



# SAW Components

Data Sheet K 7257 M





**SAW Components**

**K 7257 M**

**IF Filter for Video / Multistandard Applications**

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

**Data Sheet**

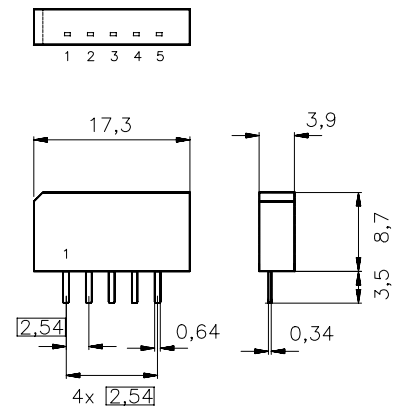
**Standard**

- B/G
- L/L'
- M/N

Plastic package **SIP5K**

**Features**

- TV IF filter switchable from B/G,L/L' mode to M/N mode
- B/G,L/L' mode with Nyquist slope and sound suppression
- Highly reduced group delay predistortion as compared to standard B/G, half
- M/N mode with Nyquist slope and sound suppression
- Constant group delay



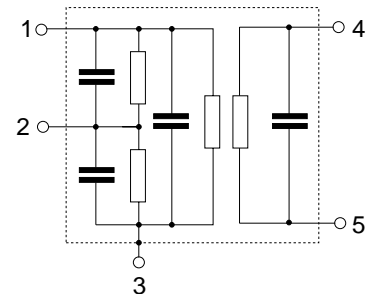
Dimensions in mm, approx. weight 1,0 g

**Terminals**

- Tinned CuFe alloy

**Pin configuration**

- 1 Input
- 2 Switching input
- 3 Chip carrier – ground
- 4, 5 Output



Type	Ordering code	Marking and package according to	Packing according to
K 7257 M	B39389-K7257-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


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**Characteristics in B/G, L/L' mode (switching input 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	37,40 MHz	15,1	16,6	18,1	dB
<b>Relative attenuation</b>					
	$\alpha_{rel}$				
Picture carrier	38,90 MHz	5,0	6,0	7,0	dB
Picture carrier	33,90 MHz	—	7,9	—	dB
Color carrier	34,47 MHz	-0,5	0,5	1,5	dB
Sound carrier	33,40 MHz	28,0	43,0	—	dB
NICAM sound carrier	33,05 MHz	—	36,0	—	dB
Adjacent picture carrier	30,90 MHz	45,0	60,0	—	dB
	31,90 MHz	47,0	60,0	—	dB
	32,40 MHz	45,0	60,0	—	dB
	40,15 MHz	39,0	52,0	—	dB
Adjacent sound carrier	40,40 MHz	40,0	53,0	—	dB
	41,40 MHz	40,0	50,0	—	dB
Lower sidelobe	25,00 ... 31,90 MHz	40,0	46,0	—	dB
Upper sidelobe	40,40 ... 45,00 MHz	36,0	43,0	—	dB
<b>Reflected wave signal suppression</b>					
1,2 $\mu$ s ... 6,0 $\mu$ s after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		42,0	52,0	—	dB
<b>Feedthrough signal suppression</b>					
1,3 $\mu$ s ... 1,2 $\mu$ s before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		50,0	56,0	—	dB
<b>Group delay predistortion</b>					
(reference frequency 38,90 MHz)					$\Delta\tau$ ns
	36,90 MHz	—	-50	—	ns
	34,47 MHz	—	50	—	ns
<b>Impedance at 37,40 MHz</b>					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,2    18,6	—	k $\Omega$    pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1,8    4,2	—	k $\Omega$    pF
<b>Temperature coefficient of frequency</b>					
		—	-72	—	ppm/K


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**Characteristics in M/N mode (switching input pin 2 connected to pin 1)**

