



RF360 Europe GmbH

A Qualcomm – TDK Joint Venture

## SAW Components

### SAW Rx filter

TETRA

Series/type:	B5055
Ordering code:	B39431B5055Z810
Date:	April 22, 2008
Version:	2.0

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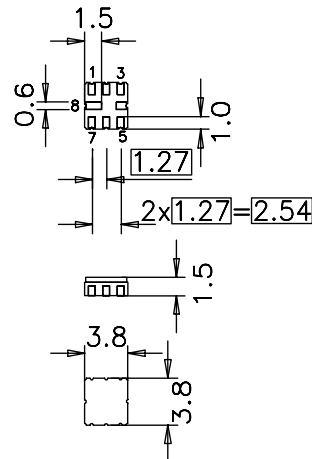
Data sheet


**Application**

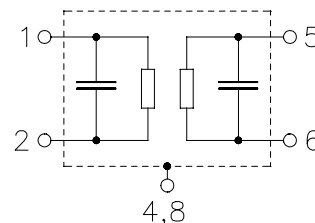
- Low-loss IF filter for base station TETRA systems, receive path (Rx)
- Unbalanced to unbalanced or unbalanced to balanced operation
- Low amplitude ripple
- No external matching required
- Usable passband 10 MHz


**Features**

- Package size 3.8 x 3.8 x 1.35 mm<sup>3</sup>
- Package code QCC8B
- RoHS compatible
- Approximate weight 0.07 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**


**Pin configuration**

- 5 Input
- 1 Output / Output balanced
- 2 Output ground / Output balanced
- 3,6,7 To be grounded
- 4,8 Case ground



Data sheet


**Characteristics**

Temperature range for specification:  $T = -30\text{ °C to }+70\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
<b>Center frequency</b>	$f_C$	—	425.00	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
420.0 ... 430.0 MHz		—	2.7	3.5 <sup>1)</sup>	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
420.0 ... 430.0 MHz		—	1.2	2.0 <sup>2)</sup>	dB
<b>Return Loss (VSWR)</b>					
420.0 ... 430.0 MHz		—	1.9	2.1	dB
<b>Attenuation</b>	$\alpha$				
50.0 ... 355.0 MHz		37	50	—	dB
355.0 ... 415.0 MHz		12	20	—	dB
435.0 ... 474.0 MHz		8	12	—	dB
474.0 ... 491.0 MHz		26	50	—	dB
491.0 ... 582.0 MHz		37	45	—	dB
582.0 ... 593.0 MHz		42	44	—	dB
593.0 ... 1422.0 MHz		30	32	—	dB
1422.0 ... 1616.0 MHz		27	29	—	dB
1616.0 ... 2046.0 MHz		15	17	—	dB

