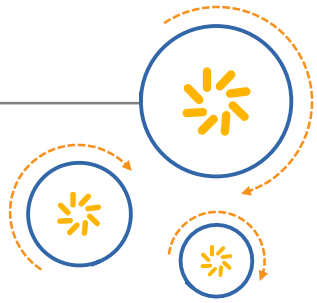
RF360 Europe GmbH

A Qualcomm – TDK Joint Venture



SAW Components

SAW Rx filter

TETRA

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

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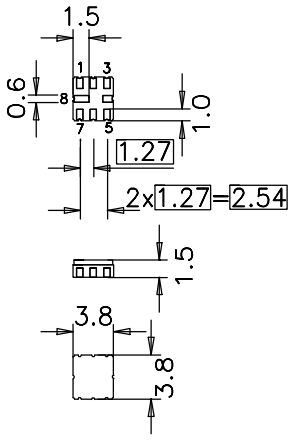
Data sheet SMD

Application

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

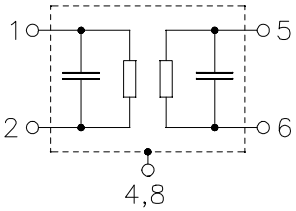
Features

- Package size 3.8 x 3.8 x 1.35 mm^3
- Package code QCC8B
- RoHS compatible
- Approximate weight 0.07 g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**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 SMD

Characteristics

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

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	455.00	—	MHz
Maximum insertion attenuation	α_{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

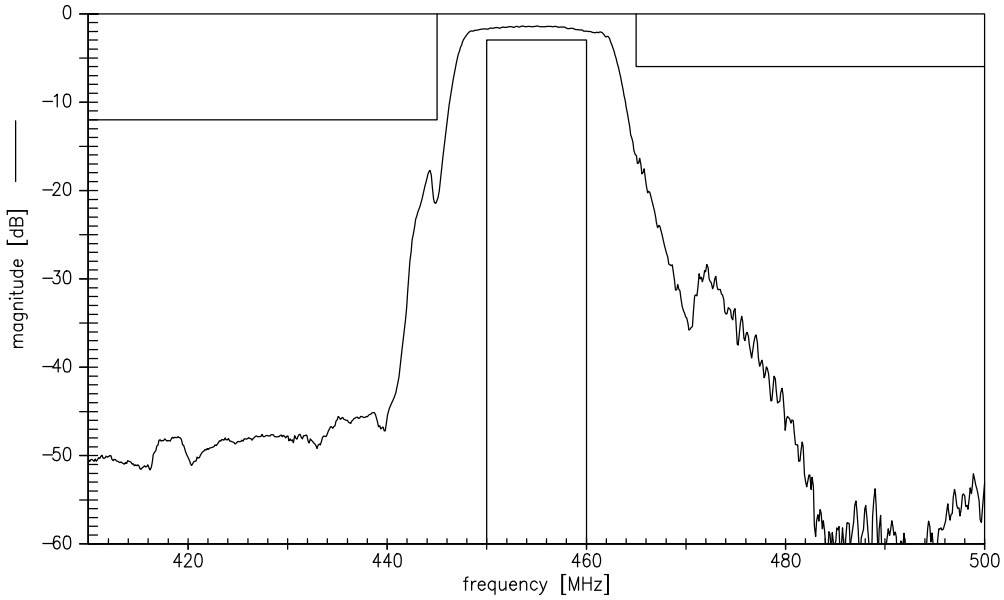
1) 2.5dB max at +15˚C to +35˚
2) 1.5dB max at +15˚C to +35˚

