SAW Components

SAW Rx Filter

MediaFLO

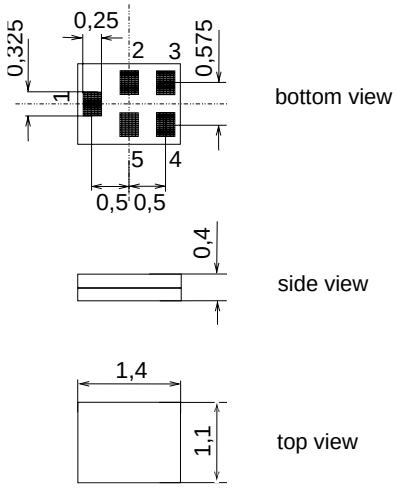
Series/Type:	**B9462**
Ordering code:	**B39721B9462P810**
Date:	Dec 14, 2009
Version:	2.0

Application

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

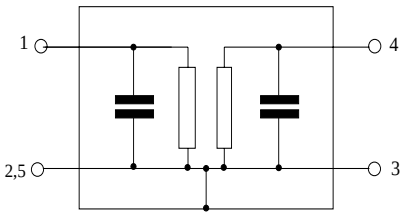
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- Package code QCS5I
- RoHS compatible
- Approx. weight 0.003g
- Package for **S**urface **M**ount **T**echnology (**SMT**)
- Ni, gold-plated terminals
- **E**lectrostatic **S**ensitive **D**evice (**ESD**)



Pin configuration

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



Data sheet SMD

Characteristics

Temperature range for specification: T = -10 ˚C to +60 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		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	α_{abs}				
0.1 ... 650.0 MHz		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)

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

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

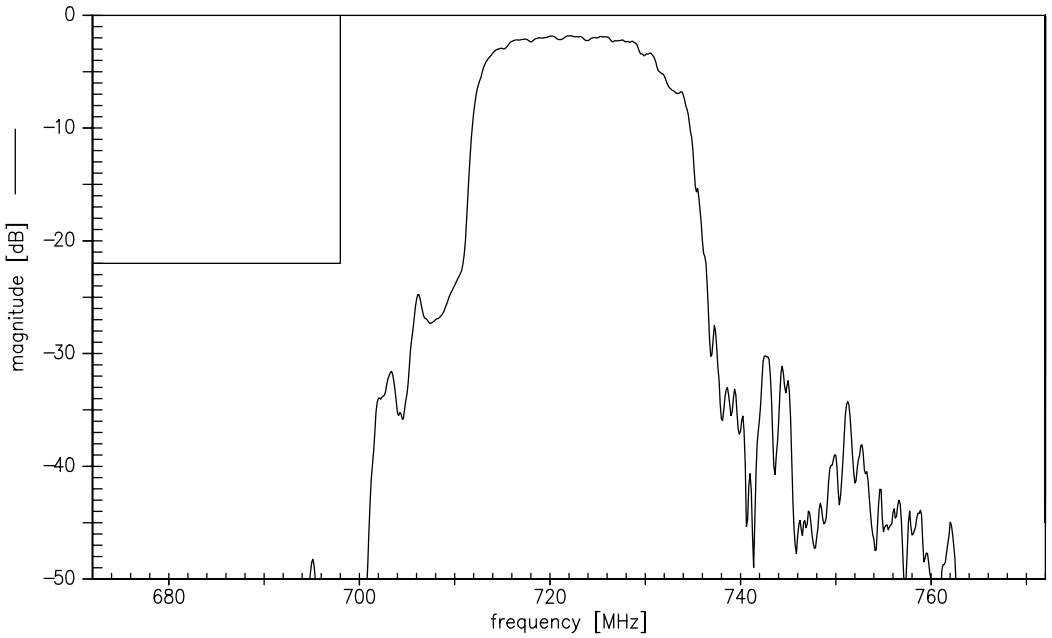
N = Number of frequency, insertion loss pairs in a channel

