



SAW Components

SAW Rx filter

TETRA

Series/type:	B5054
Ordering code:	B39461B5054Z810
Date:	April 01, 2008
Version:	2.1

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B5054

SAW Rx filter

455.00 MHz

Data sheet



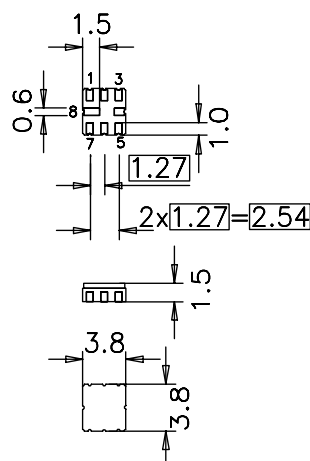
Application

- 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



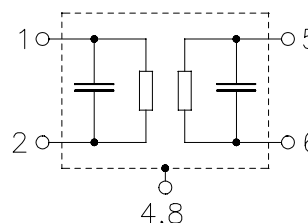
Features

- Package size 3.8 x 3.8 x 1.35 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: $T = -30\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$

 Terminating source impedance: $Z_S = 50\ \Omega$

 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	455.00	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
450.0 ... 460.0 MHz		—	2.2	3.0 ¹⁾	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
450.0 ... 460.0 MHz		—	0.9	2.0 ²⁾	dB
Return Loss (VSWR)					
450.0 ... 460.0 MHz		—	1.8	2.1	dB
Attenuation	α				
50.0 ... 326.0 MHz		27	56	—	dB
326.0 ... 445.0 MHz		12	18	—	dB
465.0 ... 530.0 MHz		6	14	—	dB
530.0 ... 611.0 MHz		27	50	—	dB
611.0 ... 623.0 MHz		45	49	—	dB
623.0 ... 1706.0 MHz		27	32	—	dB
1706.0 ... 2100.0 MHz		27	30	—	dB

¹⁾ 2.5dB max at +15°C to +35°

²⁾ 1.5dB max at +15°C to +35°

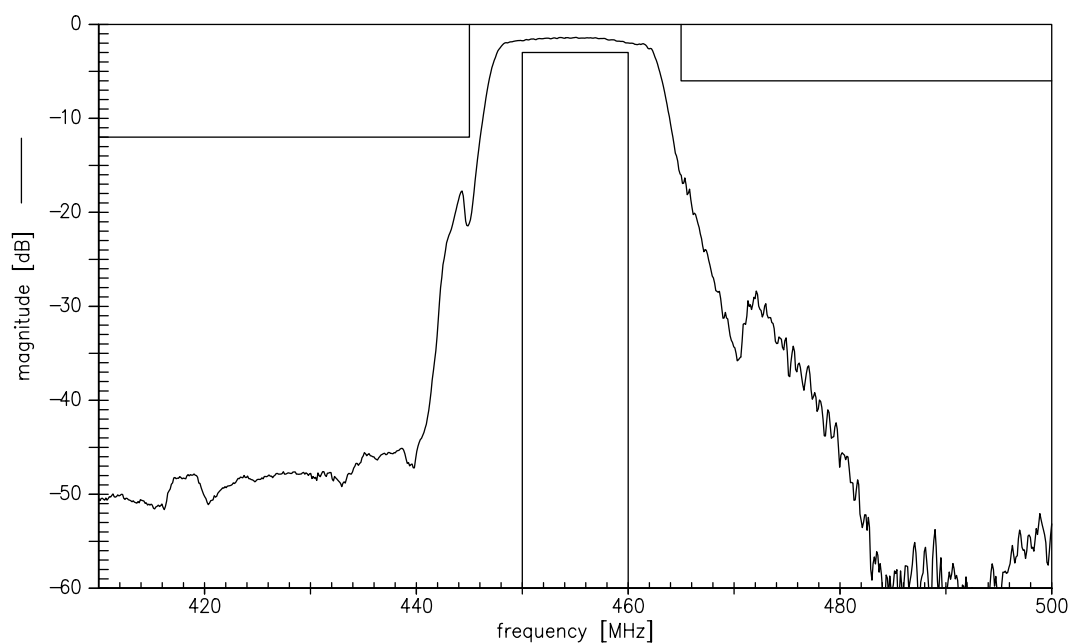
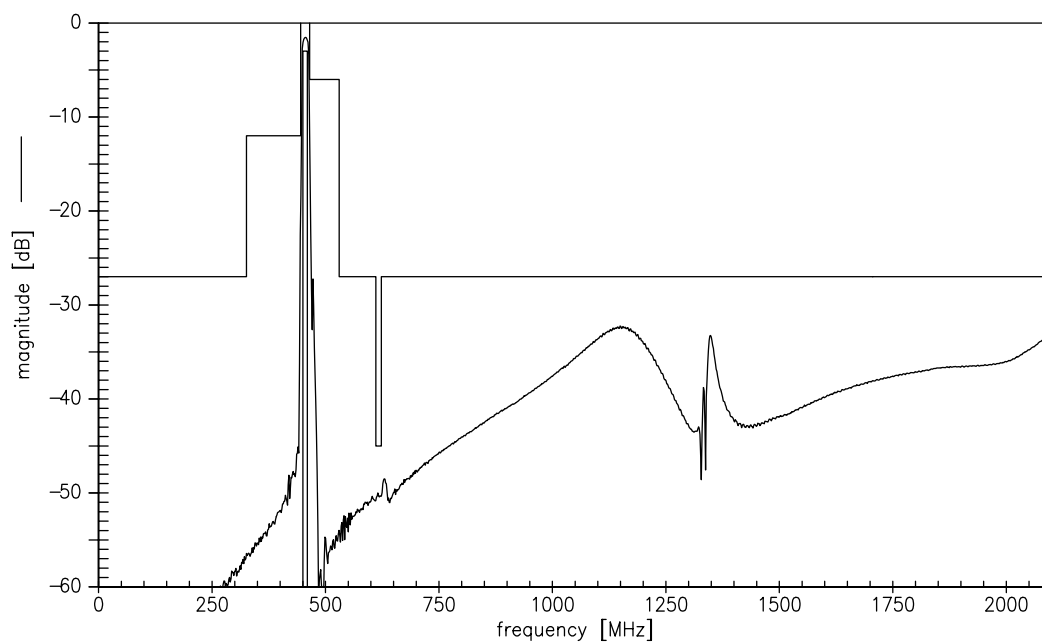
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Maximum ratings

