



SAW Components

SAW Filter

PCS / WCDMA band II

Series/Type:	B9477
Ordering code:	B39202B9477P810
Date:	August 16, 2012
Version:	2.2

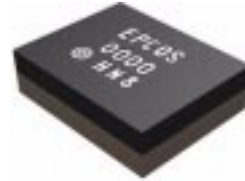
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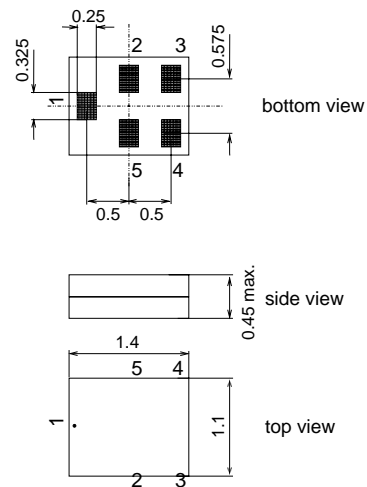
Data sheet


Application

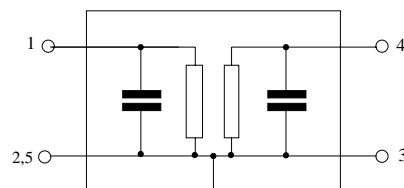
- Low-loss RF filter for mobile telephone PCS systems, receive path (RX)
- Useable passband 60 MHz
- Useable for antenna diversity systems
- Suitable for GPRS class 1 to 12


Features

- Package size 1.4 x 1.1 mm²
- max. Package height 0.45 mm
- RoHS compatible
- Approximate weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**


Pin configuration

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



Data sheet

Characteristics

Operating temperature range: $T = -30\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 50\ \Omega$ (unbalanced)

		B9477			
		min.	typ. @ 25°C	max.	
Center frequency	f_C	-	1960.0	-	MHz
Maximum insertion attenuation	α_{\max}	-	2.6	4.2 ¹⁾	dB
1930.6 ... 1989.4 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	-	1.1	2.6	dB
1930.6 ... 1989.4 MHz					
Input return loss		-	1.8	2.3	
1930.6 ... 1989.4 MHz					
Output return loss		-	2.0	2.4	
1930.6 ... 1989.4 MHz					
Attenuation	α				
DC ... 1500.0 MHz		43	51	-	dB
1500.0 ... 1907.0 MHz		43	48	-	
1907.0 ... 1909.4 MHz		43 ²⁾	51 ³⁾	-	dB
2040.0 ... 2070.0 MHz		35	55	-	
2070.0 ... 2500.0 MHz		35	46	-	dB
2500.0 ... 4500.0 MHz		31	37	-	
4500.0 ... 5200.0 MHz		31	36	-	dB
5200.0 ... 6000.0 MHz		22	30	-	

1) 4.0dB for $T = 0...85\text{ °C}$

2) 18dB for $T = 100\text{ °C}$

3) 49dB for $T = 100\text{ °C}$


Maximum ratings

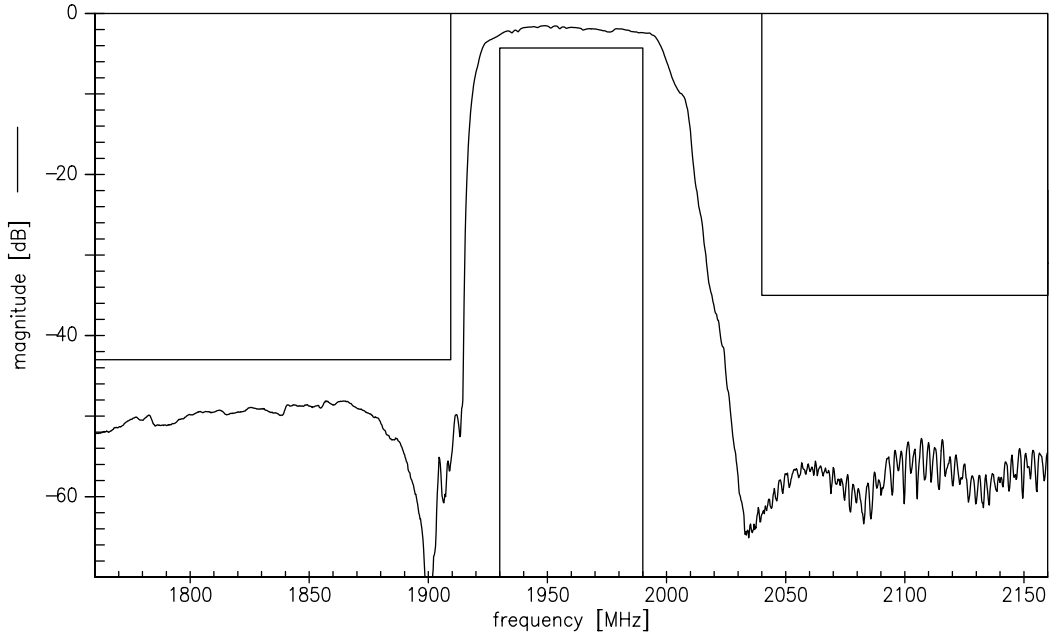
Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input Power at PCS Tx band	P _{IN}	16	dBm	CW signal @ T=55°C, 2000h

