

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture



SAW Components

SAW RF filter for base stations

Band 25 uplink

Series/type: B4182
Ordering code: B39182B4182U410

Date: Aug 07, 2014
Version: 2.4

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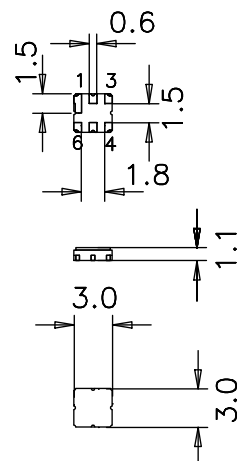
EPCOS AG is a TDK Group Company.

Application

- RF filter for base stations
- Low amplitude ripple
- No matching required for operation at 50 Ω
- Usable passband 65 MHz

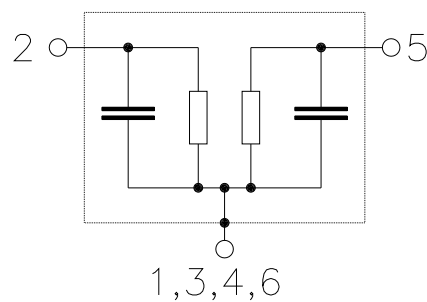
Features

- 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
- **Electrostatic Sensitive Device (ESD)**
- Moisture Sensitive Level 1
- Filter surface passivated



Pin configuration

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



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1882.5 MHz
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Characteristics

 Temperature range for specification: $T = 25 \pm 2 \text{ }^{\circ}\text{C}$

 Terminating source impedance: $Z_S = 50 \Omega$

 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C		1882.5		MHz
Maximum insertion attenuation	α_{\max}				
1850.0 ... 1915.0 MHz		—	2.5	3.2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1850.0 ... 1915.0 MHz		—	0.8	1.4	dB
Absolute group delay (mean)	$\bar{\tau}$				
1850.0 ... 1915.0 MHz		1	11	21	ns
Return loss					
1850.0 ... 1915.0 MHz		9	10	—	dB
Absolute attenuation	α_{abs}				
800.0 ... 1400.0 MHz		24	28	—	dB
1400.0 ... 1745.0 MHz		25	28	—	dB
1930.0 ... 1940.0 MHz		5	10	—	dB
1940.0 ... 3000.0 MHz		20	23	—	dB

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Characteristics

 Temperature range for specification: $T = 0 \text{ to } +85 \text{ }^{\circ}\text{C}$

 Terminating source impedance: $Z_S = 50 \text{ } \Omega$

 Terminating load impedance: $Z_L = 50 \text{ } \Omega$

			min.	typ. @ 25 °C	max.	
Center frequency	f_C			1882.5		MHz
Maximum insertion attenuation	α_{\max}					
1850.0 ... 1915.0 MHz			—	2.9	3.5	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
1850.0 ... 1915.0 MHz			—	1.1	1.7	dB
Absolute group delay (mean)	$\bar{\tau}$					
1850.0 ... 1915.0 MHz			1	11	21	ns
Return loss						
1850.0 ... 1915.0 MHz			9	10	—	dB
Absolute attenuation	α_{abs}					
800.0 ... 1400.0 MHz			24	28	—	dB
1400.0 ... 1746.0 MHz			25	28	—	dB
1930.0 ... 1940.0 MHz			5	10	—	dB
1940.0 ... 3000.0 MHz			20	23	—	dB

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Characteristics

 Temperature range for specification: $T = -40$ 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		1882.5		MHz
Maximum insertion attenuation	α_{\max}				
1850.0 ... 1915.0 MHz		—	2.9	4.0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1850.0 ... 1915.0 MHz		—	1.1	2.2	dB
Absolute group delay (mean)	$\bar{\tau}$				
1850.0 ... 1915.0 MHz		1	11	21	ns
Return loss					
1850.0 ... 1915.0 MHz		9	10	—	dB
Absolute attenuation	α_{abs}				
800.0 ... 1400.0 MHz		24	28	—	dB
1400.0 ... 1746.0 MHz		25	28	—	dB
1930.0 ... 1940.0 MHz		3	10	—	dB
1940.0 ... 3000.0 MHz		20	23	—	dB