1) 3.0dB max at +15°C to +35°

2) 1.5dB max at +15°C to +35°

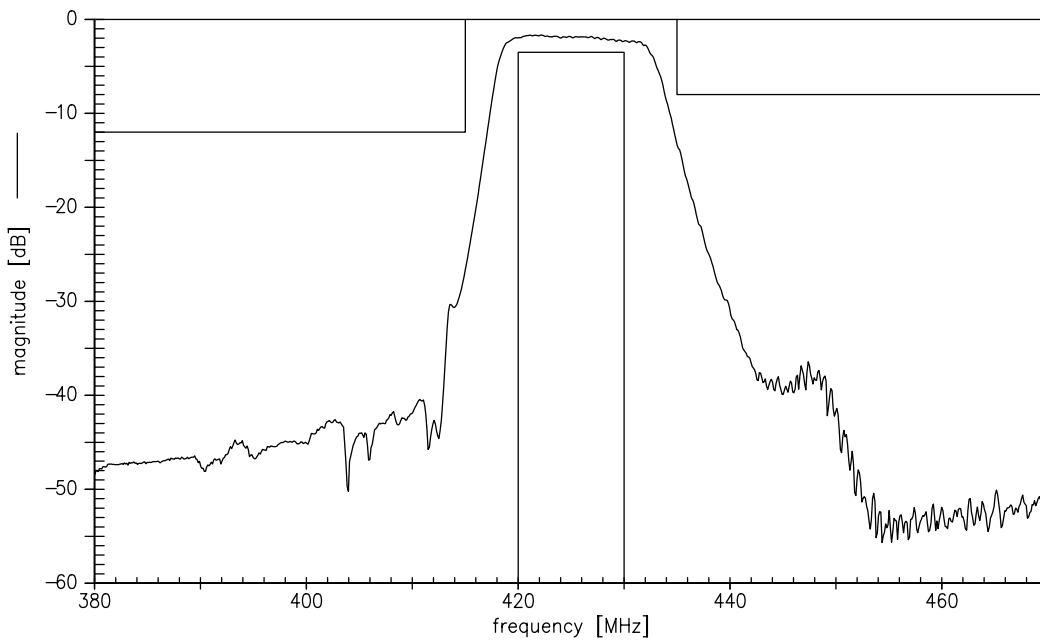

**Maximum ratings**

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T <sub>stg</sub>	-40/+85	°C	
DC voltage	V <sub>DC</sub>	5	V	
ESD voltage	V <sub>ESD</sub>	100 <sup>1)</sup>	V	machine model, 1 pulse
Input power at 420.0 ... 430.0MHz	P <sub>IN</sub>	15	dBm	Continuous Wave

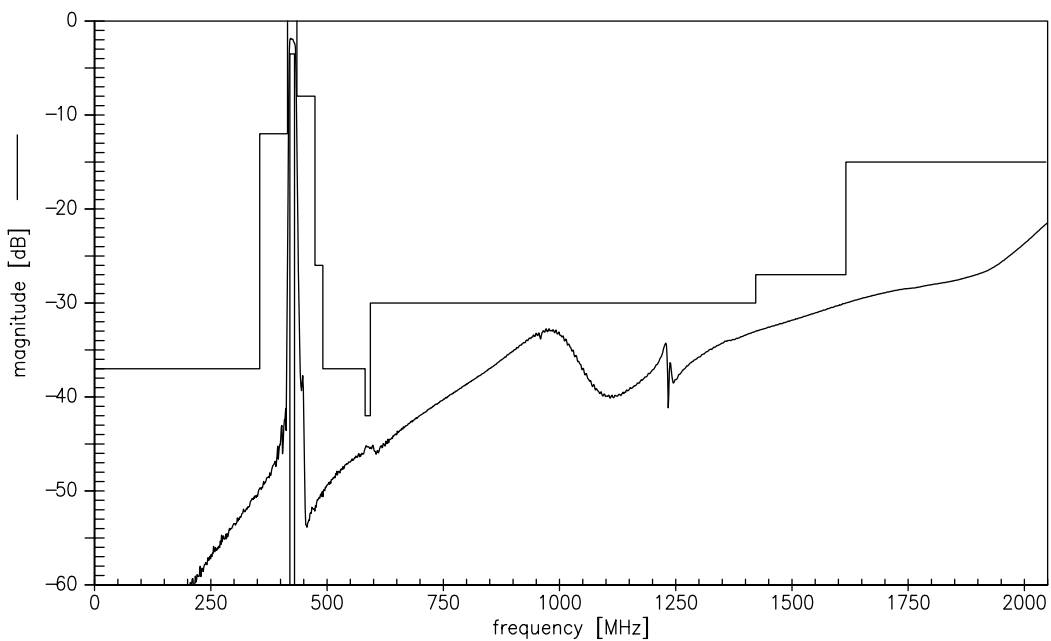
<sup>1)</sup> acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function



Transfer function (wideband)

