



SAW Components

SAW RF filter

Short range devices

Series/type:	B4143
Ordering code:	B39192B4143U410
Date:	April 25, 2008
Version:	2.2



Data sheet



Application

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



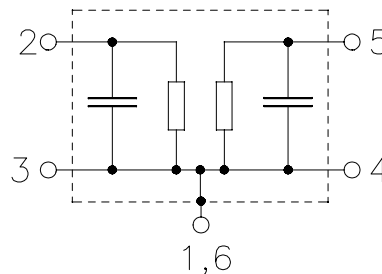
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- Lead free soldering compatible with J - STD20C
- AEC-Q200 qualified component family
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

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





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SAW RF filter

1880.00 MHz

Data sheet



Characteristics

Reference temperature: $T_A = +25\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	1880.00	—	MHz
Maximum insertion attenuation	α_{\max}	—	3.2	4.0	dB
1850.00 ... 1910.00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1.7	2.5	dB
1850.00 ... 1910.00 MHz					
Input VSWR		—	2.0	2.2	
1850.00 ... 1910.00 MHz					
Output VSWR		—	2.0	2.2	
1850.00 ... 1910.00 MHz					
Attenuation	α				
10.00 ... 1570.00 MHz		23.0	26.0	—	dB
1570.00 ... 1720.00 MHz		33.0	35.0	—	dB
1930.00 ... 1935.00 MHz		15.0	24.0	—	dB
1935.00 ... 1990.00 MHz		20.0	27.0	—	dB
2032.00 ... 2125.00 MHz		35.0	36.5	—	dB
2125.00 ... 2340.00 MHz		35.0	37.0	—	dB
2340.00 ... 3000.00 MHz		30.0	39.0	—	dB
3000.00 ... 3500.00 MHz		15.0	24.0	—	dB



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Characteristics

Temperature range for specification: $T_A = -10\text{ °C to }+70\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	1880.00	—	MHz
Maximum insertion attenuation	α_{max}	—	3.5	4.6	dB
1850.00 ... 1910.00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	2.0	3.1	dB
1850.00 ... 1910.00 MHz					
Input VSWR		—	2.0	2.2	
1850.00 ... 1910.00 MHz					
Output VSWR		—	2.0	2.2	
1850.00 ... 1910.00 MHz					
Attenuation	α				
10.00 ... 1448.00 MHz		23.0	26.0	—	dB
1448.00 ... 1570.00 MHz		30.0	32.0	—	dB
1570.00 ... 1720.00 MHz		33.0	35.0	—	dB
1930.00 ... 1935.00 MHz		14.5	22.0	—	dB
1935.00 ... 1990.00 MHz		20.0	25.0	—	dB
2032.00 ... 2125.00 MHz		35.0	36.5	—	dB
2125.00 ... 2340.00 MHz		35.0	37.0	—	dB
2340.00 ... 3000.00 MHz		30.0	39.0	—	dB
3000.00 ... 3500.00 MHz		15.0	24.0	—	dB



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Characteristics

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

		min.	typ.	max.	
Center frequency	f_C	—	1880.00	—	MHz
Maximum insertion attenuation	α_{max}	—	3.5	5.0	dB
1850.00 ... 1910.00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	2.0	3.5	dB
1850.00 ... 1910.00 MHz					
Input VSWR		—	2.0	2.2	
1850.00 ... 1910.00 MHz					
Output VSWR		—	2.0	2.2	
1850.00 ... 1910.00 MHz					
Attenuation	α				
10.00 ... 1570.00 MHz		23.0	26.0	—	dB
1570.00 ... 1720.00 MHz		33.0	35.0	—	dB
1930.00 ... 1935.00 MHz		13.0	22.0	—	dB
1935.00 ... 1990.00 MHz		20.0	25.0	—	dB
2032.00 ... 2125.00 MHz		35.0	36.5	—	dB
2125.00 ... 2340.00 MHz		35.0	37.0	—	dB
2340.00 ... 3000.00 MHz		30.0	39.0	—	dB
3000.00 ... 3500.00 MHz		15.0	24.0	—	dB



