

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

## SAW Components

### SAW RF filter

Digital radio

Series/type:	B3404
Ordering code:	B39232-B3404-U410
Date:	April 08, 2014
Version:	2.0

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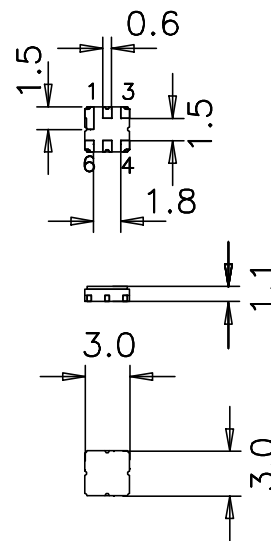
Data sheet

**Application**

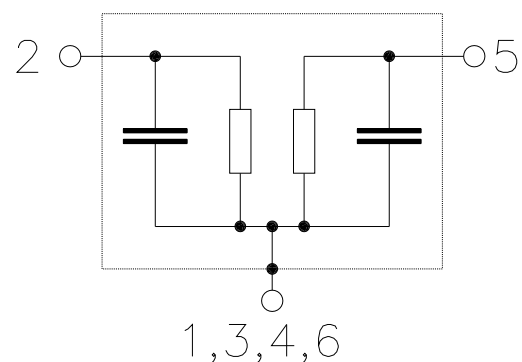
- Low-loss RF filter for digital radio
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Usable passband 25 MHz
- No matching required for operation at 50 Ω


**Features**

- Package size 3.0 x 3.0 x 1.1 mm<sup>3</sup>
- 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 Sensitivity Level 1**
- AEC-Q200 qualified component family
- Filter surface passivated


**Pin configuration**

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



Data sheet


**Characteristics**

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

		<b>B3404</b>			
		<b>min.</b>	<b>typ. @ 25 °C</b>	<b>max.</b>	
<b>Nominal frequency</b>	$f_N$	—	2332.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	0.6	0.9	dB
2320.0 ... 2345.0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0.2	0.5	dB
2320.0 ... 2345.0 MHz					
<b>Input VSWR</b>		—	1.6	2.0:1	
2320.0 ... 2345.0 MHz					
<b>Output VSWR</b>		—	1.6	2.0:1	
2320.0 ... 2345.0 MHz					
<b>Attenuation</b>	$\alpha$				
824.0 ... 894.0 MHz		15	20	—	dB
1710.0 ... 1755.0 MHz		16	21	—	dB
1850.0 ... 1990.0 MHz		17	22	—	dB
2400.0 ... 2415.0 MHz		15	35	—	dB
2415.0 ... 2600.0 MHz		20	26	—	dB

