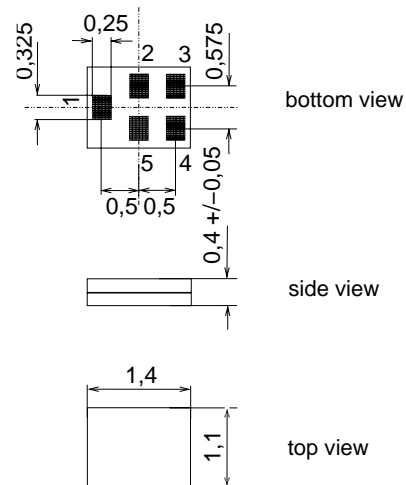
Preliminary data

Application

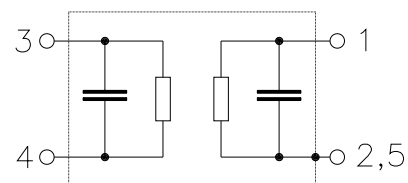
- Low-loss RF filter for mobile telephone WCDMA system (Band II, PCS band), transmit path (TX)
- Usable passband 60 MHz
- Balanced to unbalanced operation
- Impedance transformation from 200 Ω to 50 Ω
- High RX suppression


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
Preliminary data

Characteristics

Temperature range for specification:	T = -20 °C to +75 °C
Terminating source impedance:	Z _S = 200 Ω 27 nH (balanced)
Terminating load impedance:	Z _L = 50 Ω (unbalanced)

		LP05B ¹⁾			
		min.	typ. @ 25 °C	max.	
Center frequency	f _C	—	1880.0	—	MHz
Maximum insertion attenuation	α _{max}				
	1850.625 ... 1909.375 MHz	—	2.7	4.2 ²⁾	dB
Amplitude ripple (p-p)	Δα				
	1850.625 ... 1909.375 MHz	—	0.7	2.3 ³⁾	dB
Input VSWR					
	1850.625 ... 1909.375 MHz	—	1.9	2.2	
Output VSWR					
	1850.625 ... 1909.375 MHz	—	1.8	2.1	
Input amplitude balance (S₃₁/S₂₁)					
	1850.625 ... 1909.375 MHz	-1.4	-0.7/+0.6	1.4	dB
Input phase balance (φ(S₃₁) - φ(S₂₁)+180°)					
	1850.625 ... 1909.375 MHz	-10	-5/+0	10	°
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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1570.0 ... 1770.0	MHz	30	39	—	dB
1770.0 ... 1830.0	MHz	22	36	—	dB
1930.0 ... 1990.0	MHz	27	30	—	dB
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

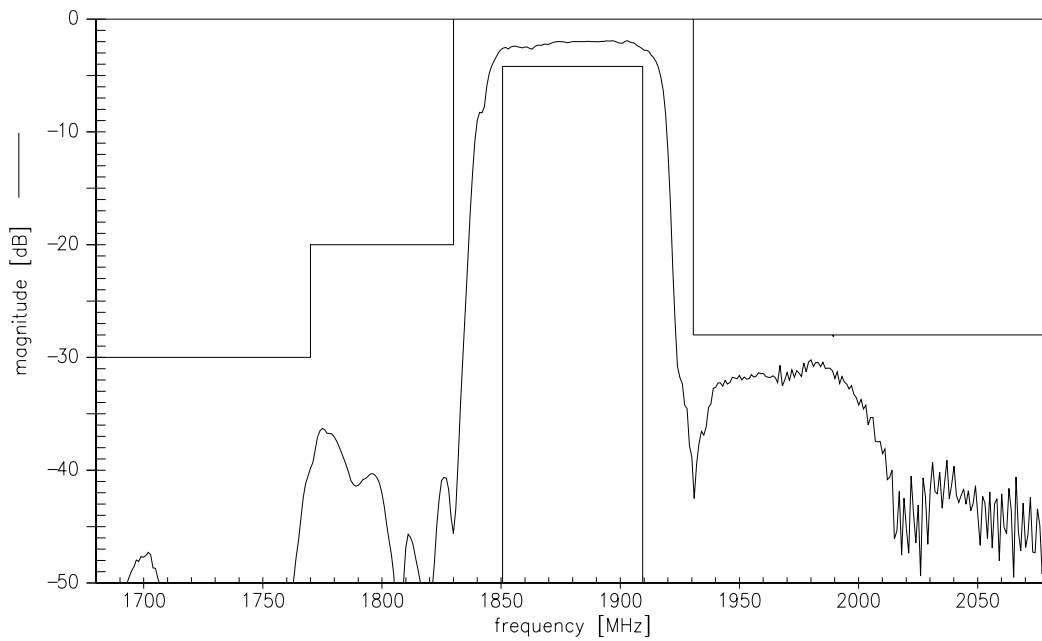
Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input power	P _{IN}	12	dBm	@ 55 °C ambient

