



SAW Components

SAW Rx filter

TETRA

Series/type:	B5053
Ordering code:	B39421B5053Z810
Date:	January 21, 2008
Version:	2.0



Data sheet



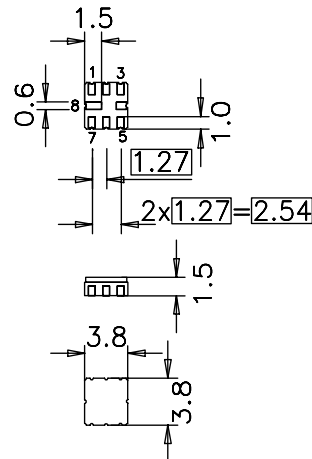
Application

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



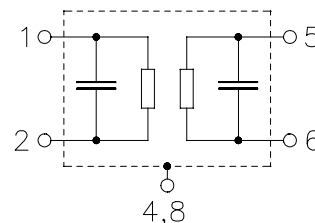
Features

- Package size 3.8 x 3.8 x 1.5 mm³
- 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





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Characteristics

Temperature range for specification: T = -30 °C to +70 °C
 Terminating source impedance: Z_S = 50Ω
 Terminating load impedance: Z_L = 50Ω

		min.	typ. @ 25 °C	max.	
Center frequency	f _C	—	415.00	—	MHz
Maximum insertion attenuation	α _{max}				
410.0 ... 420.0 MHz		—	2.4	3.0 ¹⁾	dB
Amplitude ripple (p-p)	Δα				
410.0 ... 420.0 MHz		—	0.8	2.0 ²⁾	dB
Return loss (VSWR)					
410.0 ... 420.0 MHz		—	2.1	2.4	
Attenuation	α				
50.0 ... 355.0 MHz		37	49	—	dB
355.0 ... 405.0 MHz		12	25	—	dB
425.0 ... 464.0 MHz		8	13	—	dB
464.0 ... 491.0 MHz		26	49	—	dB
491.0 ... 572.0 MHz		37	46	—	dB
572.0 ... 593.0 MHz		44	46	—	dB
593.0 ... 1392.0 MHz		30	32	—	dB
1392.0 ... 1616.0 MHz		27	31	—	dB
1616.0 ... 2046.0 MHz		15	22	—	dB

1) 2.7dB max at +15 °C to +35 °C

2) 1.5dB max at +15 °C to +35 °C



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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}	5	V	
ESD voltage	V _{ESD}	100 ¹⁾	V	machine model, 10 pulses
Input power at 410.0 ... 420.0MHz	P _{IN}	15	dBm	Continuous Wave

¹⁾ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



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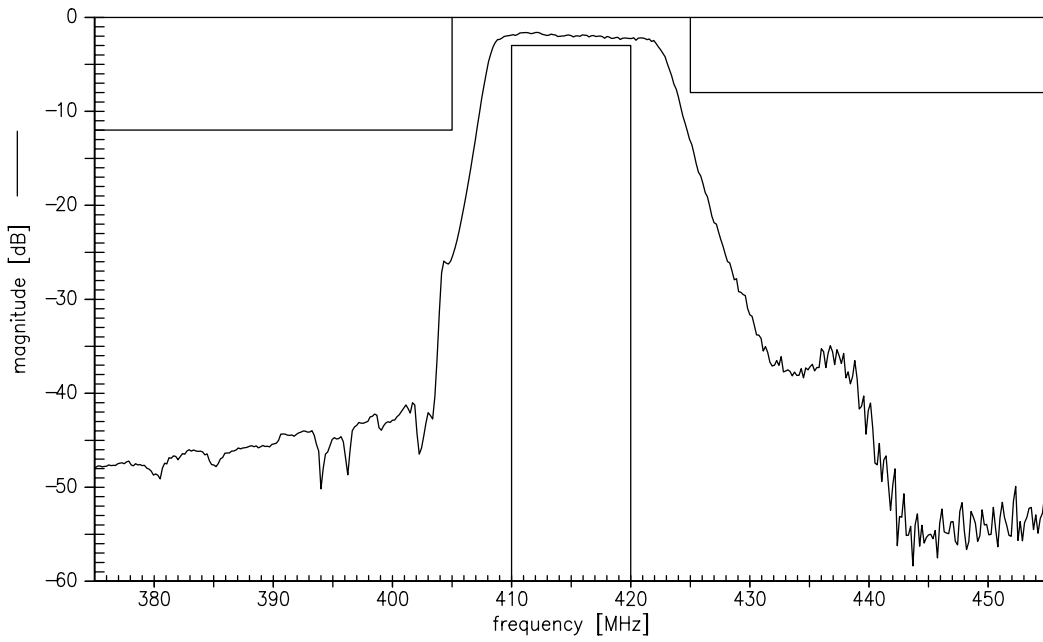
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415.00 MHz

