

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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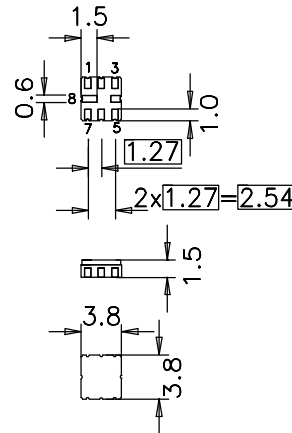
Data sheet


Application

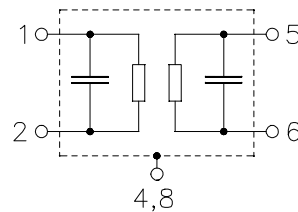
- Low-loss IF filter for base station TETRA systems, receive path (Rx)
- Unbalanced to unbalanced or unbalanced to balanced operation
- Low amplitude ripple
- No external matching required
- Usable passband 10 MHz


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



SAW Components	B5054
SAW Rx filter	455.00 MHz

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.	
Center frequency	f_C	—	455.00	—	MHz
Maximum insertion attenuation	α_{max}	—	2.2	3.0 ¹⁾	dB
450.0 ... 460.0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0.9	2.0 ²⁾	dB
450.0 ... 460.0 MHz					
Return Loss (VSWR)		—	1.8	2.1	dB
450.0 ... 460.0 MHz					
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°

SAW Components **B5054**

SAW Rx filter **455.00 MHz**

Data sheet



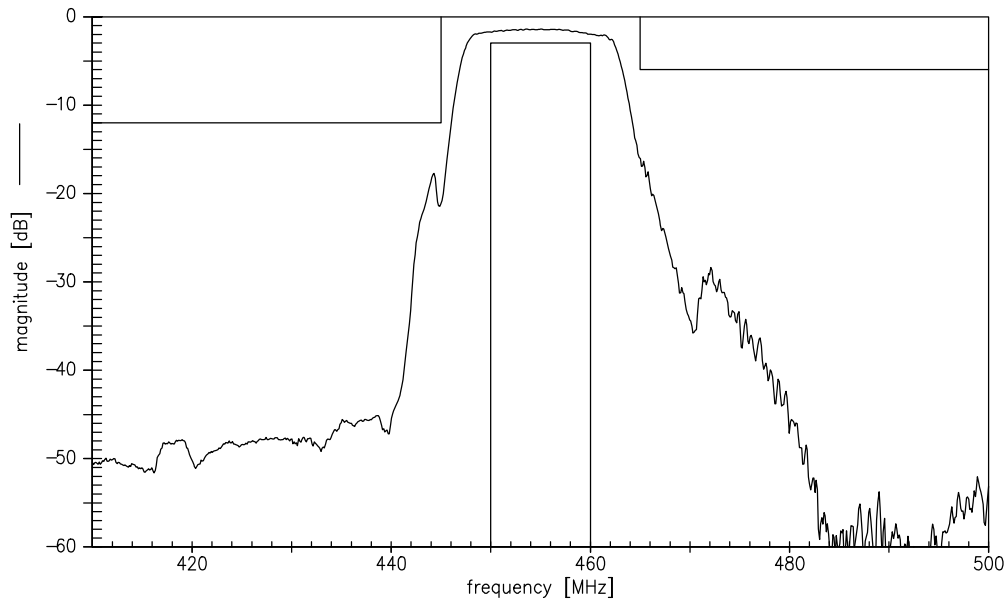
Maximum ratings

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

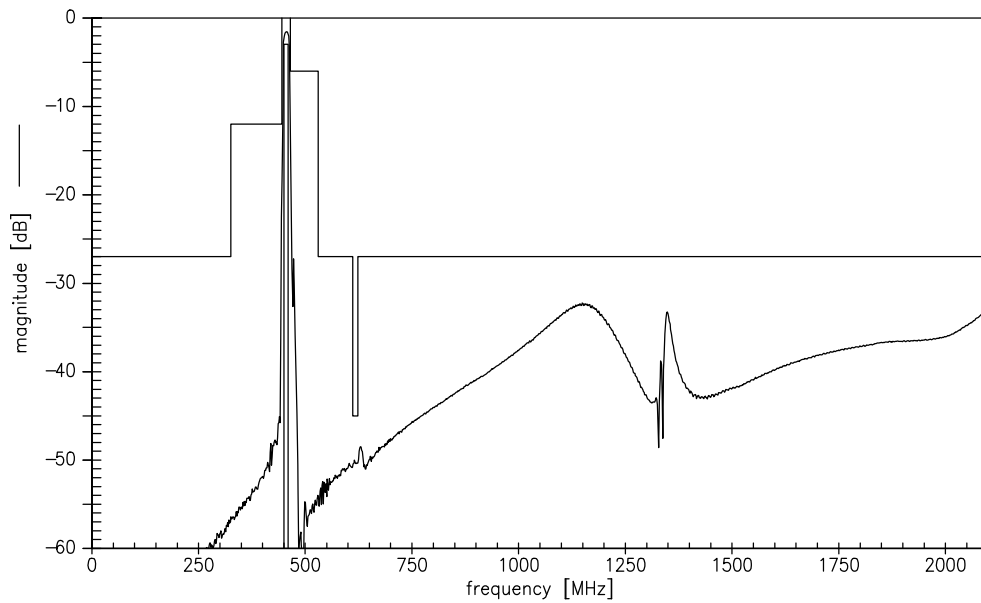
¹⁾ acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function