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, 1 pulse
Input power at 450.0 ... 460.0MHz	P _{IN}	15	dBm	Continuous Wave

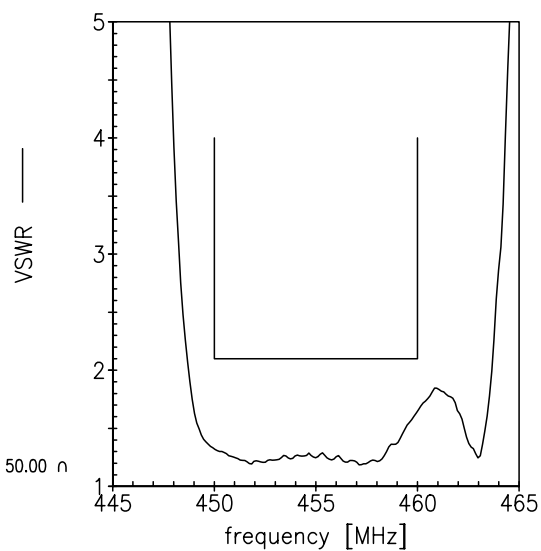
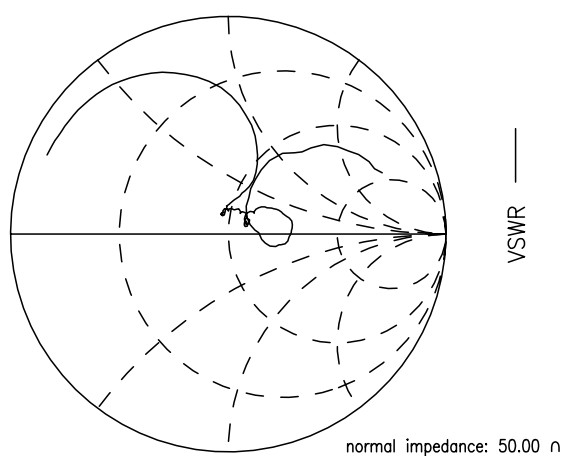
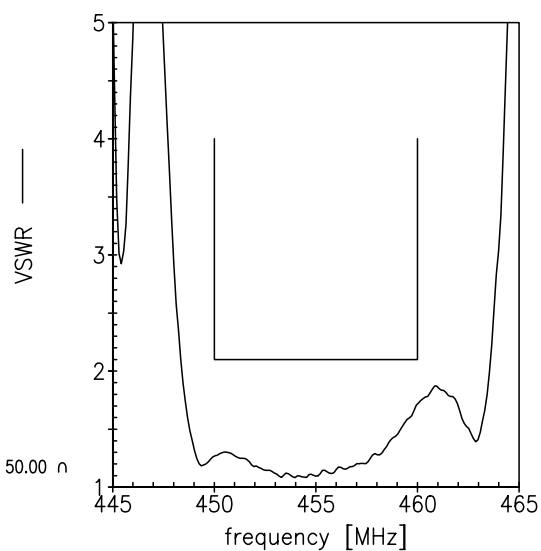
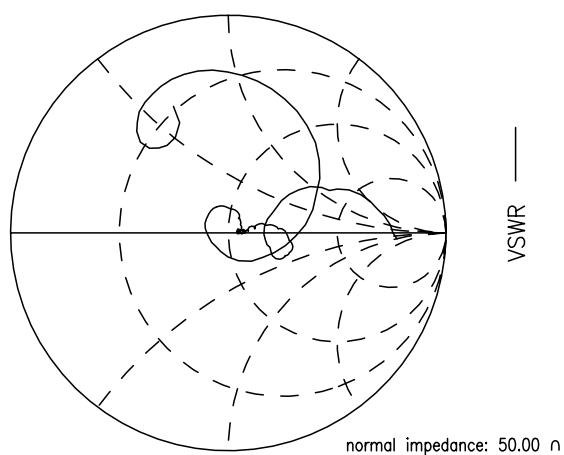
¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.

Transfer function

Transfer function (wideband)


Data sheet



Smith charts

S₁₁ function

S₂₂ function


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Data sheet


References

Type	B5054
Ordering code	B39461B5054Z810
Marking and package	C61157-A7-A46
Packaging	F61074-V8167-Z000
Date codes	L_1126
S-parameters	B5054_NB.s2p B5054_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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7 April 01, 2008

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