



# SAW Components

Data Sheet K 9650 M





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**K 9650 M**

**IF Filter for Audio Applications**

**33,90 MHz and 38,90 MHz**

**Data Sheet**

**Standard**

- B/G
- D/K
- I
- L/L'

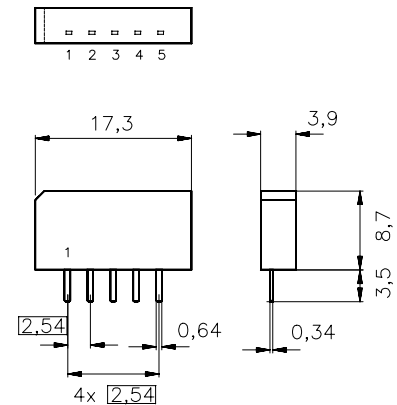
**Features**

- TV IF audio filter with two channels
- Channel 1 (L') with one pass band for sound carrier at 40,40 MHz
- Channel 2 (L, D/K, I, B/G) with one pass band for sound carriers between 32,40 MHz and 33,40 MHz

**Terminals**

- Tinned CuFe alloy

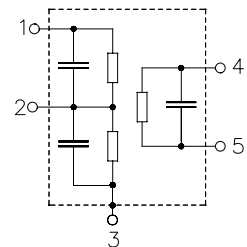
Plastic package **SIP5K**



Dimensions in mm, approx. weight 1,0 g

**Pin configuration**

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



Type	Ordering code	Marking and package according to	Packing according to
K 9650 M	B39389-K9650-M100	C61157-A1-A15	F61074-V8067-Z000

**Maximum ratings**

Operable temperature range	$T_A$	-25/+65	°C	
Storage temperature range	$T_{stg}$	-40/+85	°C	
DC voltage	$V_{DC}$	5	V	between any terminals
AC voltage	$V_{pp}$	10	V	between any terminals



Data Sheet

Characteristics of channel 1 (switching pin 2 connected to ground)

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.	max.	
<b>Insertion attenuation</b>					
	$\alpha$				
Reference level for the following data	40,40 MHz	12,4	13,9	15,4	dB
<b>Relative attenuation</b>					
	$\alpha_{rel}$				
Picture carrier	33,90 MHz	40,0	49,0	—	dB
	38,40 MHz	40,0	50,0	—	dB
Adjacent picture carrier	41,90 MHz	36,0	46,0	—	dB
Adjacent sound carrier	32,40 MHz	38,0	45,0	—	dB
Lower sidelobe	25,00 ... 38,40 MHz	37,0	44,0	—	dB
Upper sidelobe	41,90 ... 45,00 MHz	34,0	40,0	—	dB
<b>Impedance at 40,40 MHz</b>					
Input:	$Z_{IN} = R_{IN} \parallel C_{IN}$	—	0,8 $\parallel$ 9,1	—	k $\Omega$ $\parallel$ pF
Output:	$Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	2,2 $\parallel$ 5,4	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>					
	$TC_f$	—	-72	—	ppm/K



Data Sheet

Characteristics of channel 2 (switching input pin 2 connected to input pin 1)

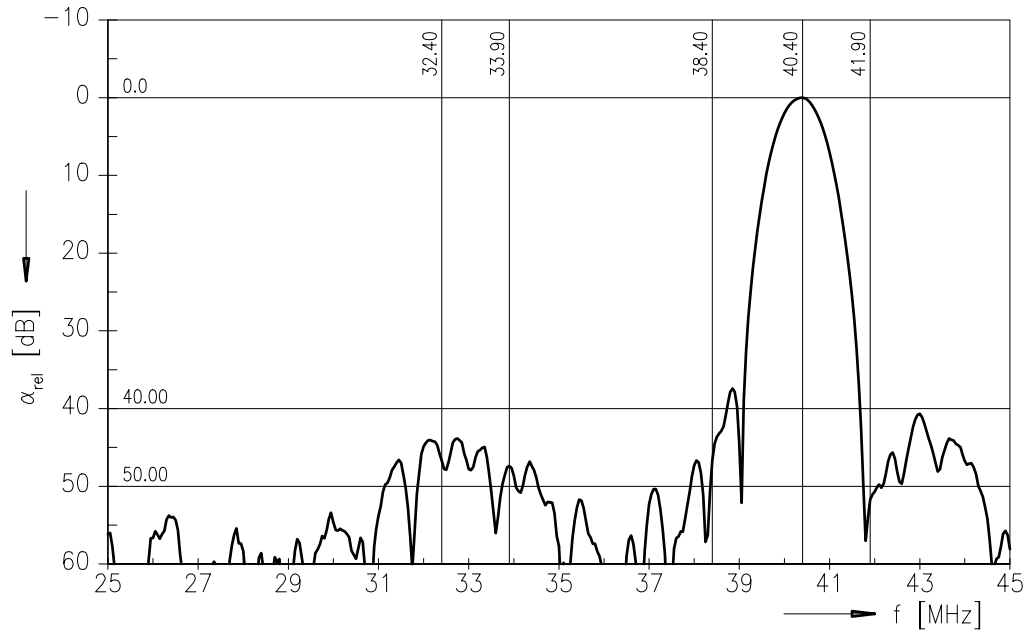
Reference temperature:  $T_A = 25\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 2\text{ k}\Omega \parallel 3\text{ pF}$