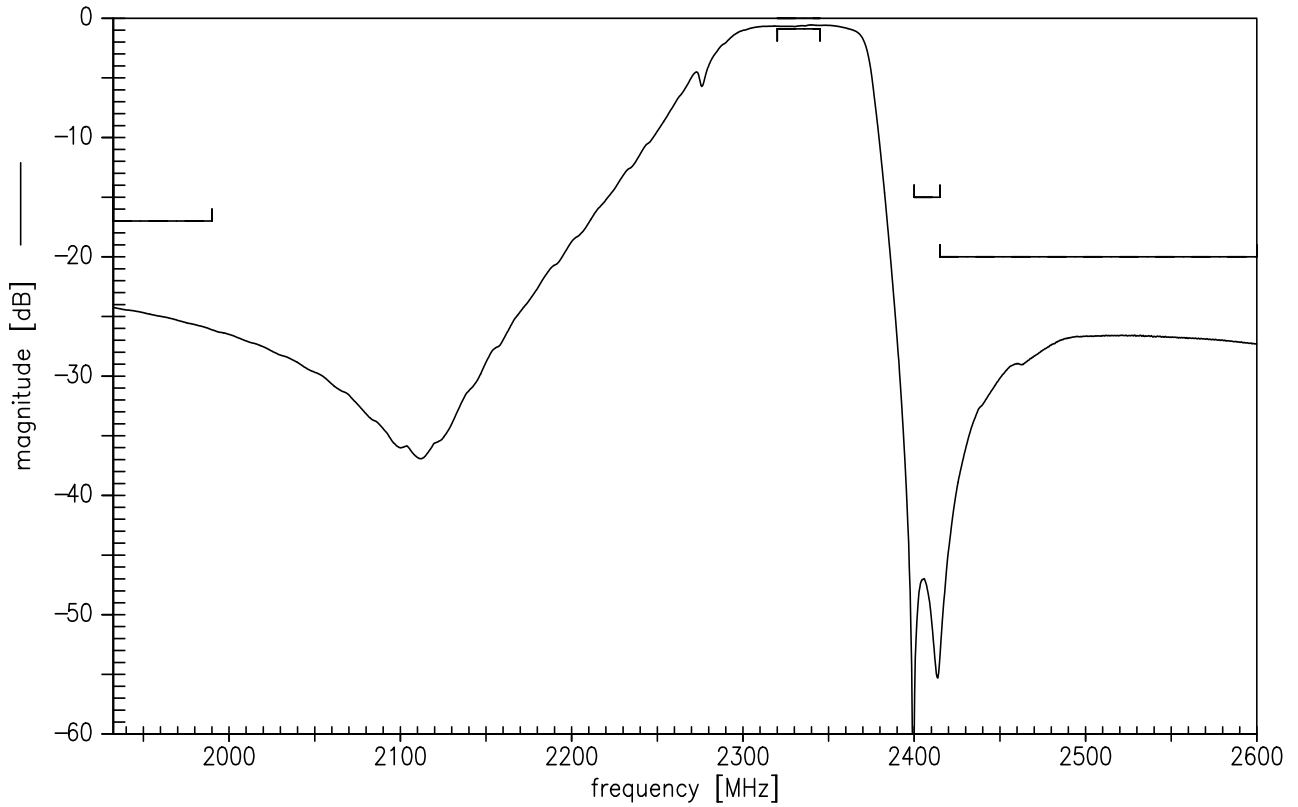
**Maximum ratings**

Operable temperature range	T	-40/+105	°C	
Storage temperature range	T <sub>stg</sub>	-40/+125	°C	
DC voltage	V <sub>DC</sub>	5	V	
Input power				
2320.0 ... 2345.0 MHz	P <sub>IN</sub>	18	dBm	cw, 100000 h, 85°C

