

RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

## SAW Components

### SAW RF filter for base stations

Band 26 uplink

Series/type:	B5348
Ordering code:	B39831B5348U410
Date:	Jul 12, 2015
Version:	2.0

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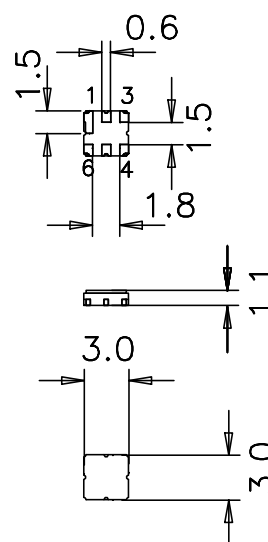
Data sheet

**Application**

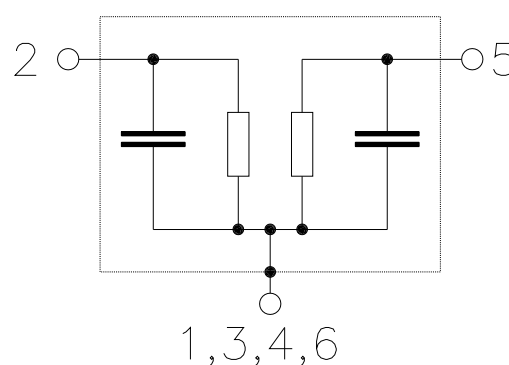
- RF filter for band 26 uplink
- Unbalanced to unbalanced operation
- Low amplitude ripple
- Usable passband 35 MHz
- No matching required for operation at 50 Ω

**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**
- Filter surface passivated


**Pin configuration**

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



Data sheet


**Characteristics**

Temperature range for specification:  $T = -40\text{ °C to }+95\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	831.5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	2.1	3.0	dB
814.0 ... 849.0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	1.3	1.8	dB
814.0 ... 849.0 MHz					
<b>Input VSWR</b>		—	1.9:1	2.4:1	
814.0 ... 849.0 MHz					
<b>Output VSWR</b>		—	1.9:1	2.4:1	
814.0 ... 849.0 MHz					
<b>Absolute group delay</b>	$\tau$	—	50	65	ns
814.0 ... 849.0 MHz					
<b>Group delay ripple (p-p)</b>	$\Delta\tau$	—	30	60	ns
814.0 ... 849.0 MHz					
<b>Absolute attenuation</b>	$\alpha_{\text{abs}}$				dB
0.0 <sup>1)</sup> ... 760.0 MHz		35	38	—	dB
760.0 ... 768.0 MHz		30	35	—	dB
768.0 ... 800.0 MHz		20	25	—	dB
800.0 ... 807.0 MHz		2	10	—	dB
859.0 ... 860.0 MHz		6	16	—	dB
860.0 ... 894.0 MHz		10	20	—	dB
894.0 ... 960.0 MHz		12	40	—	dB
960.0 ... 1050.0 MHz		20	40	—	dB
1050.0 ... 2000.0 MHz		25	34	—	dB
2000.0 ... 3000.0 MHz		20	30	—	dB
3000.0 ... 4000.0 MHz		10	17	—	dB
4000.0 ... 5100.0 MHz		8	12	—	dB

1) Final test start from 10 MHz

**Maximum ratings**

Operable temperature range	T	-45/+125	°C	
Storage temperature range	T <sub>stg</sub>	-45/+125	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	Machine Model
		150 <sup>2)</sup>	V	Human Body Model
Input power	P <sub>IN</sub>			
814.0 ... 849.0 MHz		15	dBm	cw, 100000 h, 85 °C
814.0 ... 849.0 MHz		14	dBm	cw, 100000 h, 95 °C
814.0 ... 849.0 MHz		20	dBm	cw, 1000 h, 85 °C
814.0 ... 849.0 MHz		19	dBm	cw, 1000 h, 95 °C
814.0 ... 849.0 MHz		23	dBm	cw, 2 h, 85 °C
814.0 ... 849.0 MHz		22	dBm	cw, 2 h, 95 °C

