



## SAW Components

### SAW IF filter

IF Filter for Intercarrier Applications

<b>Series/type:</b>	<b>K 2983 M</b>
<b>Ordering code:</b>	<b>B39380-K2983-M100</b>
<b>Date:</b>	<b>May 08, 2007</b>
<b>Version:</b>	<b>2.0</b>

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SAW Components

K 2983 M

SAW IF filter

38.00 MHz

Data sheet

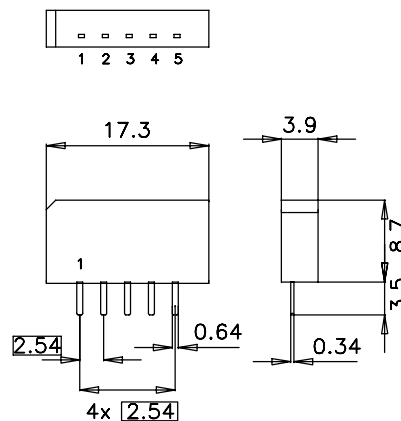
### Application

- B/G and D/K standard
- TV IF filter with Nyquist slope and sound shelf
- Broad sound shelf for sound carriers at 31.50 MHz and 32.50 MHz
- Customized group delay predistortion



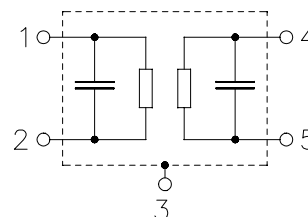
### Features

- Plastic package **SIP5K**
- Approximate weight 1.0 g
- RoHS compatible
- Tinned CuFe alloy terminals



### Pin configuration

- 1 Input
- 2 Input - ground
- 3 Chip carrier - ground
- 4 Output
- 5 Output



Please read *cautions and warnings and important notes* at the end of this document.

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**Characteristics**

Reference temperature:  $T_A = 25\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 2\text{ k}\Omega \parallel 3\text{ pF}$

				min.	typ. @ 25 °C	max.	
<b>Insertion attenuation</b> $\alpha$							
Reference level for the following data	36.50	MHz		16.2	17.7	19.2	dB
<b>Relative attenuation</b> $\alpha_{rel}$							
Picture carrier	38.00	MHz		3.9	4.9	5.9	dB
Color carrier	33.57	MHz		1.5	2.5	3.5	dB
Sound carrier	31.50	MHz		13.8	15.3	16.8	dB
	32.50	MHz		13.2	14.7	—	dB
Adj. picture carrier	30.00	MHz		44.0	54.0	—	dB
Adj. sound carrier	39.50	MHz		41.0	54.0	—	dB
Lower sidelobe	25.00 ... 30.00	MHz		40.0	45.0	—	dB
Upper sidelobe	39.50 ... 45.00	MHz		32.0	38.0	—	dB
<b>Reflected wave signal suppression</b>							
1.2 $\mu$ s ... 6.0 $\mu$ s after main pulse (test pulse 250 ns, carrier frequency 36.50 MHz)				42.0	50.0	—	dB
<b>Feedthrough signal suppression</b>							
0.9 $\mu$ s ... 0.8 $\mu$ s before main pulse (test pulse 250 ns, carrier frequency 36.50 MHz)				—	56.0	—	dB
<b>Group delay predistortion</b> $\Delta\tau$							
(reference frequency 38.00 MHz)							
	37.00	MHz		—	- 25	—	ns
	35.75	MHz		—	- 60	—	ns
	34.50	MHz		—	- 110	—	ns
	34.00	MHz		—	- 120	—	ns
	33.57	MHz		—	- 120	—	ns
<b>Impedance at 36.50 MHz</b>							
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$				—	2.5 $\parallel$ 8.6	—	k $\Omega$ $\parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$				—	4.6 $\parallel$ 2.4	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b> $TC_f$				—	-72	—	ppm/K

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**Maximum ratings**

Operable temperature range	T	-25 / +65	°C	
Storage temperature range	T <sub>stg</sub>	-40 / +85	°C	
DC voltage	V <sub>DC</sub>	5	V	between any terminals
AC voltage	V <sub>pp</sub>	10	V	between any terminals