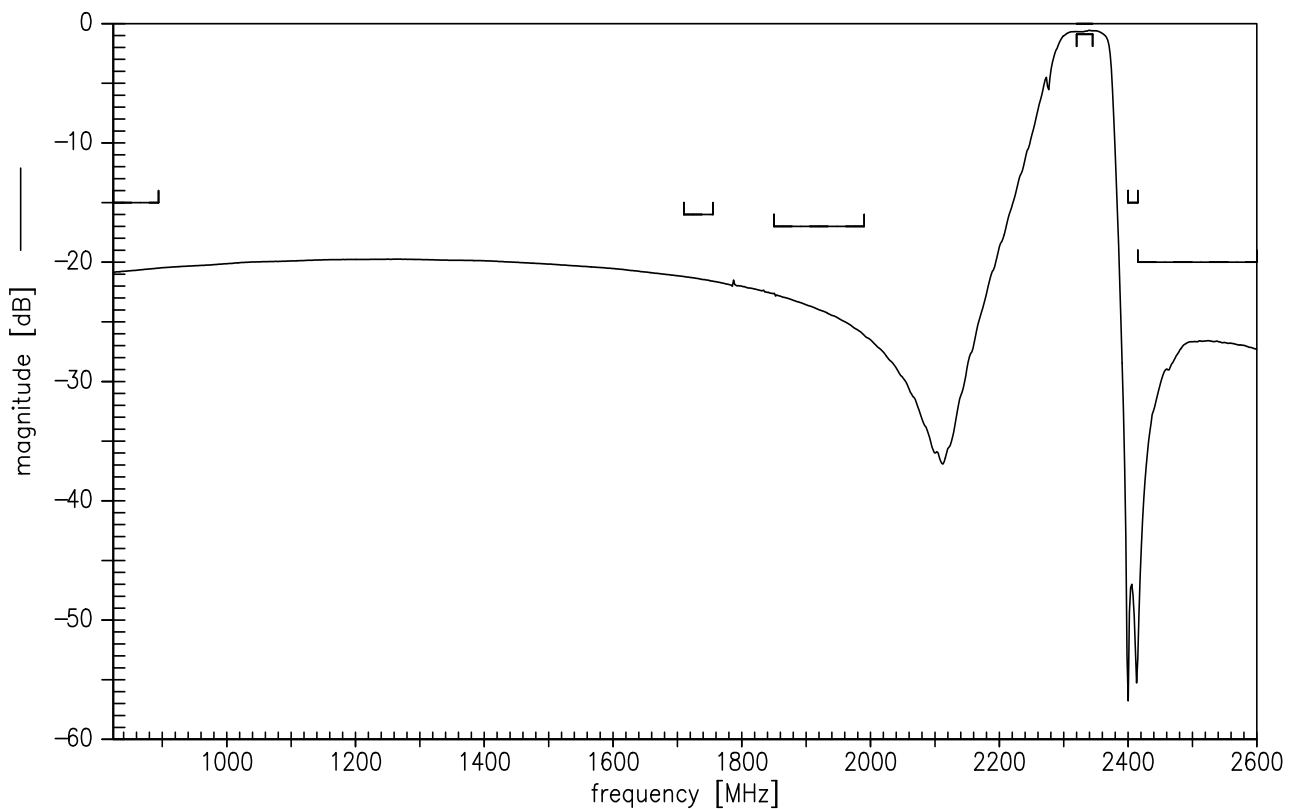
Data sheet



**Transfer function (narrow band)**



**Transfer function (wide band)**

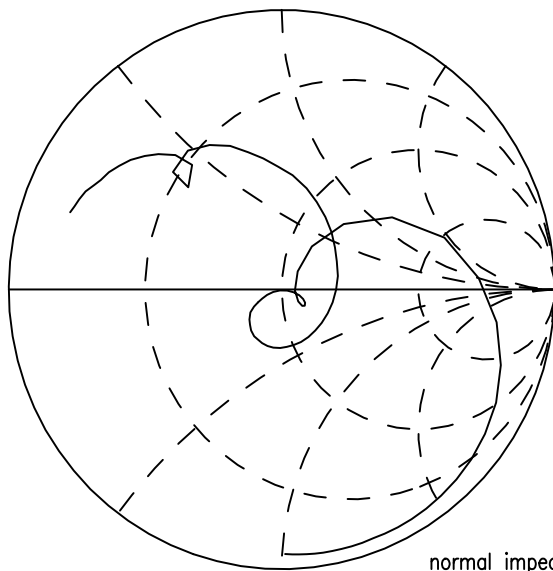


Data sheet

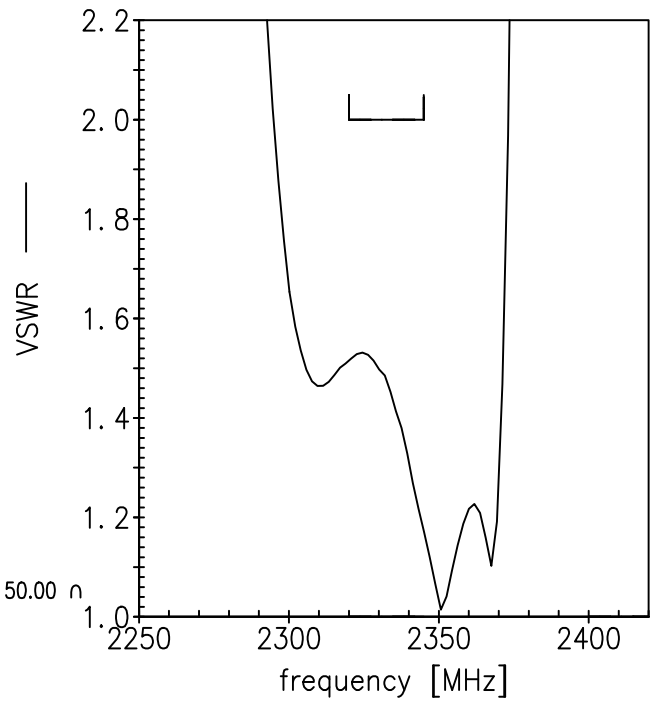


Smith charts

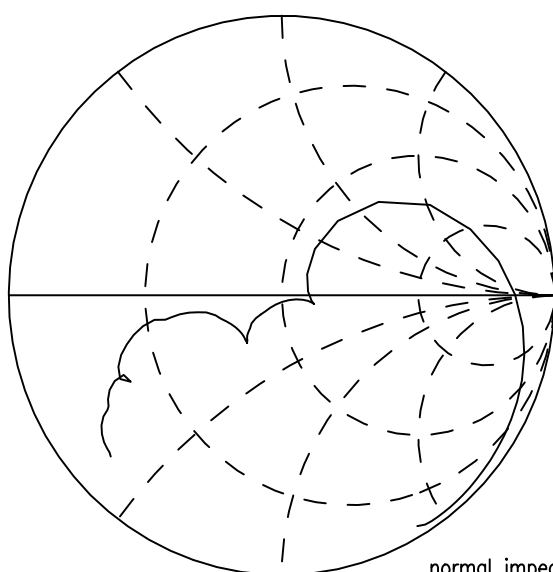
**S<sub>11</sub> function**



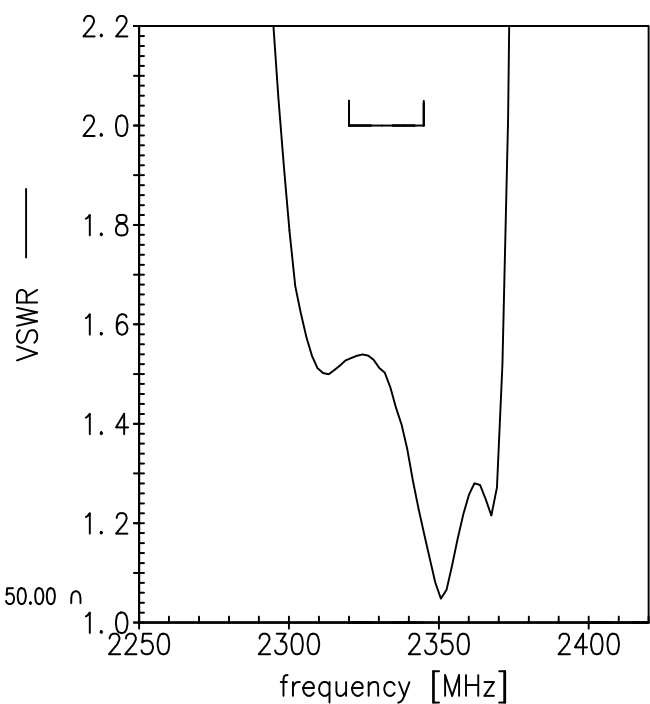
normal impedance: 50.00  $\Omega$



**S<sub>22</sub> function**



normal impedance: 50.00  $\Omega$





**References**

<b>Type</b>	B3404
<b>Ordering code</b>	B39232-B3404-U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8228-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B3404_NB.s2p B3404_WB.s2p See file header for port/pin assignment table.
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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.
<b>Matching coils</b>	See Inductor pdf-catalog <a href="http://www.tdk.co.jp/tefe02/coil.htm#aname1">http://www.tdk.co.jp/tefe02/coil.htm#aname1</a> and Data Library for circuit simulation <a href="http://www.tdk.co.jp/etvcl/index.htm">http://www.tdk.co.jp/etvcl/index.htm</a> for a large variety of matching coils.

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