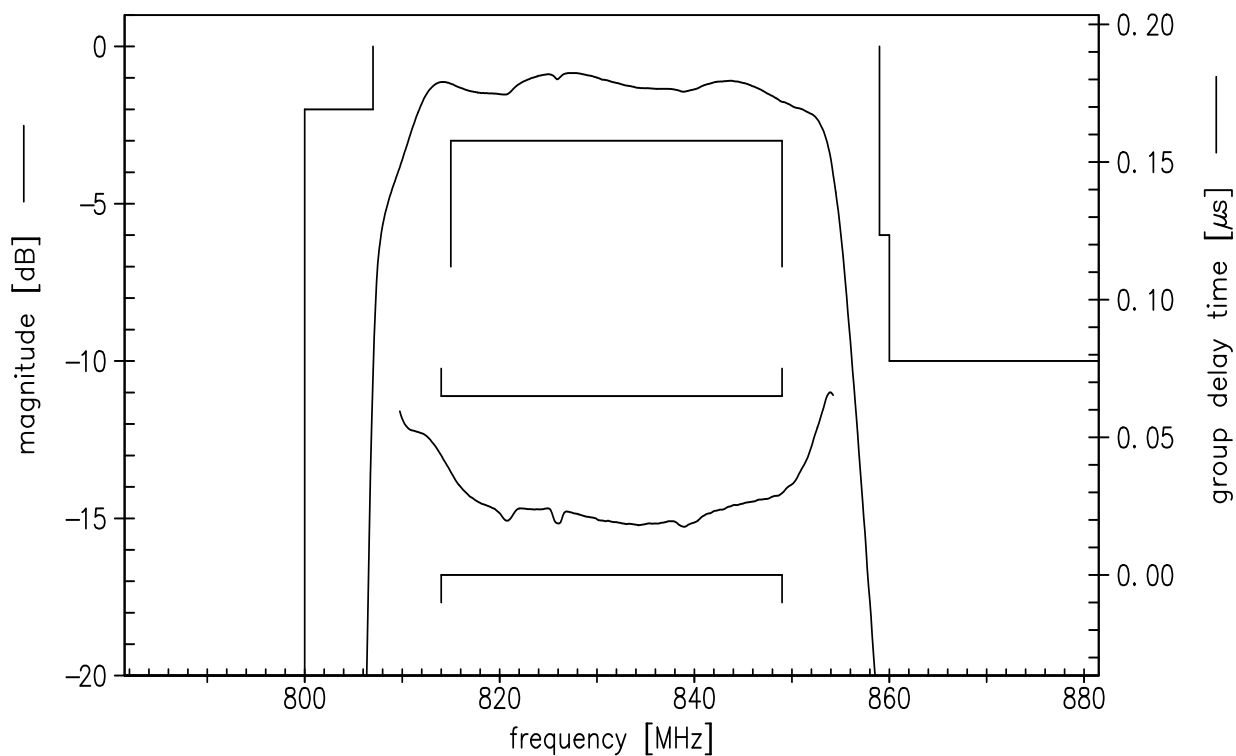
1) acc. to JESD22-A115B (MM - Machine Model), 10 negative & 10 positive pulses