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

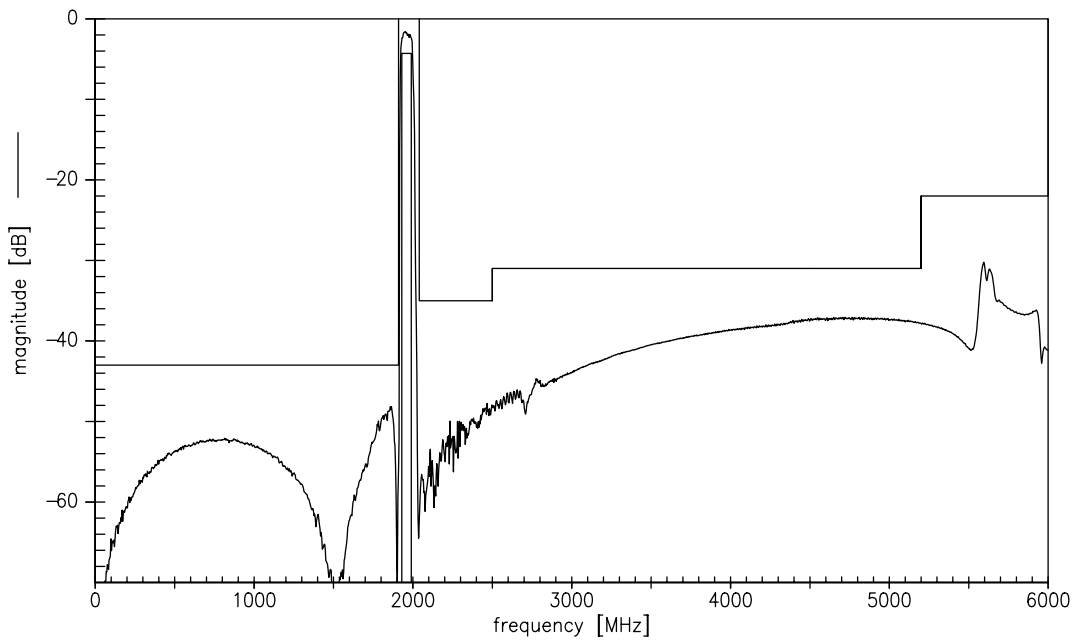
Data sheet



Transfer function (narrowband)



Transfer function (wideband)

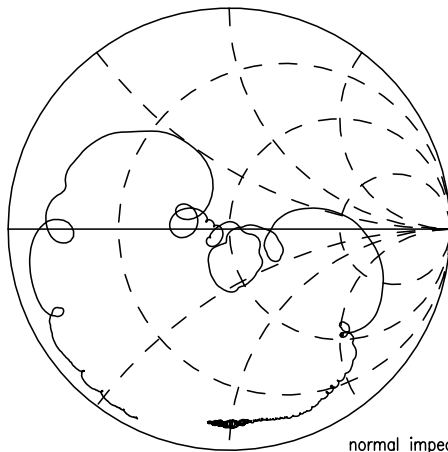


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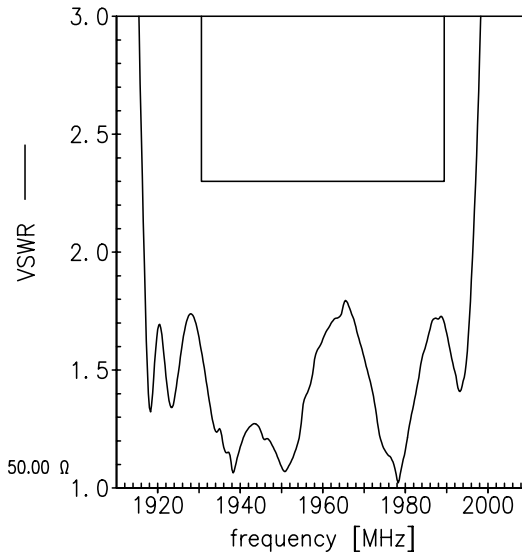


Smith chart

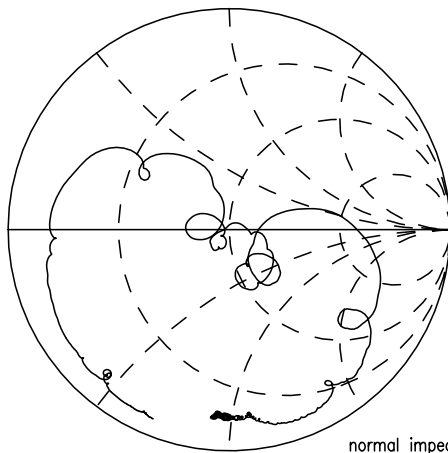
S_{11} function



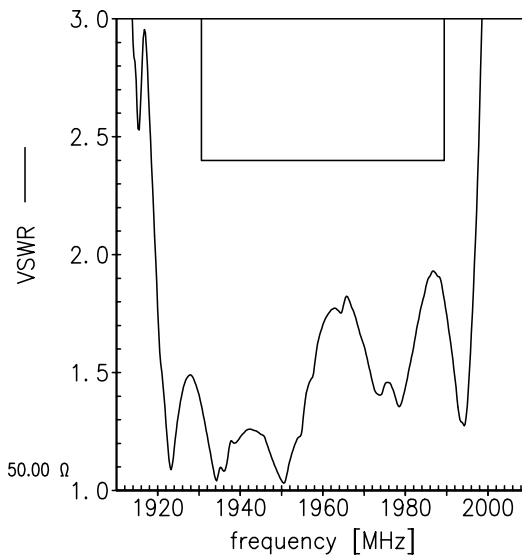
normal impedance: 50.00 Ω



S_{22} function



normal impedance: 50.00 Ω



SAW Components	B9477
SAW Filter	1960.0 MHz

Data sheet



References

Type	B9477
Ordering code	B39202B9477P810
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B9477_NB.s2p B9477_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 http://www.tdk.co.jp/tefe02/coil.htm#aname1 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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