



SAW Components

SAW filter

MediaFLO

Series/type: B9036

Ordering code: B39721B9036E910

Date: June 21, 2007

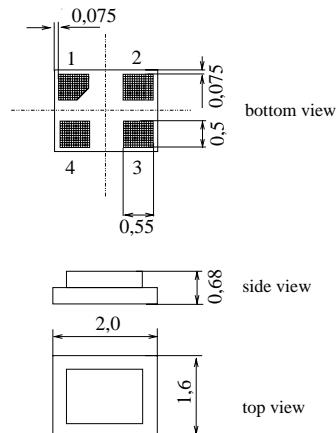
Version: 2.0

Application

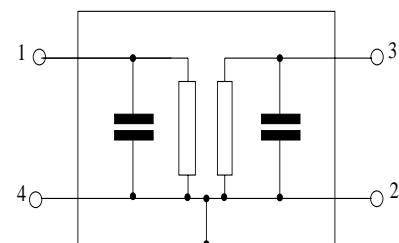
- Low-loss RF filter for MediaFLO TV application in mobile telephone systems
- High selectivity
- Usable passband: 5 MHz
- No matching required for operation at $50\ \Omega$


Features

- Package size $2.0 \times 1.6 \times 0.68\ \text{mm}^3$
- Package code DCS4G
- RoHS compatible
- Approximate weight 0.008 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**


Pin configuration

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



**SAW Components****B9036****SAW filter****719.0 MHz****Data sheet****Characteristics**Temperature range for specification: $T = -30^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ Terminating source impedance: $Z_S = 50 \Omega$ Terminating load impedance: $Z_L = 50 \Omega$

			min.	typ. @ 25 °C	max.	
Center frequency		f_C	—	719.0	—	MHz
Maximum insertion attenuation		α_{max}				
716.5 ... 721.5	MHz		—	2.5	2.7	$\text{dB}_{\text{INT}}^1)$
Amplitude ripple (p-p)		$\Delta\alpha$				
716.5 ... 721.5	MHz		—	0.3	2.0	dB
Return Loss (Input/Output)						
716.5 ... 721.5	MHz		9.4	13.0	—	dB
Group delay ripple (p-p)						
716.5 ... 721.5	MHz		—	30	80	ns
Attenuation		α				
0.1 ... 690.0	MHz		40.0	47.0	—	dB
690.0 ... 704.0	MHz		35.0	43.0	—	dB
704.0 ... 710.0	MHz		30.0	40.0	—	dB_{INT}
710.0 ... 716.0	MHz		4.0	9.0	—	dB_{INT}
722.0 ... 728.0	MHz		4.0	9.0	—	dB_{INT}
728.0 ... 734.0	MHz		30.0	36.0	—	dB_{INT}
734.0 ... 750.0	MHz		27.0	30.0	—	dB
750.0 ... 824.0	MHz		37.0	40.0	—	dB
824.0 ... 960.0	MHz		45.0	55.0	—	dB
960.0 ... 2500.0	MHz		32.0	40.0	—	dB

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

$$\text{dB}_{\text{INT}} = \frac{\sum_2^N \frac{\text{Loss}(F_{n-1}) + \text{Loss}(F_n)}{2} \times (F_n - F_{n-1})}{F_N - F_1}$$