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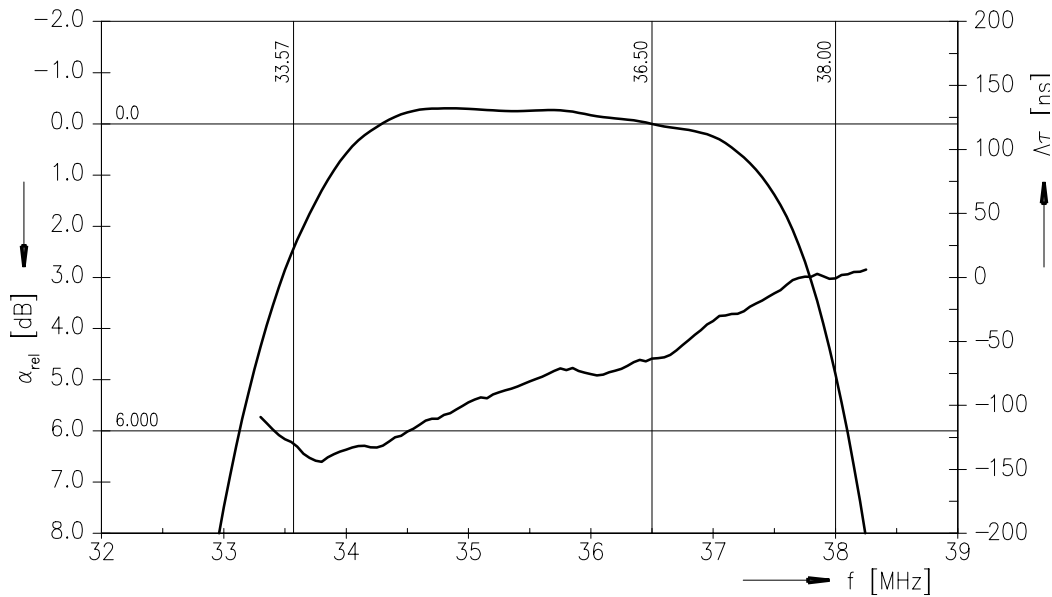
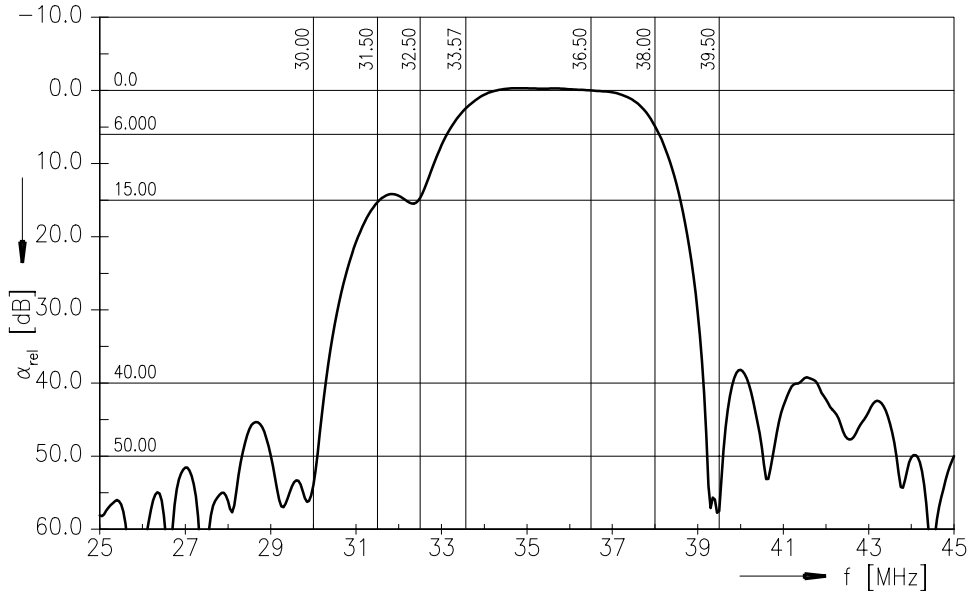
K 2983 M