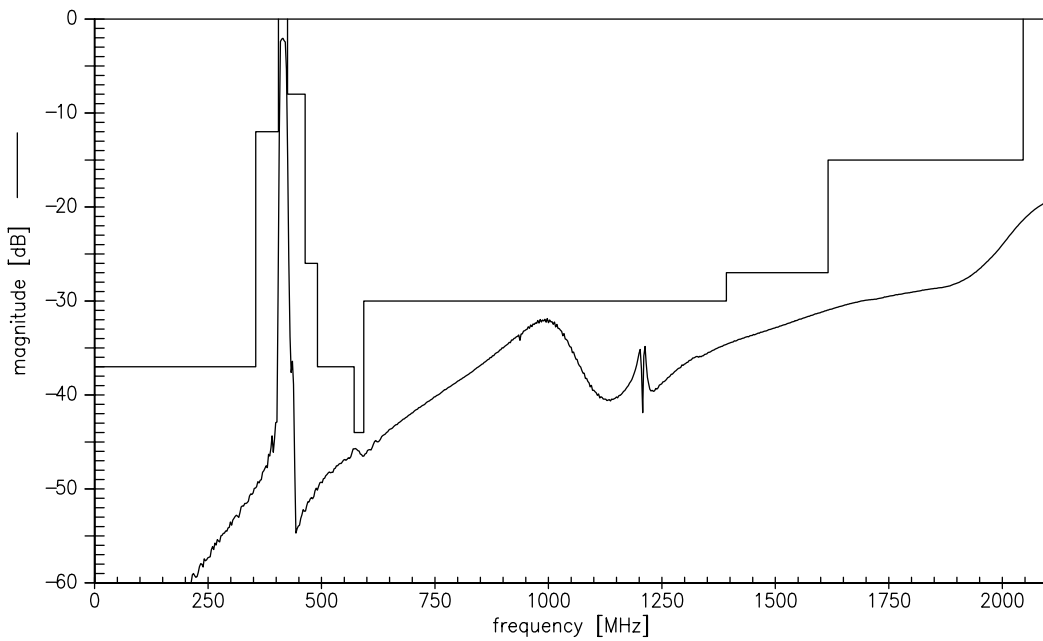
Data sheet



Transfer function



Transfer function (wideband)