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

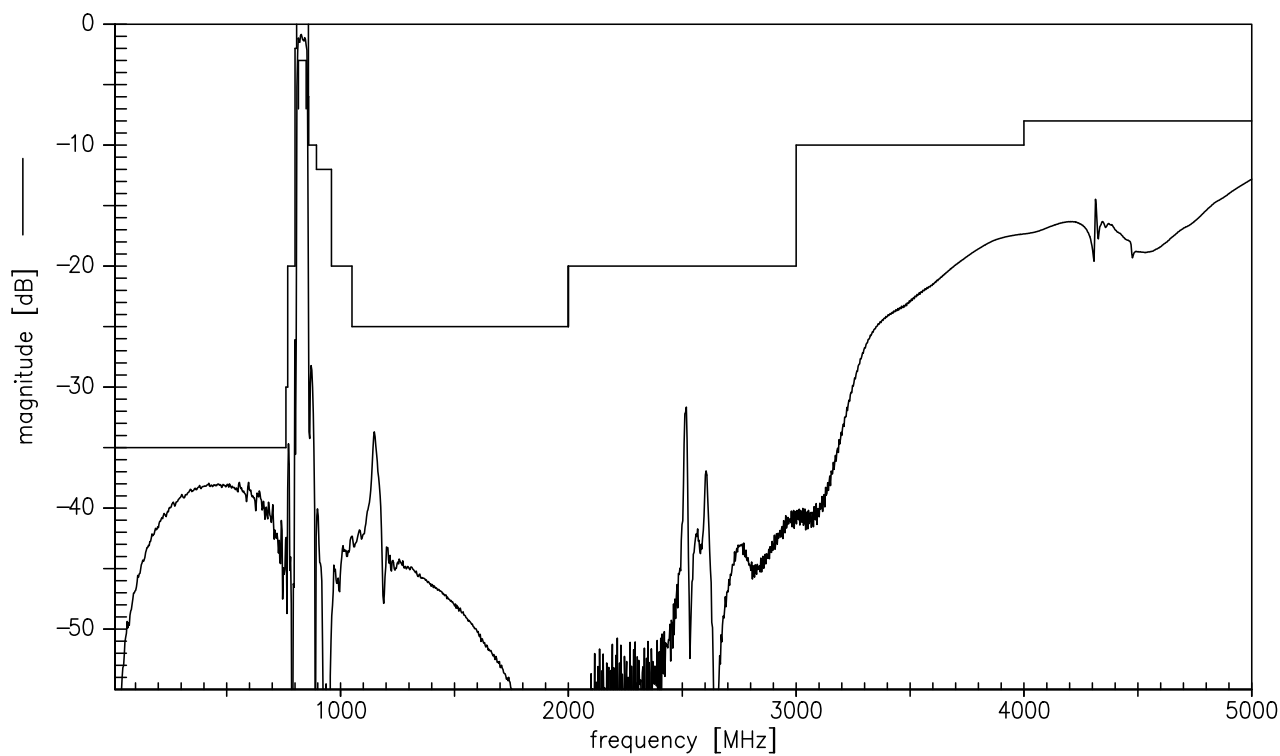
Data sheet



**Transfer function (S21, narrowband)**



**Transfer function (S21, wideband)**

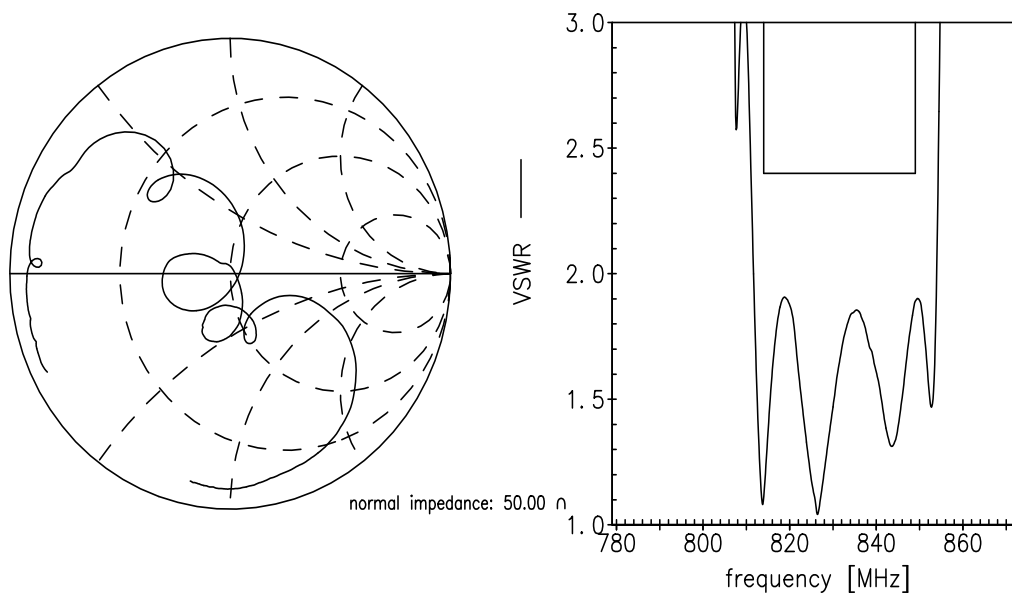


Data sheet

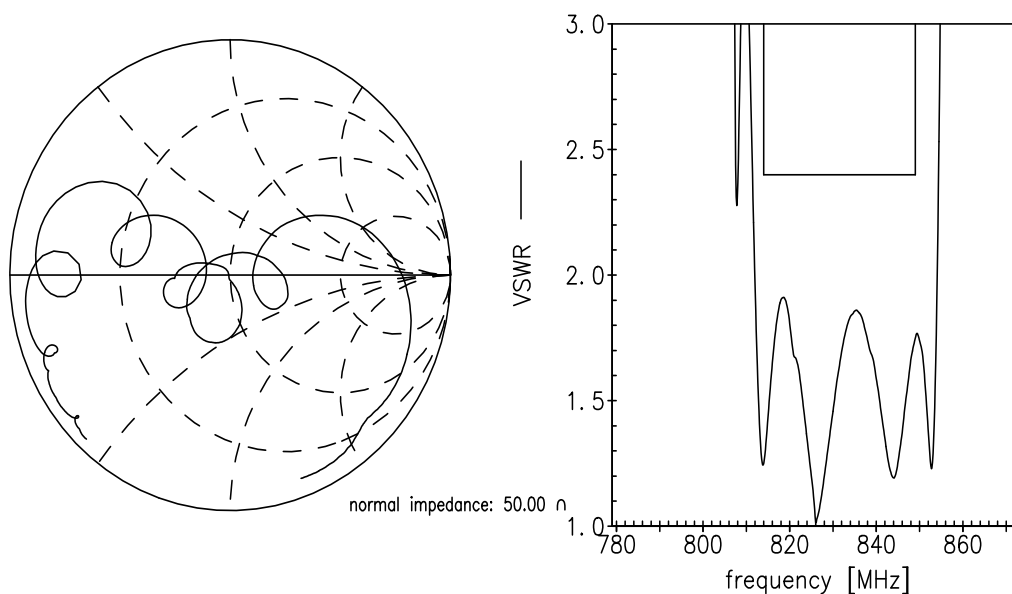
**SMD**

Smith charts

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



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





**References**

<b>Type</b>	B5348
<b>Ordering code</b>	B39831B5348U410
<b>Marking and package</b>	C61157-A7-A67
<b>Packaging</b>	F61074-V8228-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5348_NB.s2p B5348_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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