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

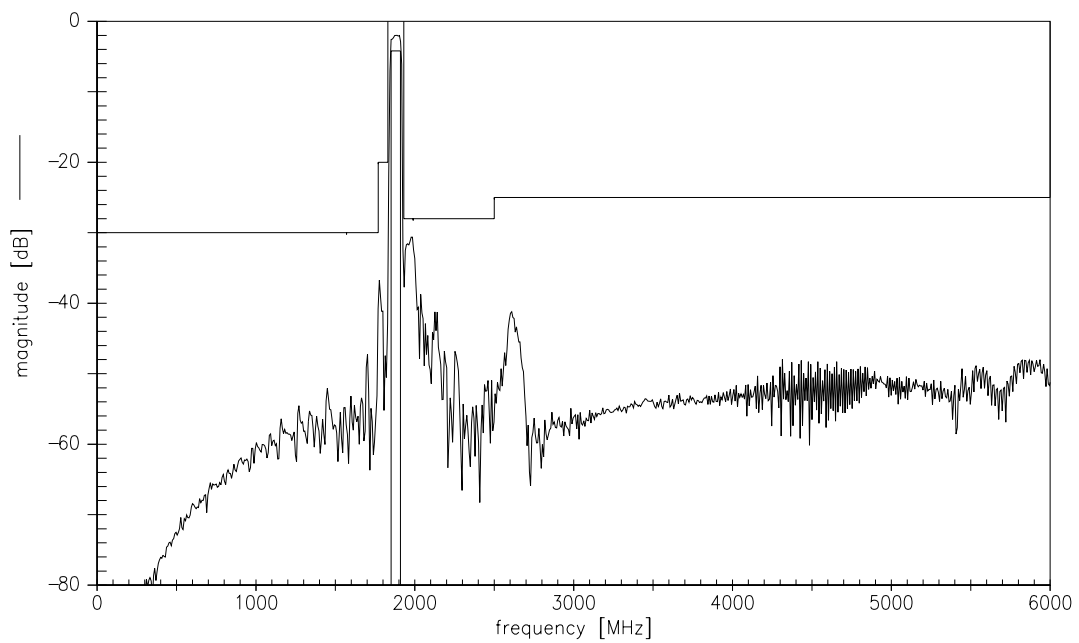
Preliminary data



Transfer function



Transfer function (wideband)



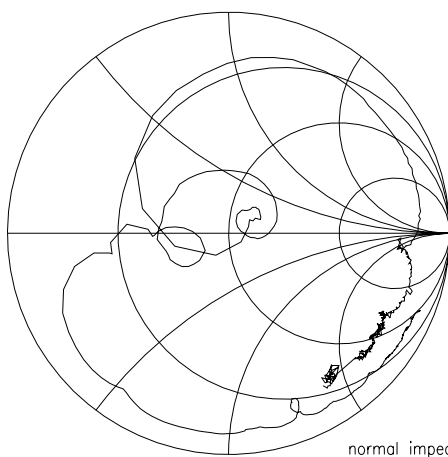
Please read *cautions and warnings* and *important notes* at the end of this document.

Preliminary data

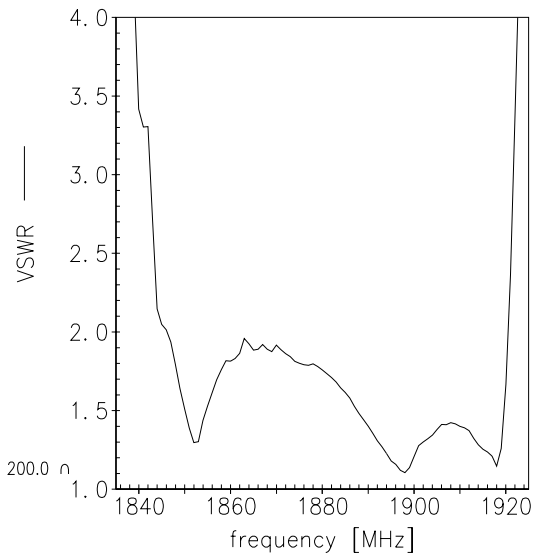


Smith charts

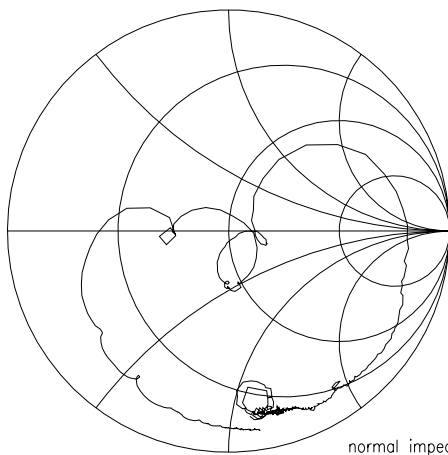
S_{11} function



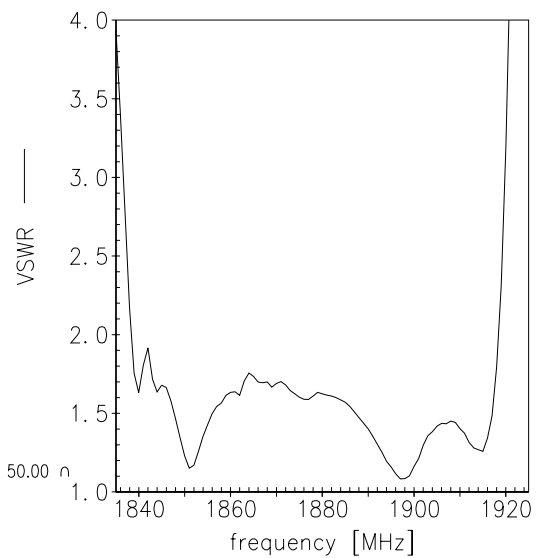
normal impedance: 200.0 Ω



S_{22} function



normal impedance: 50.00 Ω



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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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