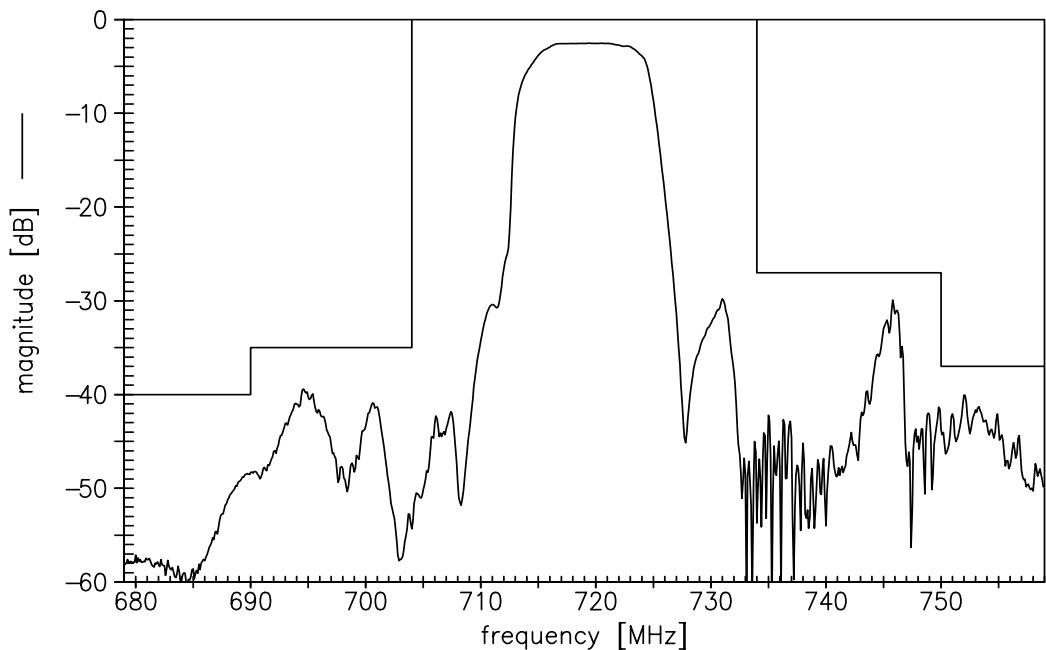
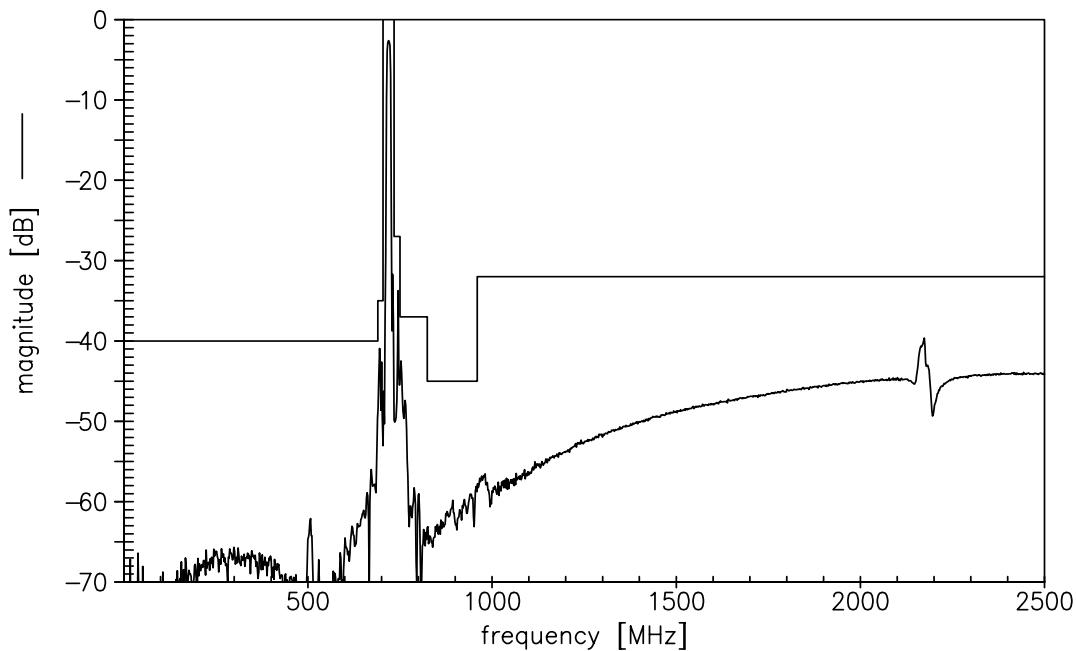
$$\text{Where Loss}(F_n) = 10^{(S_{21}^{\text{indB}})/20}$$