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Characteristics

Temperature range for specification: $T_A = -40\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	1880.00	—	MHz
Maximum insertion attenuation	α_{max}	—	3.7	5.2	dB
1850.00 ... 1910.00 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	2.0	3.7	dB
1850.00 ... 1910.00 MHz					
Input VSWR		—	2.0	2.3	
1850.00 ... 1910.00 MHz					
Output VSWR		—	2.0	2.3	
1850.00 ... 1910.00 MHz					
Attenuation	α				
10.00 ... 1570.00 MHz		23.0	26.0	—	dB
1570.00 ... 1720.00 MHz		33.0	35.0	—	dB
1930.00 ... 1935.00 MHz		11.0	22.0	—	dB
1935.00 ... 1990.00 MHz		19.0	25.0	—	dB
2032.00 ... 2125.00 MHz		34.0	36.5	—	dB
2125.00 ... 2340.00 MHz		35.0	37.0	—	dB
2340.00 ... 3000.00 MHz		30.0	39.0	—	dB
3000.00 ... 3500.00 MHz		15.0	24.0	—	dB

Maximum ratings

Operable temperature range	T_A	-40/+85	°C	
Storage temperature range	T_{stg}	-40/+85	°C	
DC voltage	V_{DC}	0	V	
Input power max.	P_{IN}	13	dBm	source and load impedance 50 Ω peak power of TDMA signal, duty cycle 1 : 3 continuous wave
1850...1910 MHz		12	dBm	



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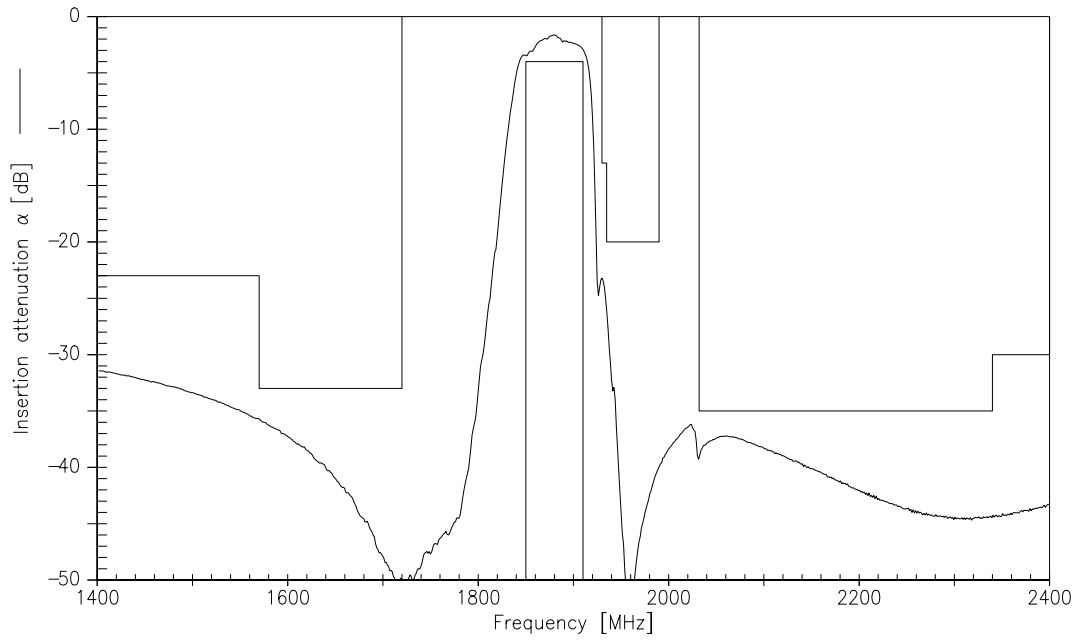
SAW RF filter

