



SAW Components

SAW Rx Filter

Low Loss Filter for Mobile Telephone PCS system

Series/type:	B4150
Ordering code:	B39202B4150U410
Date:	November 24, 2009
Version:	2.0



Data sheet



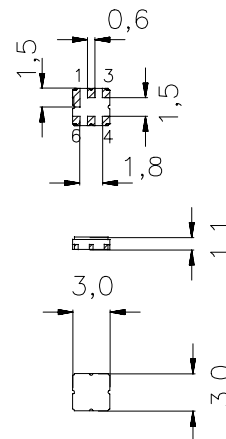
Application

- Low-loss RF filter for mobile telephone, receive path
PCS systems, receive path
- Usable passband of 60MHz
- No matching required for operation at 50 Ω



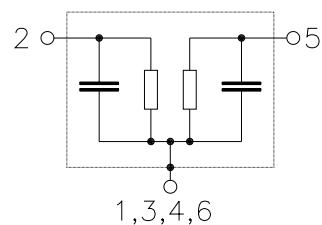
Features

- Package size 3.0x 3.0 x 1.1 mm³
- Package code DCC6C
- Approx. weight 0.037 g
- Ceramic package for **Surface Mount Technology (SMT)**
- RoHS compliant
- Ni, gold-plated



Pin configuration

- 2 Input
- 1,3 To be ground
- 5 Output
- 4,6 To be ground





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Characteristics

Temperature range for specification: $T = 25 \pm 2^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1960.0	—	MHz
Maximum insertion attenuation	α_{\max}	—	2.8	3.5	dB
1930.0 ... 1990.0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.9	1.6	dB
1930.0 ... 1990.0 MHz					
Input return loss		9.5	10.5	—	dB
1930.0 ... 1990.0 MHz					
Output return loss		9.5	10.5	—	dB
1930.0 ... 1990.0 MHz					
Attenuation	α				
10.0 ... 1850.0 MHz		20	21	—	dB
1850.0 ... 1910.0 MHz		21	30	—	dB
2040.0 ... 2100.0 MHz		25	27	—	dB
2100.0 ... 5000.0 MHz		20	25	—	dB
5000.0 ... 6000.0 MHz		8	18	—	dB



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Characteristics

Temperature range for specification: $T = -30$ to $+80$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1960.0	—	MHz
Maximum insertion attenuation	α_{max}	—	3.2	5.3	dB
1930.0 ... 1990.0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1.2	3.2	dB
1930.0 ... 1990.0 MHz					
Input return loss		9.5	10.5	—	dB
1930.0 ... 1990.0 MHz					
Output return loss		9.5	10.5	—	dB
1930.0 ... 1990.0 MHz					
Attenuation	α	20	21	—	dB
10.0 ... 1850.0 MHz		15	30	—	
1850.0 ... 1910.0 MHz		25	27	—	
2040.0 ... 2100.0 MHz		20	25	—	
2100.0 ... 5000.0 MHz		8	18	—	
5000.0 ... 6000.0 MHz					



Data sheet



Characteristics

Temperature range for specification: $T = -30$ to $+85$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1960.0	—	MHz
Maximum insertion attenuation	α_{max}	—	3.2	5.3	dB
1930.0 ... 1990.0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1.2	3.2	dB
1930.0 ... 1990.0 MHz					
Input return loss		9.0	10.5	—	dB
1930.0 ... 1990.0 MHz					
Output return loss		9.0	10.5	—	dB
1930.0 ... 1990.0 MHz					
Attenuation	α	20	21	—	dB
10.0 ... 1850.0 MHz		14	30	—	
1850.0 ... 1910.0 MHz		25	27	—	
2040.0 ... 2100.0 MHz		20	25	—	
2100.0 ... 5000.0 MHz		8	18	—	
5000.0 ... 6000.0 MHz					



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Maximum ratings

Operable temperature range	T	-30 / +85	°C	source and load impedance 50 Ω peak power of TDMA signal, duty cycle 1 : 3 continuous wave
Storage temperature range	T _{stg}	-40 / +85	°C	
DC voltage	V _{DC}	0	V	
Input power max 1930.0...1990.0 MHz	P _{IN}	13	dBm	
		10	dBm	



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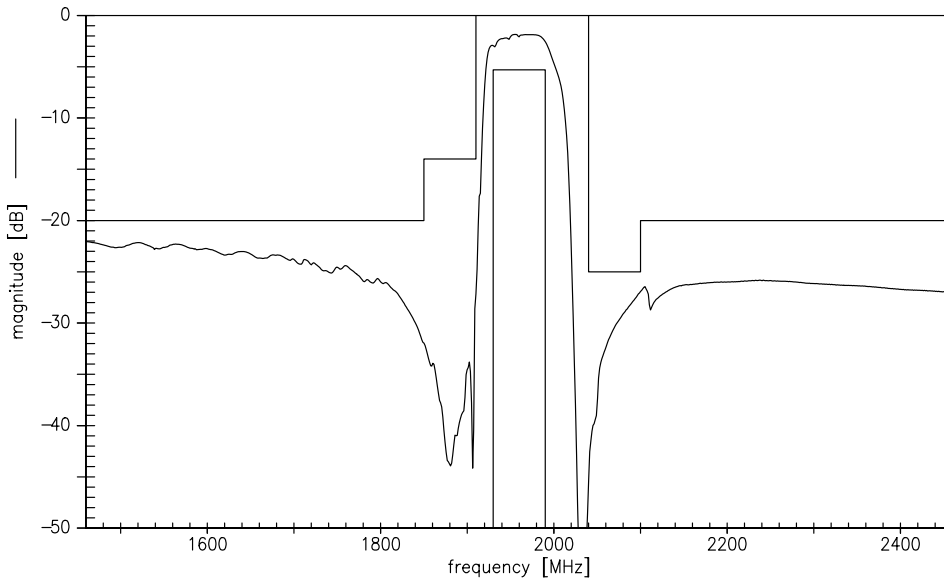
SAW Rx Filter