		min.	typ.	max.	
<b>Insertion attenuation</b>					
	$\alpha$				
Reference level for the following data	33,40 MHz	13,8	15,3	16,8	dB
<b>Relative attenuation</b>					
	$\alpha_{rel}$				
Sound carrier	33,05 MHz	-1,4	-0,4	0,6	dB
	32,90 MHz	-1,1	-0,1	0,9	dB
	32,40 MHz	-1,1	-0,1	0,9	dB
Picture carrier	38,90 MHz	38,0	49,0	—	dB
Color carrier	34,47 MHz	30,0	40,0	—	dB
Adjacent picture carrier	30,90 MHz	32,0	41,0	—	dB
Adjacent sound carrier	40,40 MHz	35,0	41,0	—	dB
	40,90 MHz	36,0	45,0	—	dB
	41,40 MHz	35,0	41,0	—	dB
Lower sidelobe	25,00 ... 30,50 MHz	38,0	46,0	—	dB
Upper sidelobe	38,90 ... 45,00 MHz	32,0	38,0	—	dB
<b>Impedance at 33,40 MHz</b>					
Input:	$Z_{IN} = R_{IN} \parallel C_{IN}$	—	1,0    13,5	—	k $\Omega$    pF
Output:	$Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	2,7    5,8	—	k $\Omega$    pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



Data Sheet

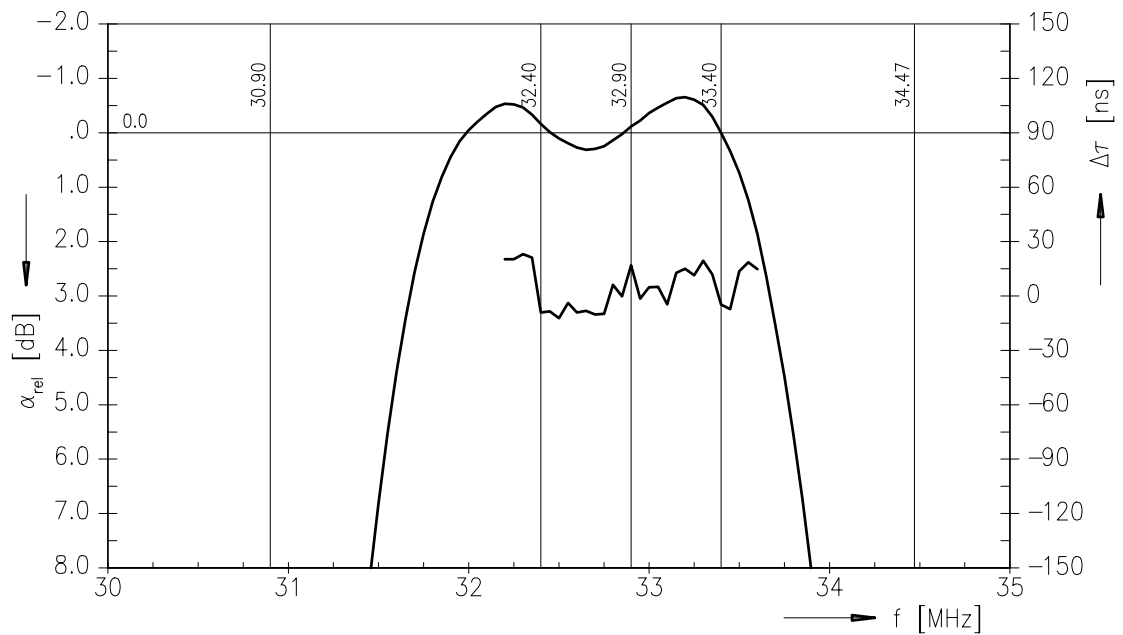
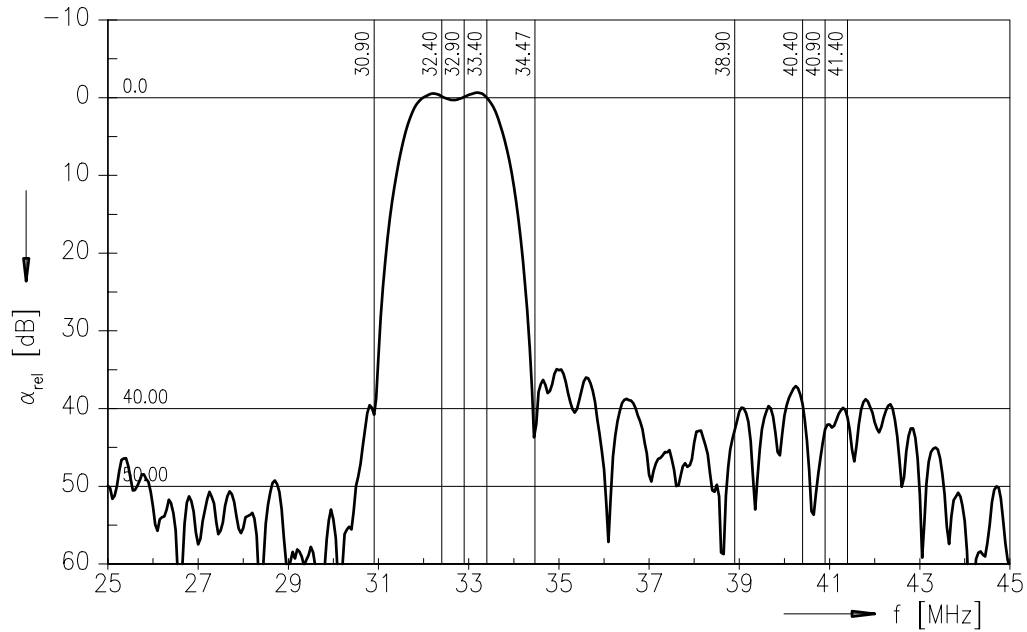
Frequency response of channel 1





Data Sheet

Frequency response of channel 2





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