1880.00 MHz

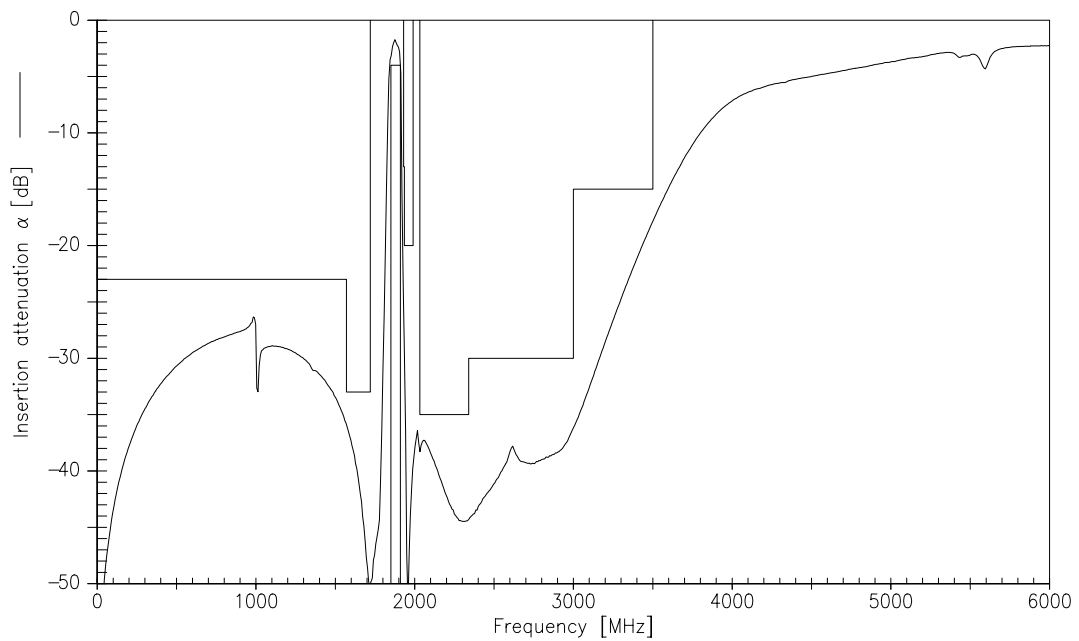
Data sheet



Transfer function (25° C spec)



Transfer function (wiedeband)

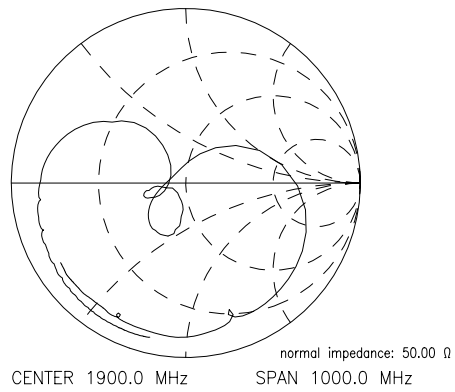
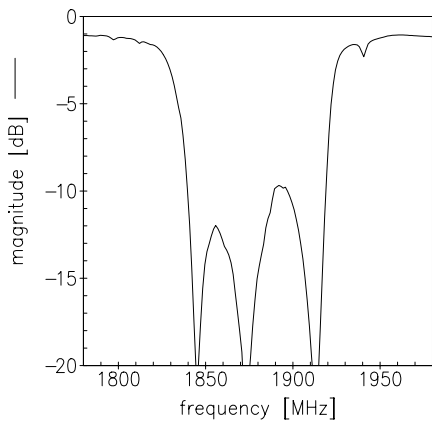


Please read *cautions and warnings* and *important notes* at the end of this document.

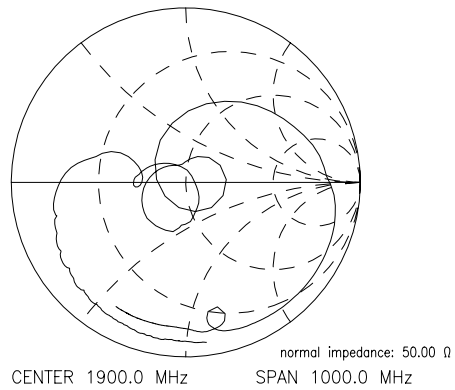
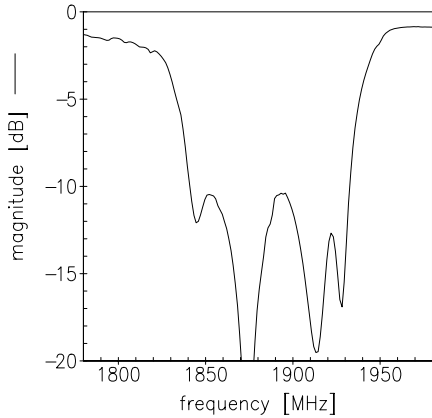


Reflection functions

S_{11}



S_{22}





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References

Type	B4143
Ordering code	B39192B4143U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B4143_NB.s2p B4143_WB.s2p
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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