



SAW Components

SAW Rx Filter

MediaFLO

Series/Type:	B9462
Ordering code:	B39721B9462P810
Date:	Dec 14, 2009
Version:	2.0



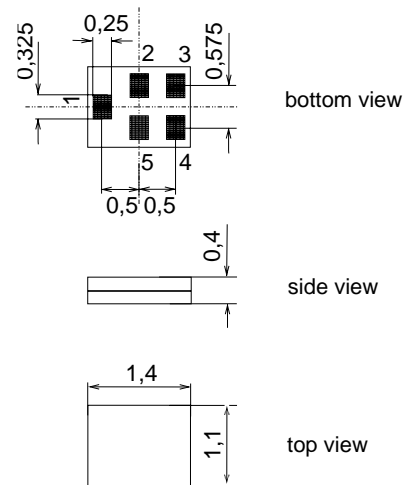
Application

- Low-loss RF filter for MediaFLO TV application in mobile telephone systems
- High selectivity
- Usable passband for ch55 + ch56
- Impedance 50 Ω at input and output



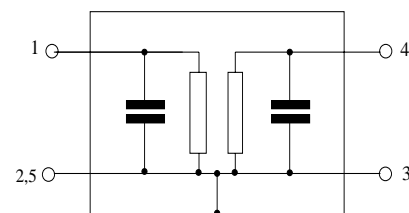
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5I
- RoHS compatible
- Approx. weight 0.003g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 1 Input unbalanced
- 4 Output unbalanced
- 2,3,5 To be grounded





Data sheet



Characteristics

Temperature range for specification: $T = -10\text{ °C to }+60\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	722.0	—	MHz
Maximum insertion attenuation					
	716.29...727.71 MHz α_{max}	—	2.1	2.7	dB _{INT} ¹⁾
Input VSWR	716.29...727.71 MHz	—	1.4	2.0	
Output VSWR	716.29...727.71 MHz	—	1.4	2.0	
Group delay ripple (p-p)	716.29...727.71 MHz	—	50	100	ns
Attenuation					
	0.1 ... 650.0 MHz α_{abs}	40	66	—	dB
	650.0 ... 698.0 MHz	22	38	—	dB
	ch53: 707.0 MHz	16	22	—	dB _{INT}
	ch54: 713.0 MHz	3.0	4.0	—	dB _{INT}
	ch57: 731.0 MHz	2.5	3.5	—	dB _{INT}
	ch58: 737.0 MHz	10	18	—	dB _{INT}
	776.0 ... 798.0 MHz	32	48	—	dB
	824.0 ... 960.0 MHz	45	52	—	dB
	1575.0 MHz	35	50	—	dB
	1710.0 ... 1785.0 MHz	45	50	—	dB
	1920.0 ... 1980.0 MHz	43	50	—	dB
	2400.0 ... 2484.0 MHz	30	50	—	dB

1) dB_{INT} is integrated rejection (see formula below)

$$dB_{INT} = 20 \cdot \log \frac{\sum_{n=1}^N \frac{Loss(F_{n-1}) + Loss(F_n)}{2} \times (F_n - F_{n-1})}{F_N - F_1}$$