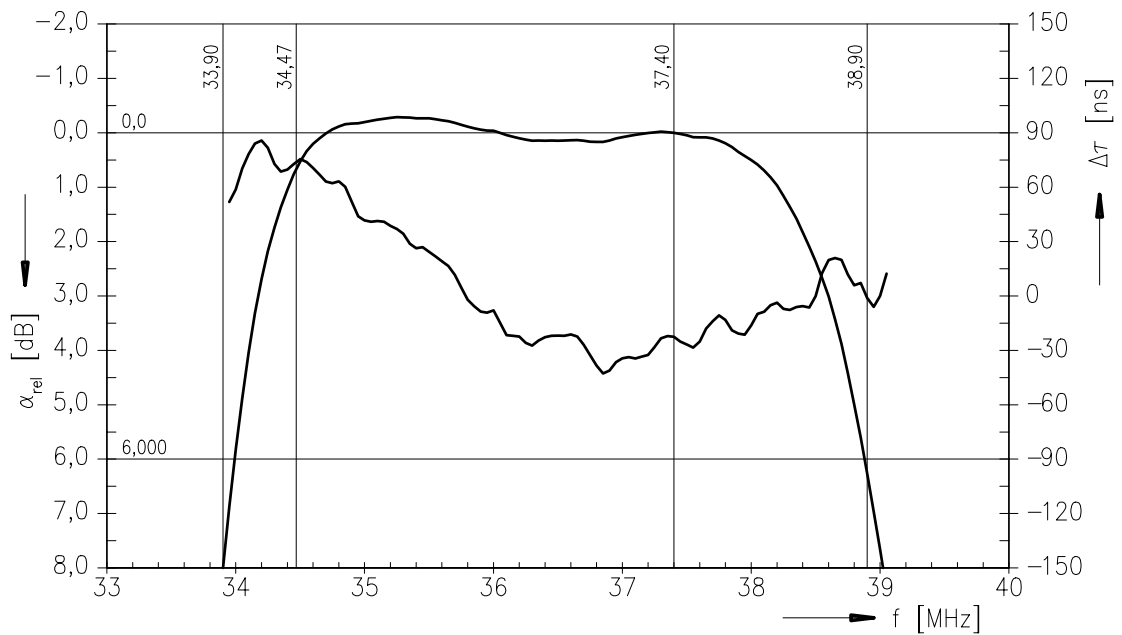
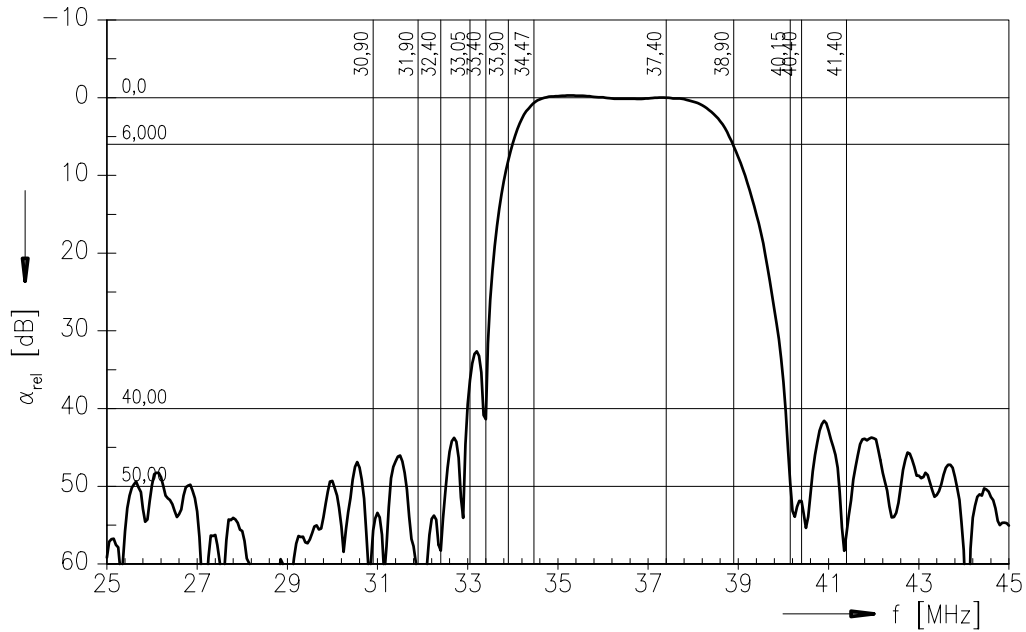
Reference temperature:  $T_A = 25\text{ °C}$   
 Terminating source impedance:  $Z_S = 50\ \Omega$   
 Terminating load impedance:  $Z_L = 2\text{ k}\Omega \parallel 3\text{ pF}$