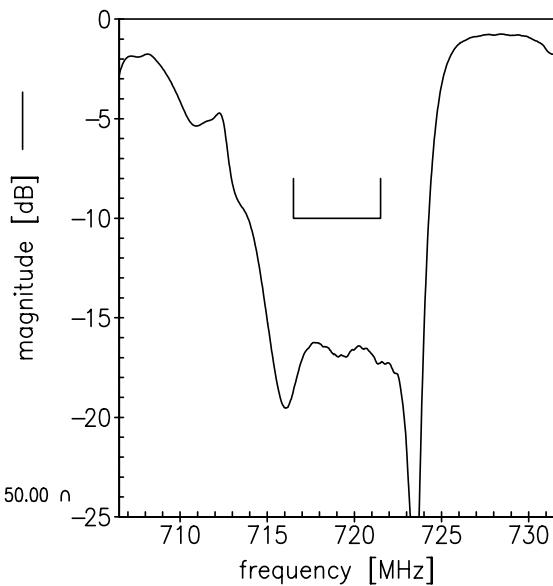
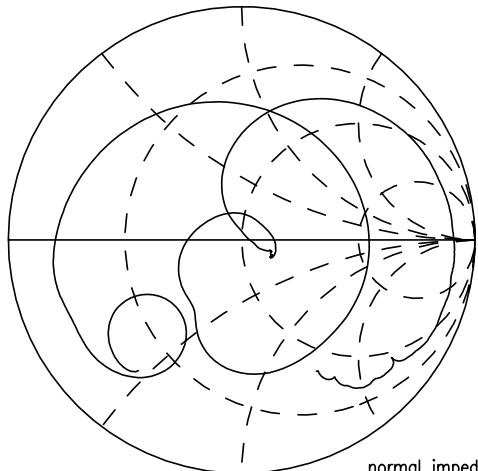
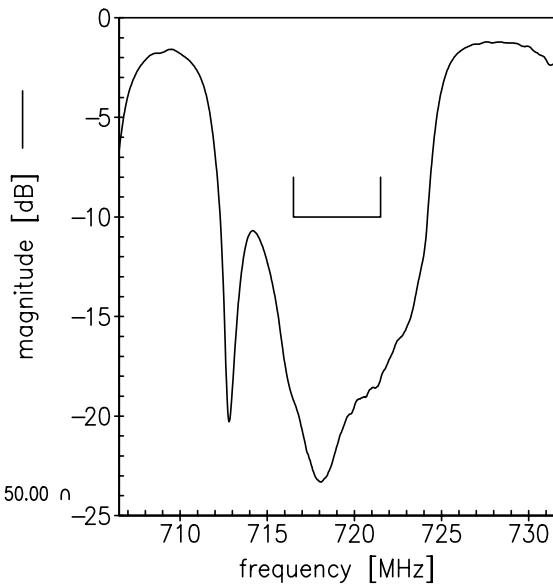
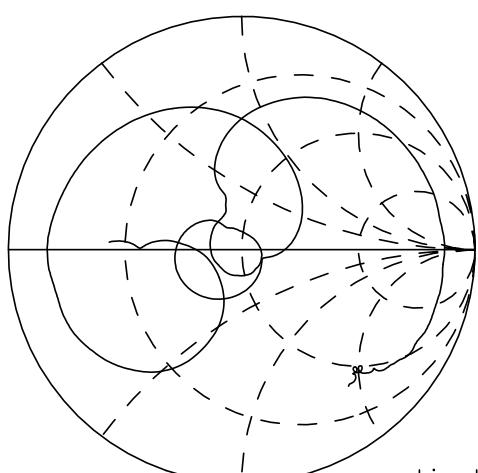
N = Number of frequency, insertion loss pairs

**SAW Components****B9036****SAW filter****719.0 MHz****Data sheet****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, 10 pulses
Input power at				
400.0 ... 500.0MHz	P _{IN}	15	dBm	CW
824.0 ... 2500.0MHz				

¹⁾ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.


Transfer function (wideband)



 S_{22} function




SAW Components	B9036
SAW filter	719.0 MHz
Data sheet	

References

Type	B9036
Ordering code	B39721B9036E910
Marking and package	C61157-A7-A105
Packaging	F61074-V8152-Z000
Date codes	L_1126
S-parameters	B9036_NB.s2p B9036_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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