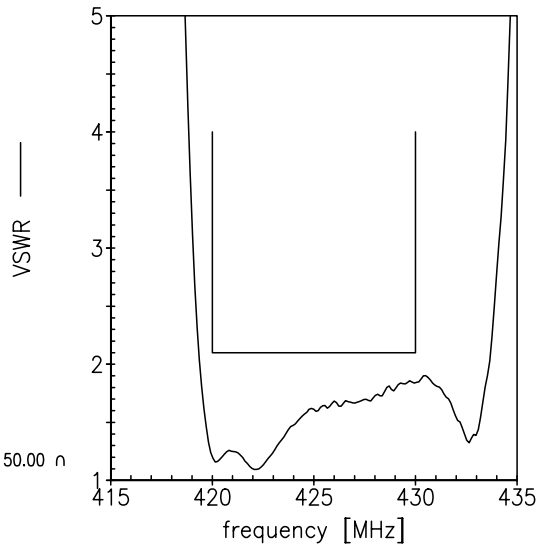
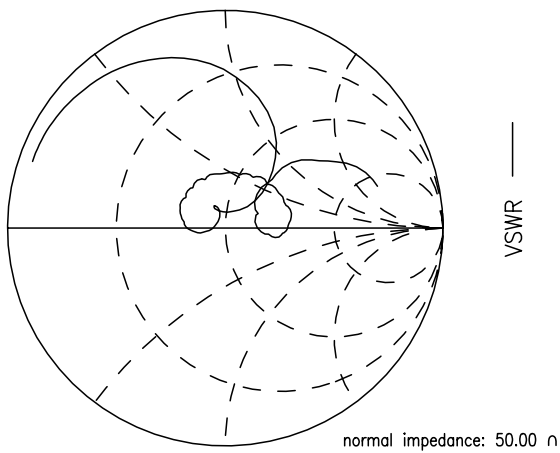


Data sheet

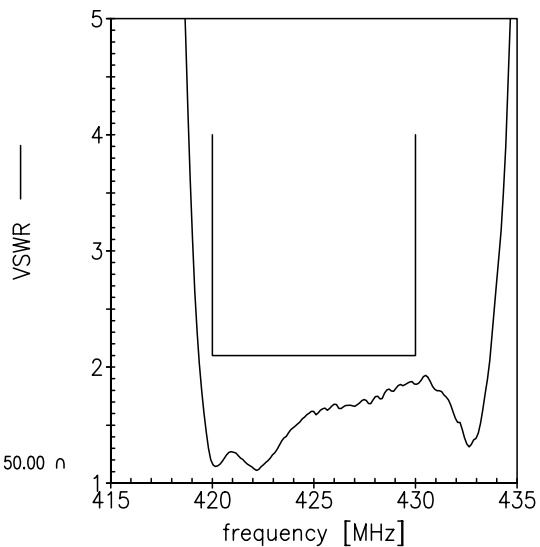
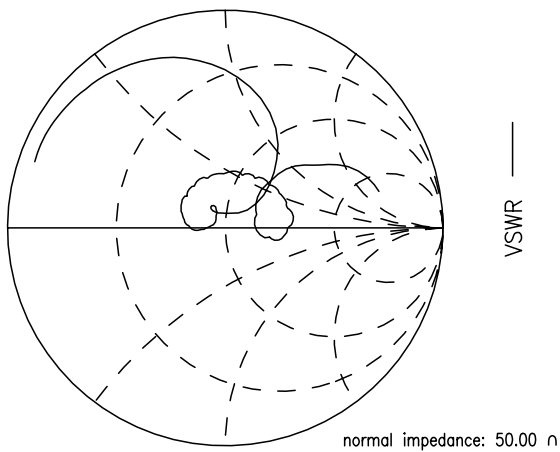


Smith charts

S<sub>11</sub> function



S<sub>22</sub> function





**SAW Components**

**B5055**

**SAW Rx filter**

**425.00 MHz**

Data sheet



## References

<b>Type</b>	B5055
<b>Ordering code</b>	B39431B5055Z810
<b>Marking and package</b>	C61157-A7-A46
<b>Packaging</b>	F61074-V8167-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	B5055_NB.s2p B5055_WB.s2p
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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."

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