		min.	typ.	max.	
<b>Insertion attenuation</b>					
	$\alpha$				
Reference level for the following data	37,40 MHz	14,8	16,3	17,8	dB
<b>Relative attenuation</b>					
	$\alpha_{rel}$				
Picture carrier	38,90 MHz	5,4	6,4	7,4	dB
Color carrier	35,32 MHz	1,6	2,6	3,6	
Sound carrier	34,40 MHz	28,0	39,0	—	dB
Adjacent picture carrier	32,90 MHz	37,0	45,0	—	dB
Adjacent sound carrier	40,40 MHz	40,0	48,0	—	dB
Lower sidelobe	25,00 ... 32,90 MHz	36,0	44,0	—	dB
Upper sidelobe	40,40 ... 45,00 MHz	32,0	38,0	—	dB
<b>Reflected wave signal suppression</b>					
1,3 $\mu$ s ... 6,0 $\mu$ s after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		42,0	52,0	—	dB
<b>Feedthrough signal suppression</b>					
1,3 $\mu$ s ... 1,2 $\mu$ s before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)		—	50,0	—	dB
<b>Group delay ripple (p-p)</b>					
	$\Delta\tau$				
	35,32 ... 38,90 MHz	—	50	—	ns
<b>Impedance at 37,40 MHz</b>					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1,3    19,5	—	k $\Omega$    pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1,8    4,2	—	k $\Omega$    pF
<b>Temperature coefficient of frequency</b>					
	$TC_f$	—	-72	—	ppm/K