Maximum ratings

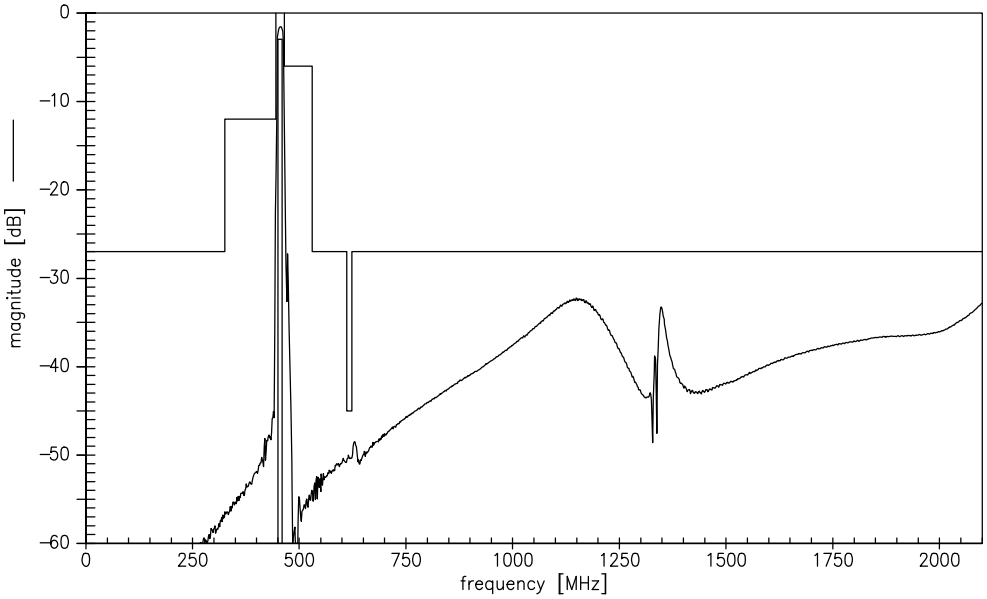
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100[1)]	V	machine model, 1 pulse
Input power at 450.0 ... 460.0MHz	P_{IN}	15	dBm	Continuous Wave

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

Transfer function

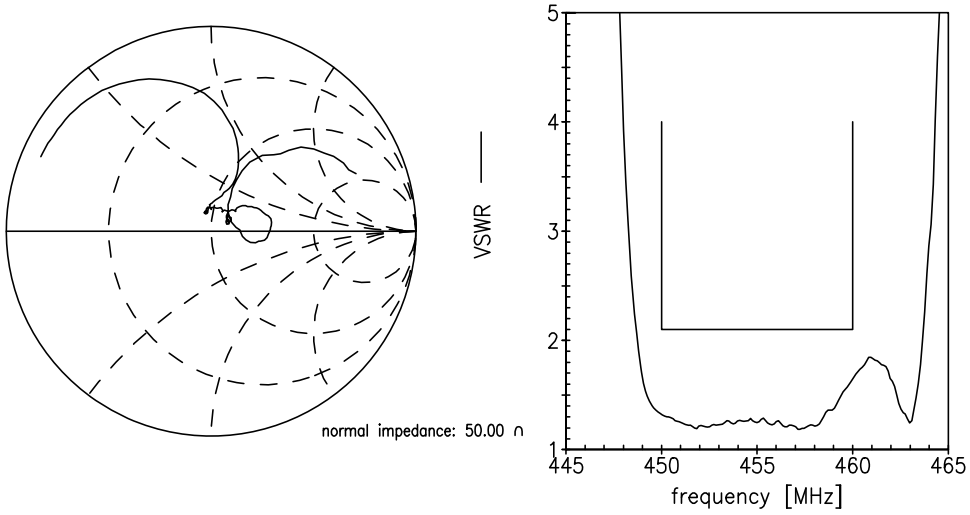


Transfer function (wideband)

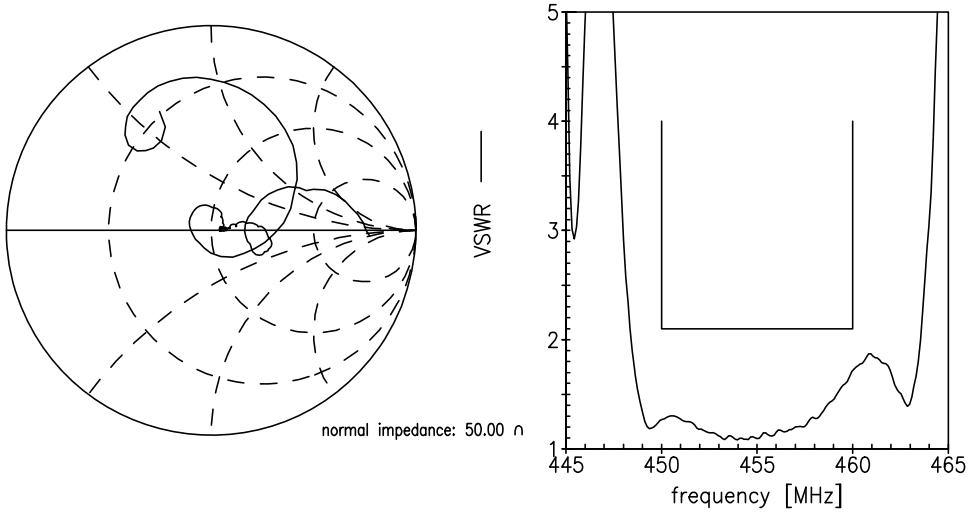


Smith charts

S_{11} function



S_{22} function



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."

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