Maximum ratings

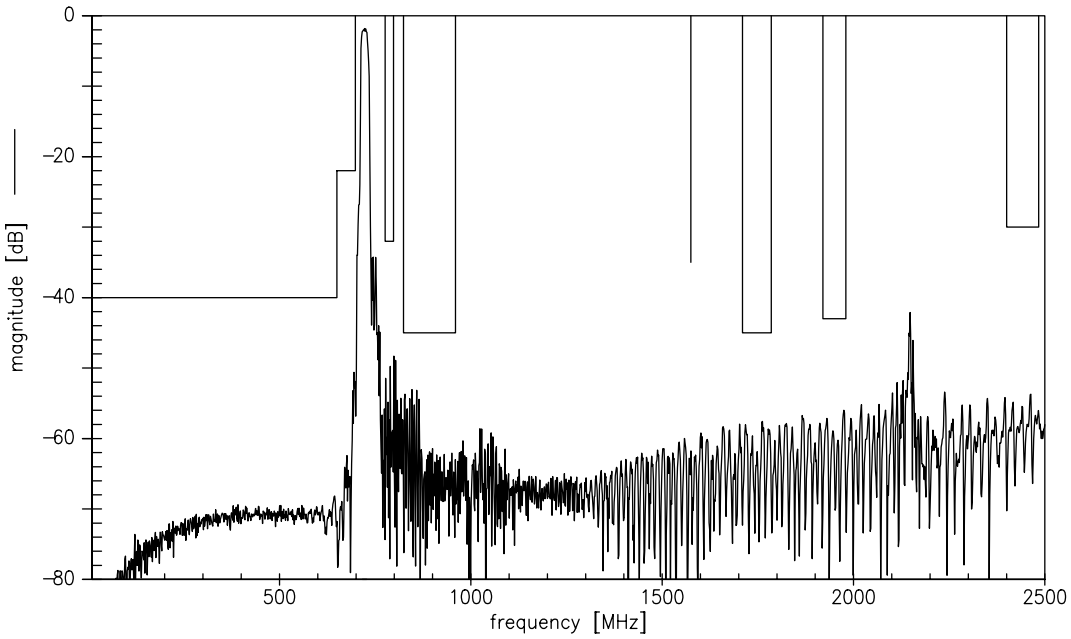
Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}	100 [1)]	V	machine model, 1 pulse
Input Power at 400.0...500.0 MHz 824.0...2400.0 MHz	P_{IN}	15	dBm	CW

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

Transfer function

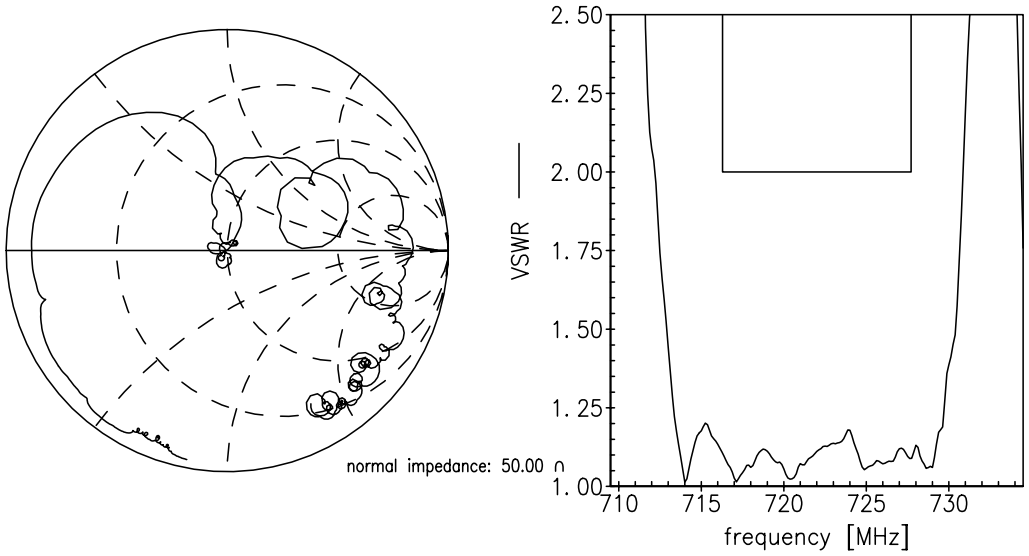


Transfer function (wideband)

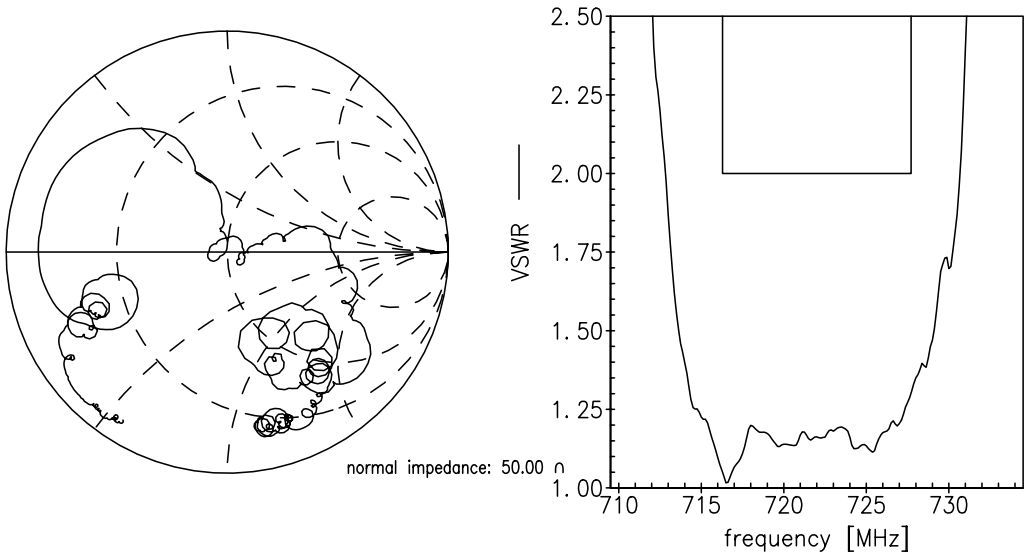


Smith charts

S_{11} function



S_{22} function



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.

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