Data Sheet

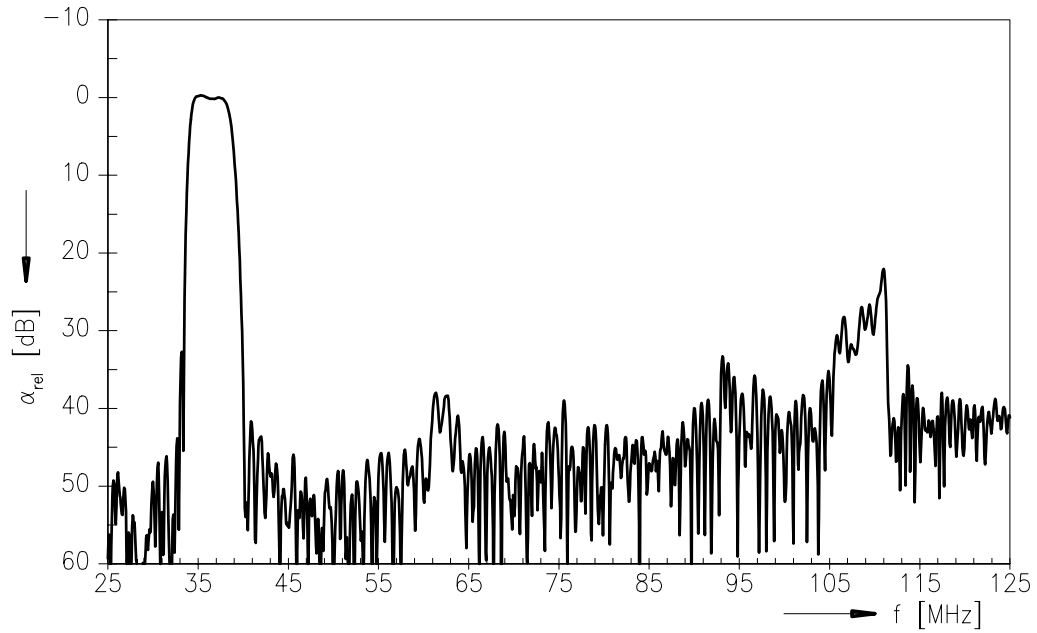
Frequency response in B/G, L/L' mode



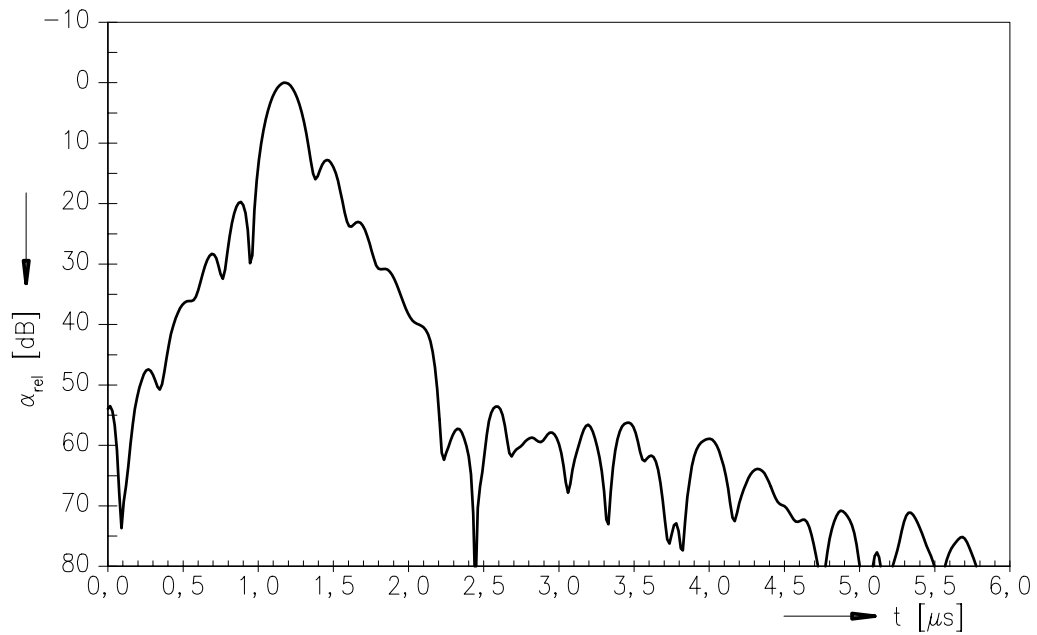


Data Sheet