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

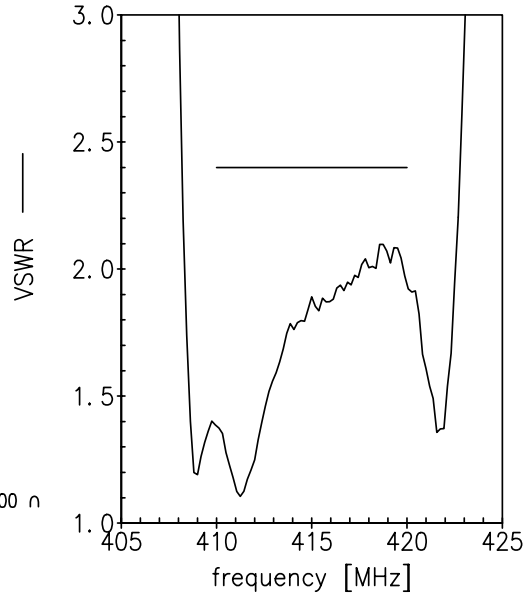
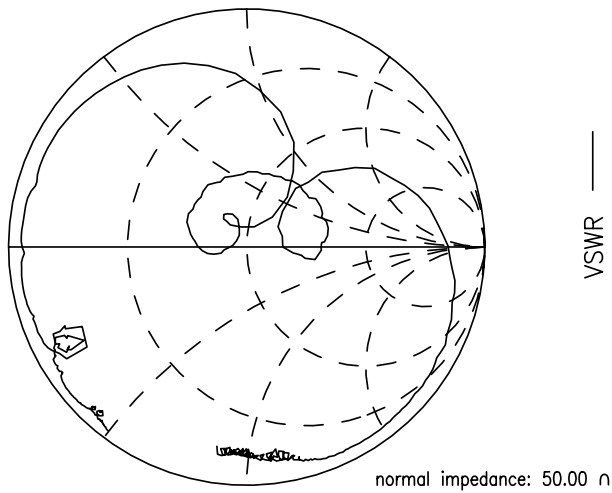


Data sheet

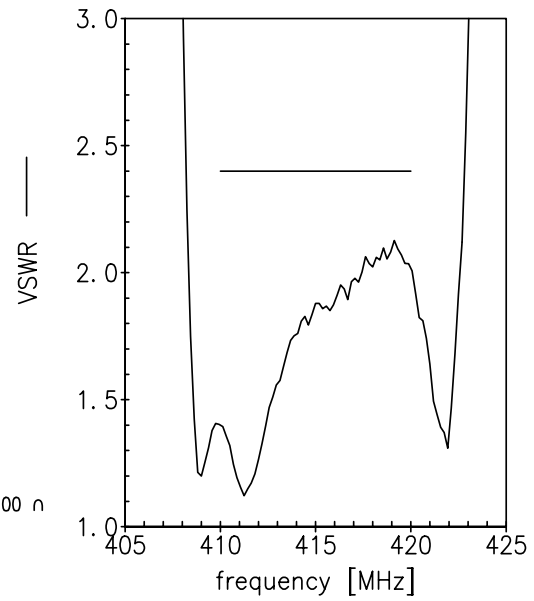
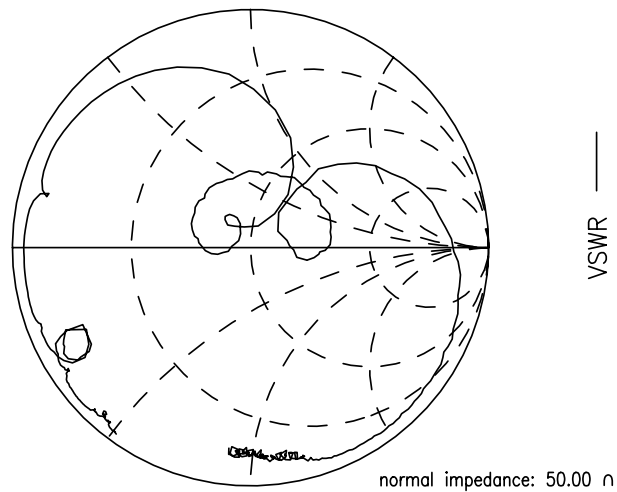


Smith charts

S₁₁ function



S₂₂ function





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References

Type	B5053
Ordering code	B39421B5053Z810
Marking and package	C61157-A7-A46
Packaging	F61074-V8167-Z000
Date codes	L_1126
S-parameters	B5053_NB.s2p B5053_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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