Where $Loss(F_n) = 10^{(S_{21} \text{indB})/20}$

N = Number of frequency, insertion loss pairs in a channel



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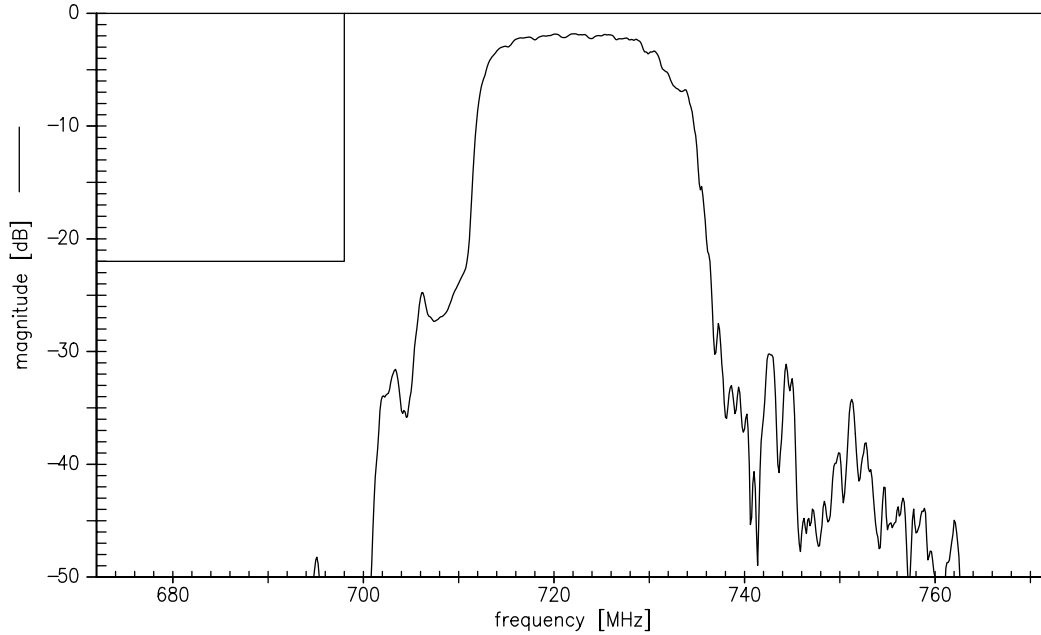
Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	3	V	
ESD voltage	V _{ESD}	100 ¹⁾	V	machine model, 1 pulse
Input Power at 400.0...500.0 MHz 824.0...2400.0 MHz	P _{IN}	15	dBm	CW

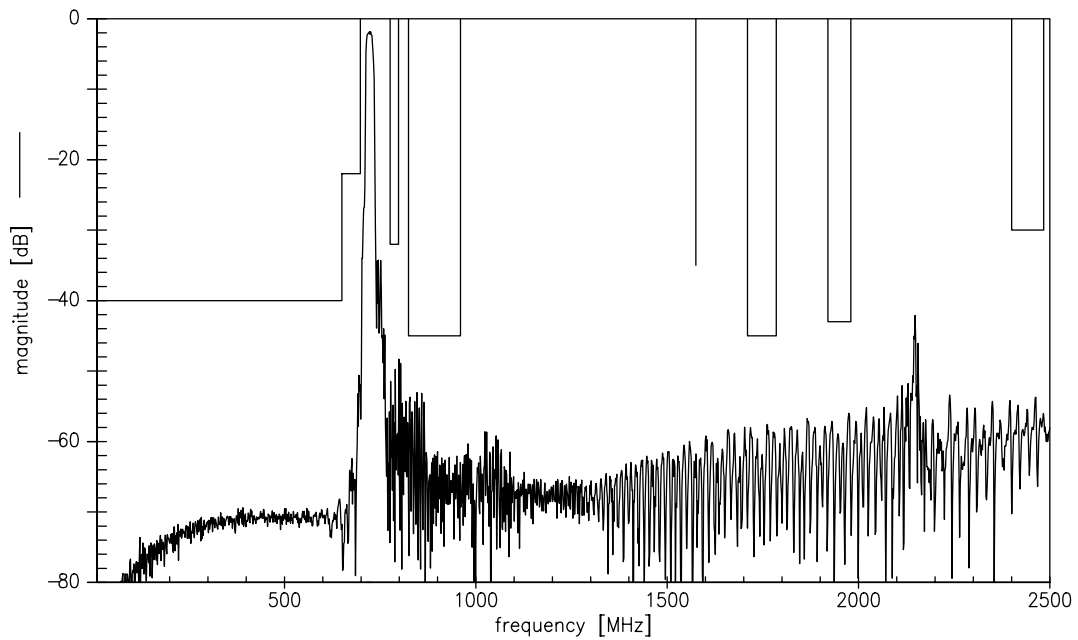
¹⁾ acc. to JEDEC22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function