Frequency response in B/G, L/L' mode



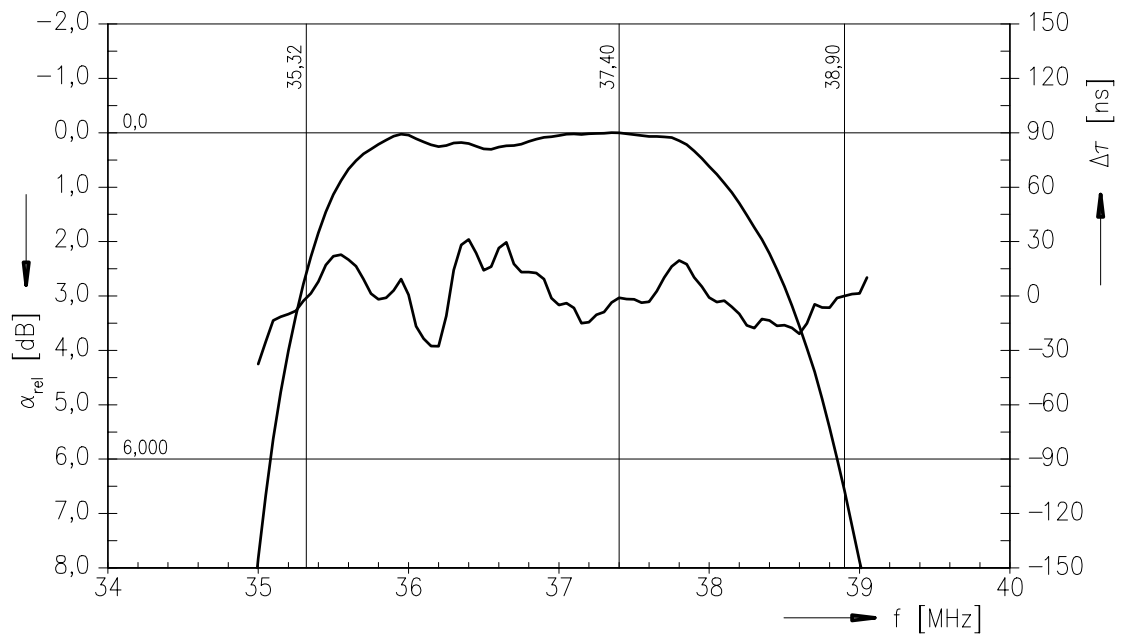
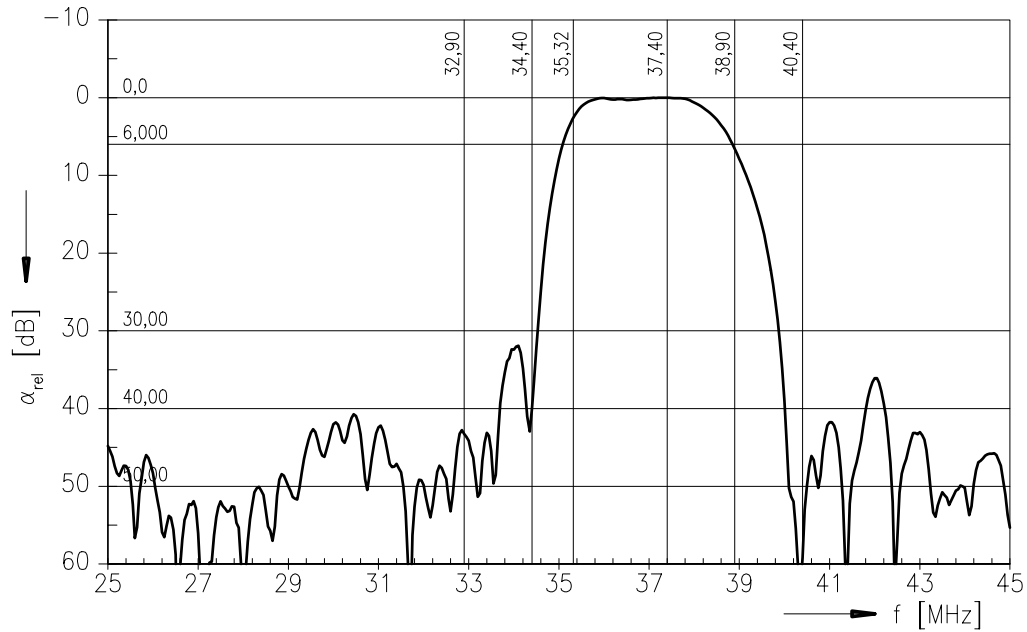
Time domain response in B/G, L/L' mode