SAW IF filter

38.00 MHz

Data sheet

Frequency response



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SAW Components

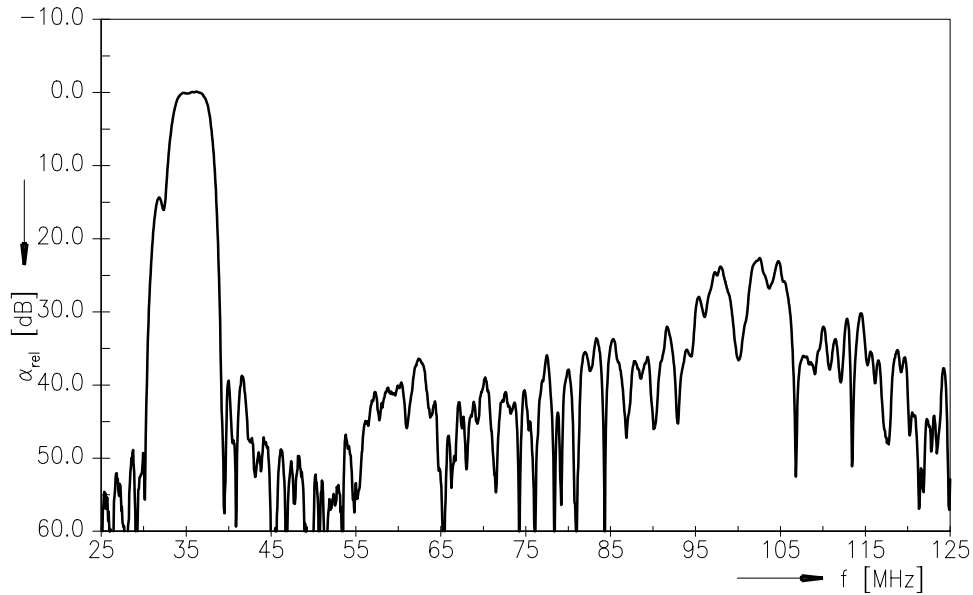
K 2983 M

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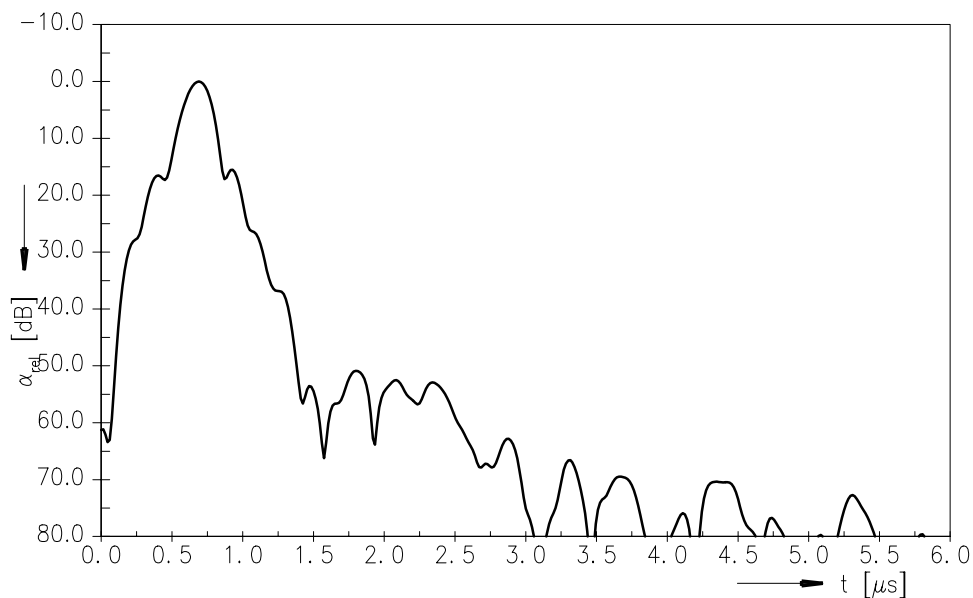
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### Frequency response



### Time domain response



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**38.00 MHz**

Data sheet

#### References

<b>Type</b>	K 2983 M
<b>Ordering code</b>	B39380-K2983-M100
<b>Marking and package</b>	C61157-A1-A15
<b>Packaging</b>	F61074-V8067-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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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