Transfer function (wideband)

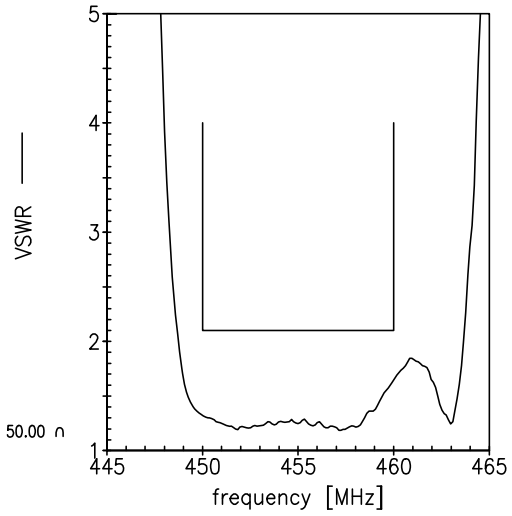
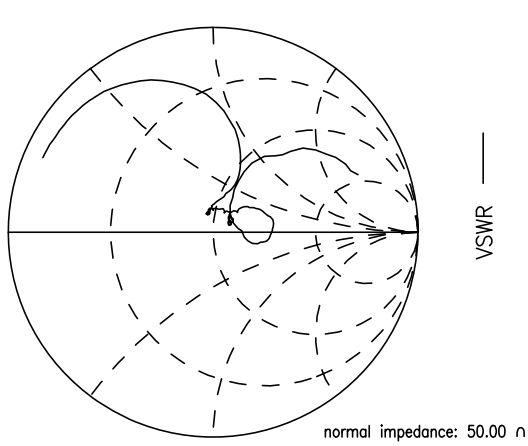


Data sheet

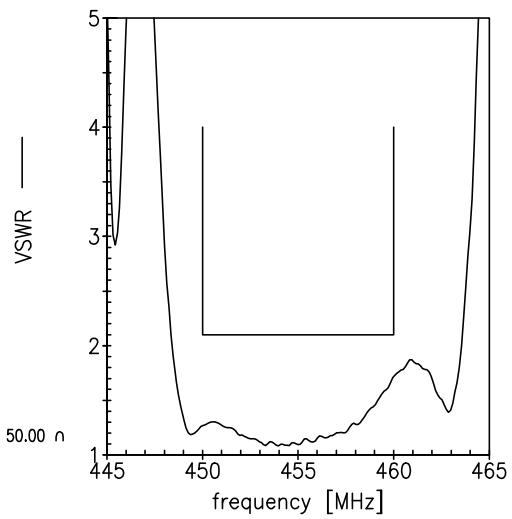
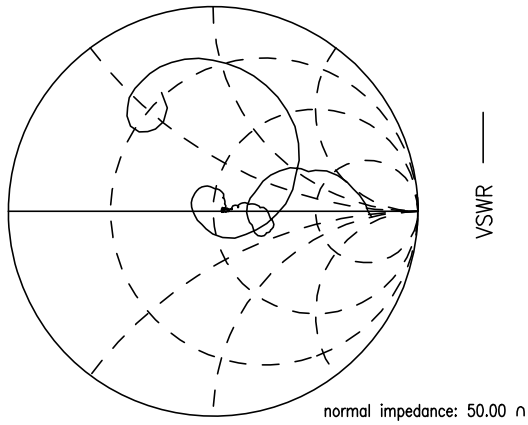


Smith charts

S_{11} function



S_{22} function



SAW Components **B5054**

SAW Rx filter **455.00 MHz**

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."

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