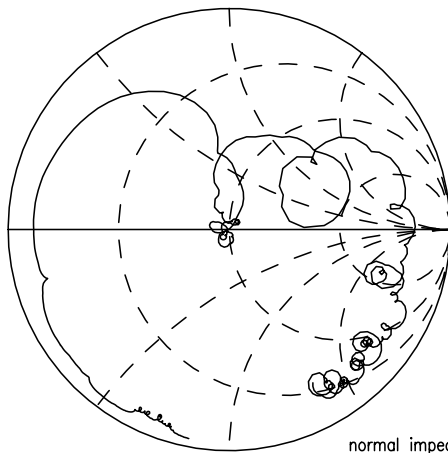


Transfer function (wideband)

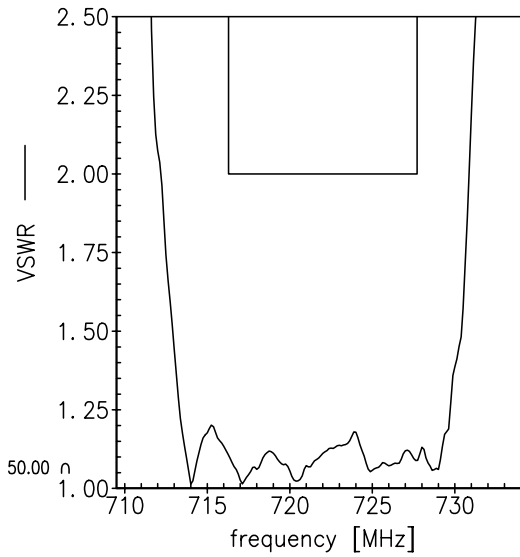


Smith charts

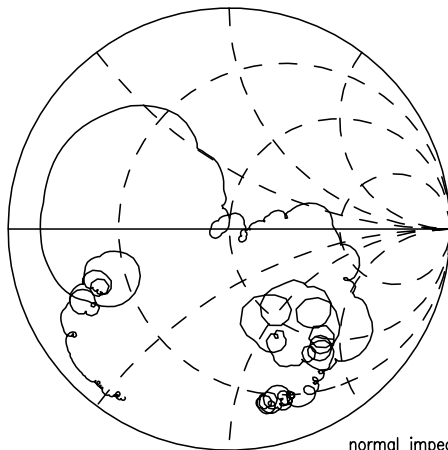
S₁₁ function



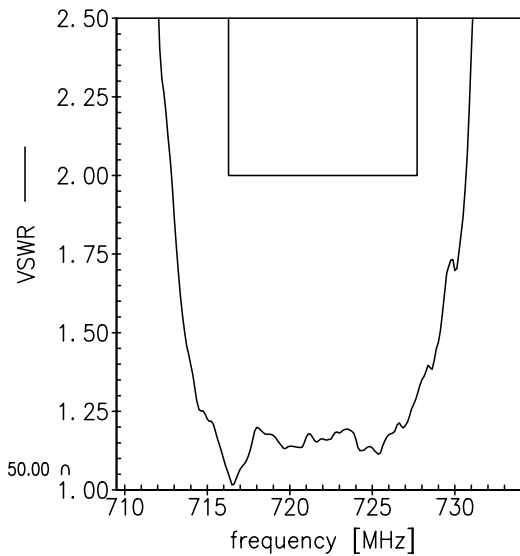
normal impedance: 50.00 Ω



S₂₂ function



normal impedance: 50.00 Ω





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References

Type	B9462
Ordering code	B39721B9462P810
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	B9462_NB.s2p B9462_WB.s2p See file header for port/pin assignment table
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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com .

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