Data Sheet

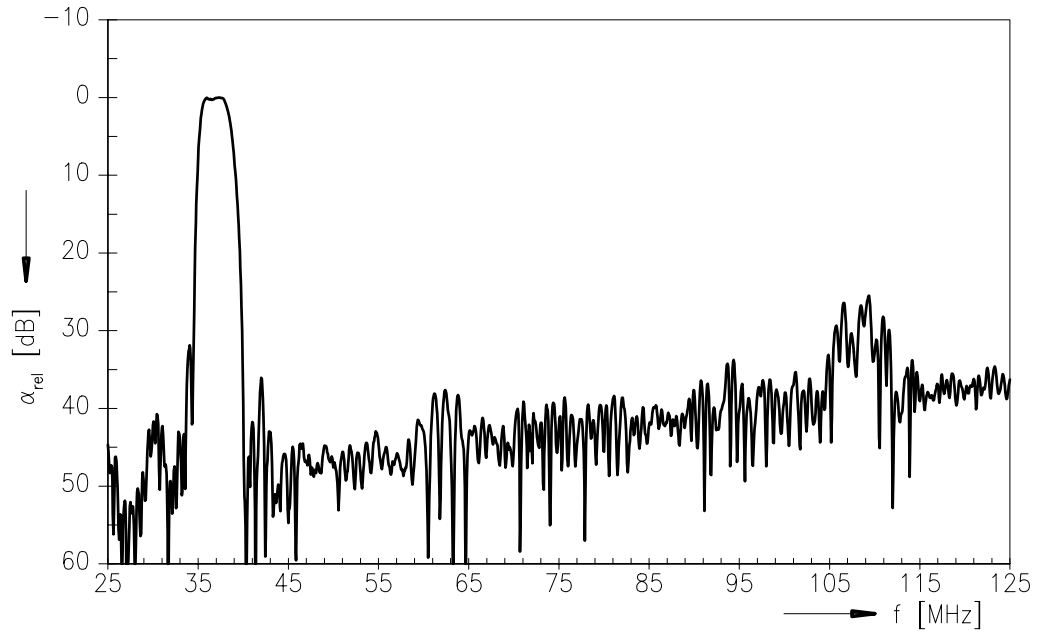
Frequency response in M/N mode



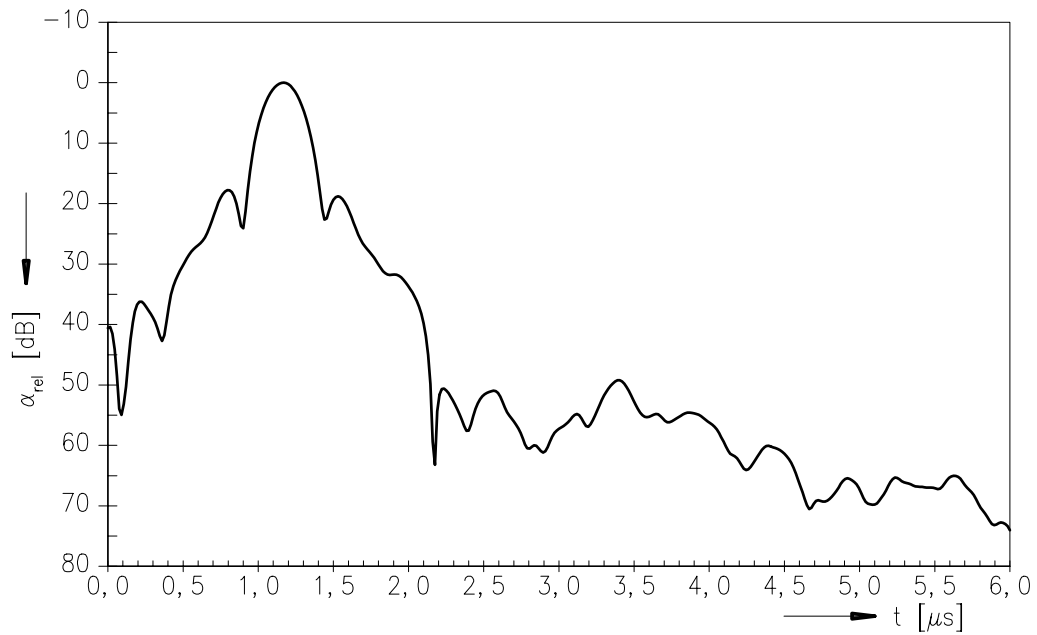


Data Sheet

Frequency response in M/N mode



Time domain response in M/N mode







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