1960.0 MHz

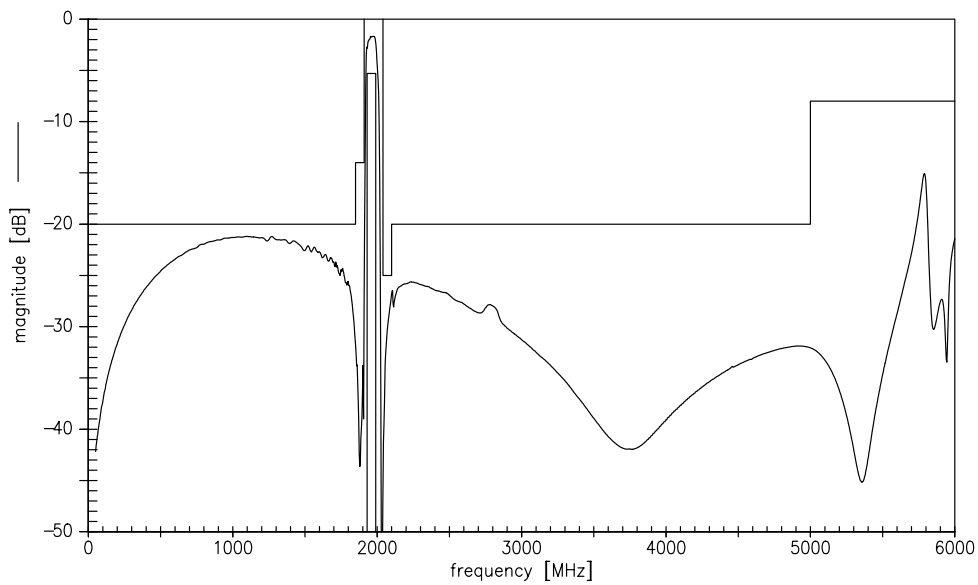
Data sheet



Transfer function (narrowband)



Transfer function (wideband)



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

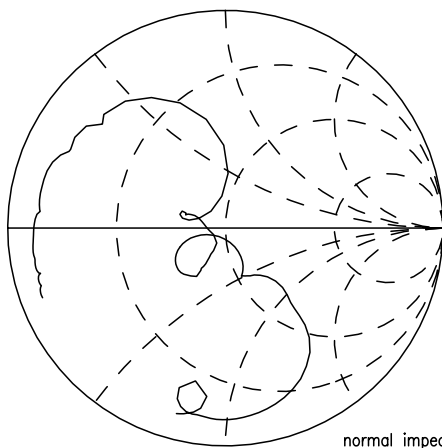


Data sheet

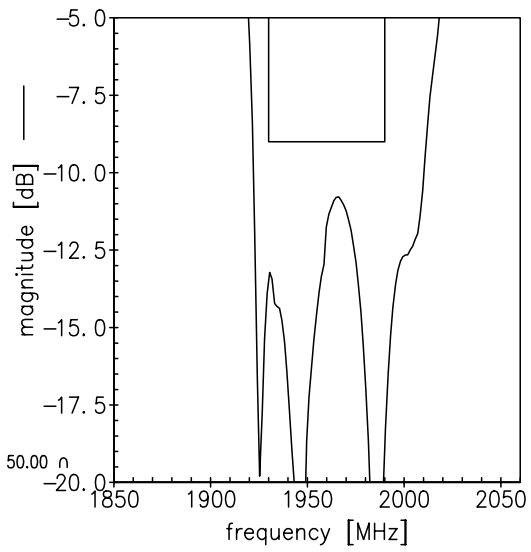


Smith charts

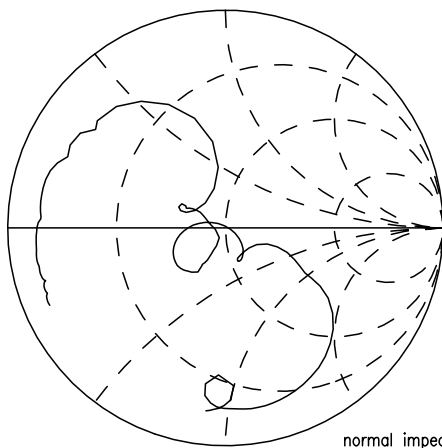
S₁₁ function



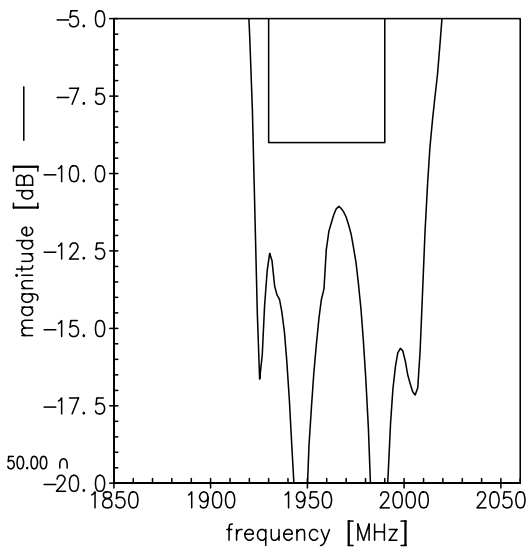
normal impedance: 50.00 Ω



S₂₂ function



normal impedance: 50.00 Ω





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References

Type	B4150
Ordering code	B39202B4150U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8088-Z000
Date codes	L_1126
S-parameters	B4150_NB.s2p B4150_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."

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

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