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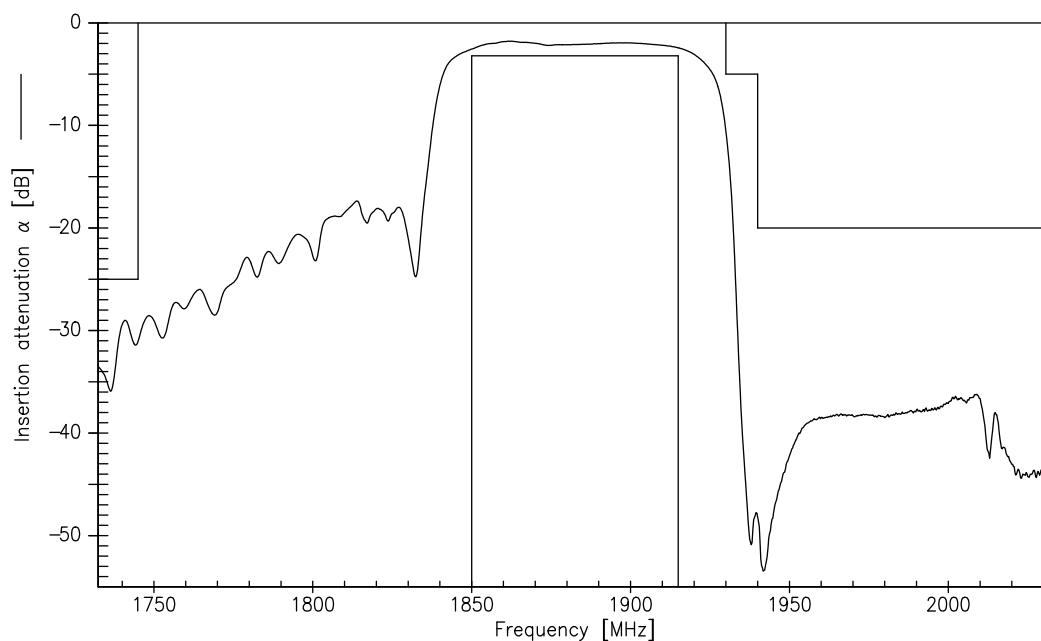
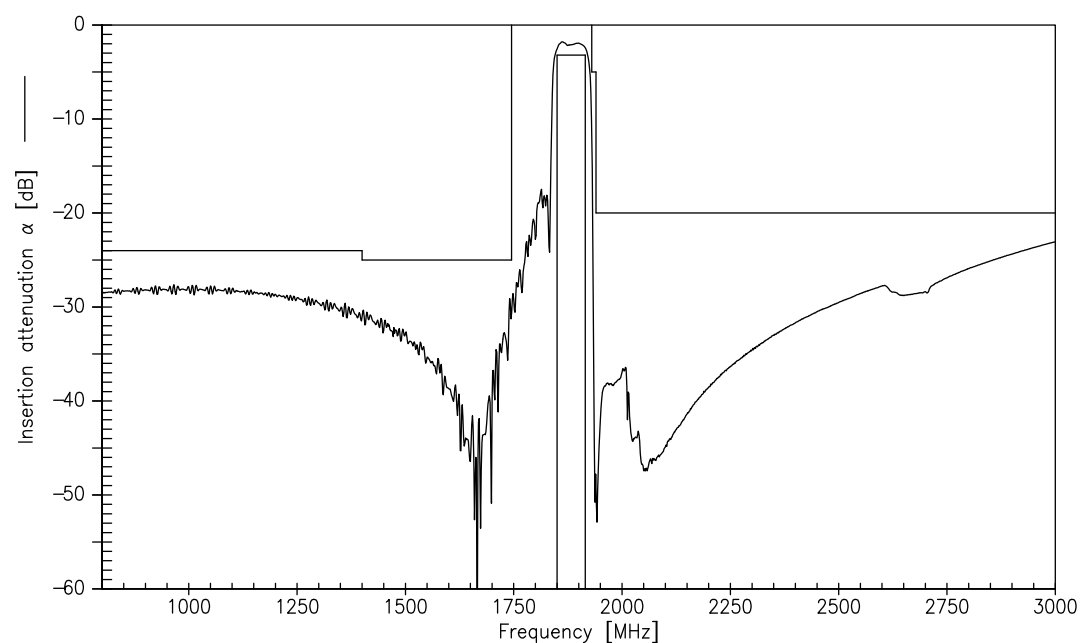

Maximum ratings

Operable temperature range	T	−40/+85	°C	
Storage temperature range	T _{stg}	−40/+85	°C	
DC voltage	V _{DC}	6	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	Machine Model
		250 ²⁾	V	Human Body Model
Input power	P _{IN}			
1850.0 ... 1915.0 MHz		18	dBm	cw, 48 h, 85 °C
1930.0 ... 1990.0 MHz		12	dBm	cw, 2000 h, 85 °C
1930.0 ... 1990.0 MHz		15	dBm	cw, 2000 h, 55 °C

¹⁾ acc. to JESD22-A115B (MM - machine model), 10 negative & 10 positive pulses.

²⁾ acc. to JESD22-A114F (HBM - Human Body Model), 1 negative & 1 positive pulses.

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Transfer function (S21, narrowband)

Transfer function (S21, wideband)


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

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References

Type	B4182
Ordering code	B39182B4182U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B4182_NB.s2p , B4182_WB.s2p See file header for port/pin assignment table
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru

www.lifeelectronics.ru