



# SAW Components

Data Sheet K 9456 M





**SAW Components**

**K 9456 M**

**IF Filter for Audio Applications**

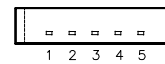
**33,90 MHz and 38,90 MHz**

**Data Sheet**

**Standard**

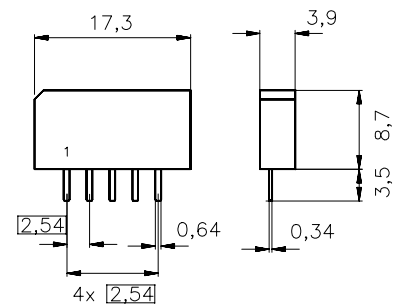
- B/G
- D/K
- I
- L/L'

Plastic package **SIP5K**



**Features**

- TV IF audio filter with two channels
- Channel 1 (L') with one pass band for sound carriers at 40,40 MHz (L') and 39,75 MHz (L' - NICAM)
- Channel 2 (B/G,D/K,L,I) with one pass band for sound carriers between 32,35 MHz and 33,40 MHz



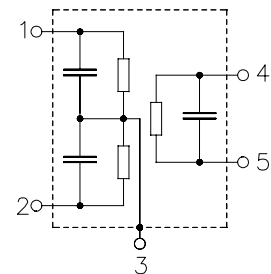
**Terminals**

- Tinned CuFe alloy

Dimensions in mm, approx. weight 1,0 g

**Pin configuration**

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



Type	Ordering code	Marking and package according to	Packing according to
K 9456 M	B39389-K9456-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	$V_{DC}$	12	V	between any terminals
AC voltage	$V_{pp}$	10	V	between any terminals



Data Sheet

Characteristics of channel 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	40,40 MHz	15,1	16,6	18,1	dB
<b>Relative attenuation</b>					
	$\alpha_{rel}$				
	39,75 MHz	-1,3	-0,3	0,7	dB
	38,40 MHz	27,0	35,0	—	dB
Picture carrier	33,90 MHz	38,0	45,0	—	dB
Adjacent picture carrier	41,90 MHz	31,0	38,0	—	dB
Adjacent sound carrier	32,40 MHz	40,0	46,0	—	dB
Lower sidelobe	25,00 ... 33,90 MHz	34,0	40,0	—	dB
Upper sidelobe	41,90 ... 45,00 MHz	28,0	35,0	—	dB
<b>Group delay ripple (p-p)</b>					
	$\Delta\tau$				
	39,40 ... 40,50 MHz	—	40	—	ns
<b>Impedance at 40,40 MHz</b>					
Input:	$Z_{IN} = R_{IN} \parallel C_{IN}$	—	0,9 $\parallel$ 9,5	—	k $\Omega$ $\parallel$ pF
Output:	$Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	2,9 $\parallel$ 4,5	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>					
	$TC_f$	—	-72	—	ppm/K



Data Sheet

Characteristics of channel 2

Reference temperature:

$$T_A = 25 \text{ }^\circ\text{C}$$

Terminating source impedance:

$$Z_S = 50 \text{ } \Omega$$

Terminating load impedance:

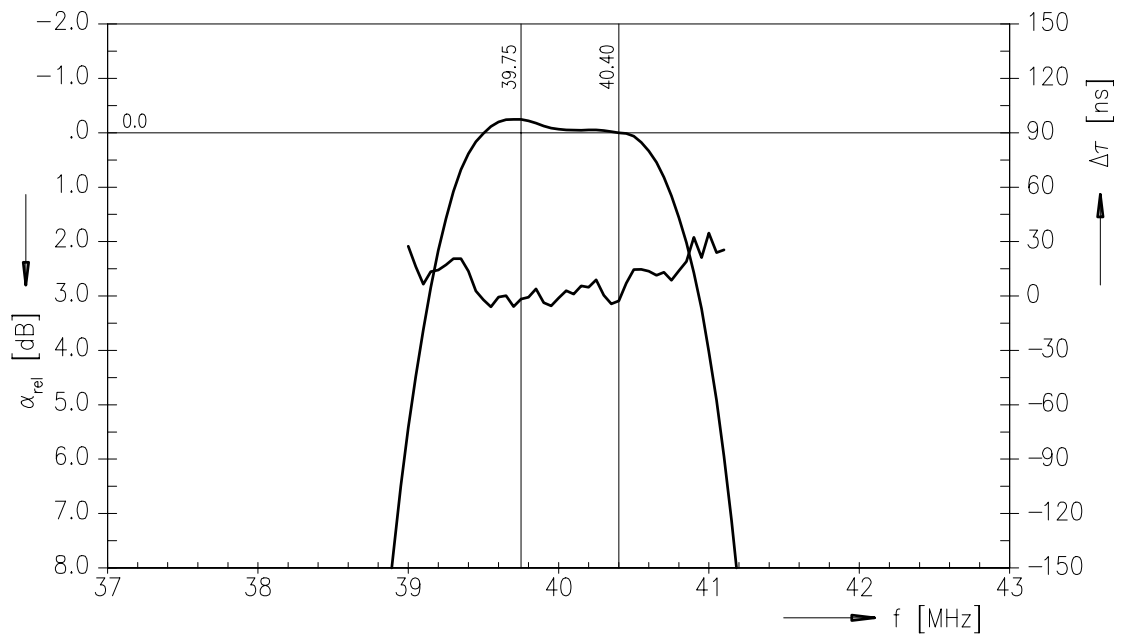
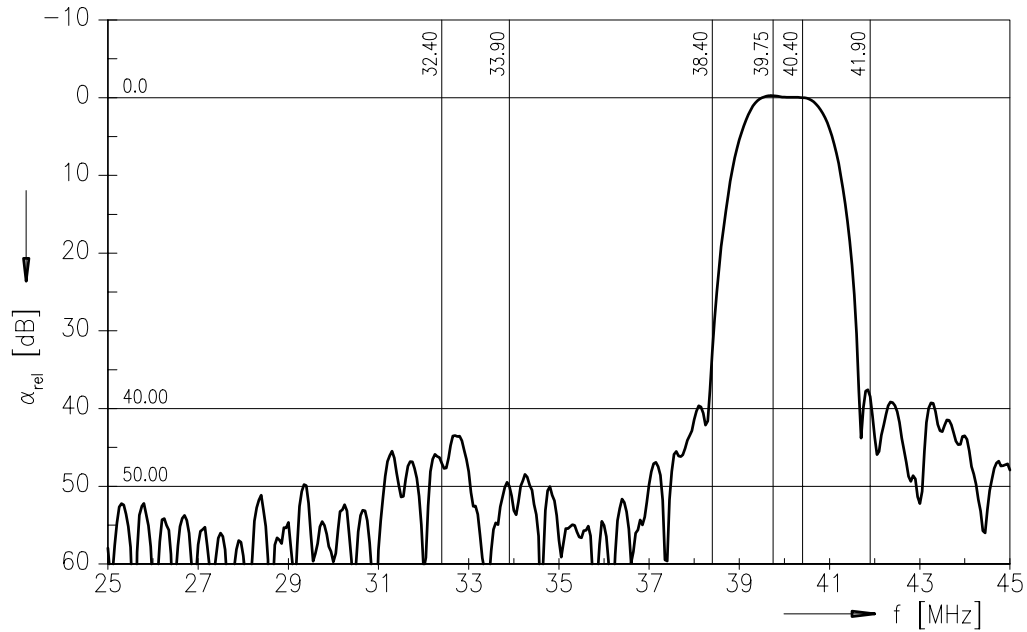
$$Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF}$$

		min.	typ.	max.	
<b>Insertion attenuation</b>					
	$\alpha$				
Reference level for the following data	33,40 MHz	14,5	16,0	17,5	dB
<b>Relative attenuation</b>					
	$\alpha_{rel}$				
Sound carrier B/G-NICAM	33,05 MHz	-1,4	-0,4	0,6	dB
Sound carrier I	32,90 MHz	-1,4	-0,4	0,6	dB
Sound carrier D/K, L	32,40 MHz	0,2	1,2	2,2	dB
Picture carrier	38,90 MHz	37,0	48,0	—	dB
Color carrier	34,47 MHz	23,0	30,0	—	dB
Adjacent picture carrier	30,90 MHz	39,0	45,0	—	dB
	31,90 MHz	—	9,4	—	dB
Adjacent sound carrier	40,40 MHz	35,0	40,0	—	dB
	40,90 MHz	35,0	40,0	—	dB
	41,40 MHz	40,0	54,0	—	dB
Lower sidelobe	25,00 ... 30,90 MHz	38,0	44,0	—	dB
Upper sidelobe	38,90 ... 45,00 MHz	34,0	39,0	—	dB
<b>Group delay ripple (p-p)</b>					
	$\Delta\tau$				
	32,00 ... 33,50 MHz	—	40	—	ns
<b>Impedance at 33,40 MHz</b>					
	Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	—	1,0 $\parallel$ 9,1	—	k $\Omega$ $\parallel$ pF
	Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	2,8 $\parallel$ 4,7	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>					
	$TC_f$	—	-72	—	ppm/K



Data Sheet

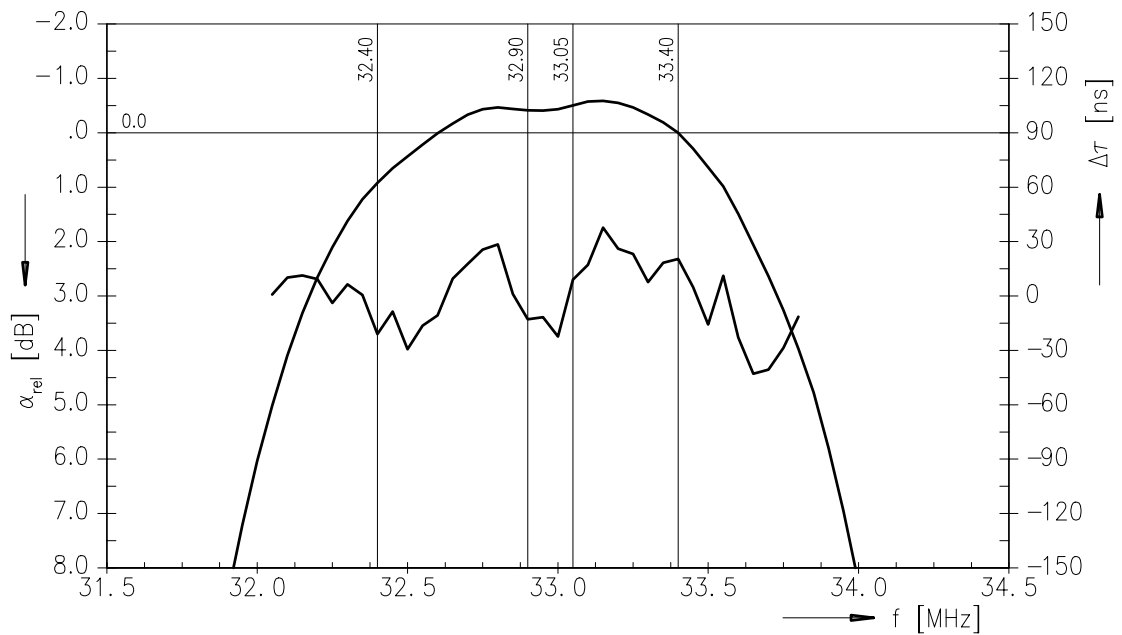
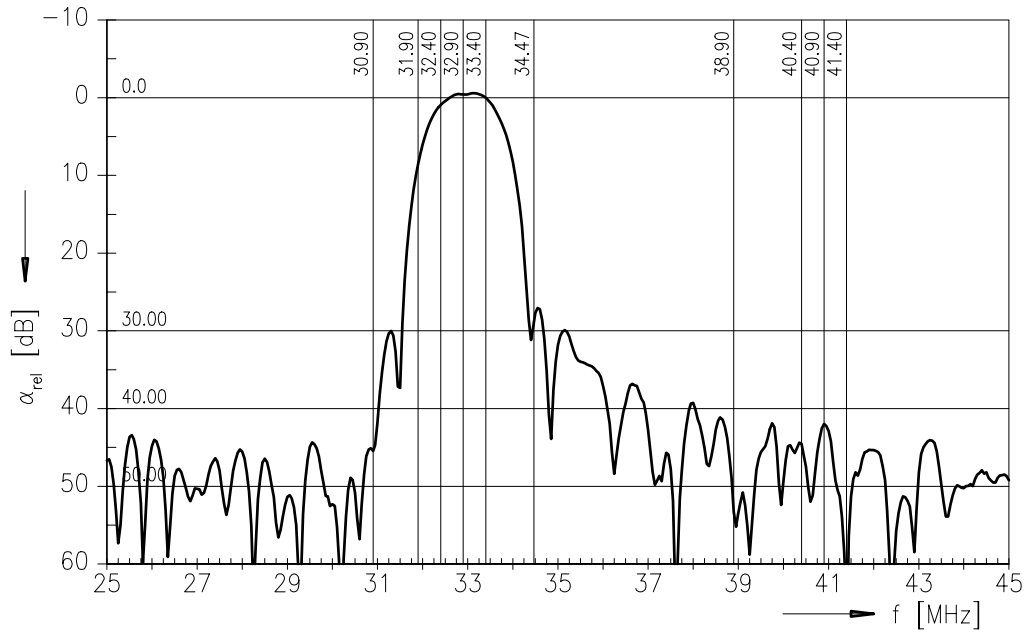
Frequency response of channel 1





Data Sheet

Frequency response of channel 2





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

**Data Sheet**

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