EPCOS

SAW Components

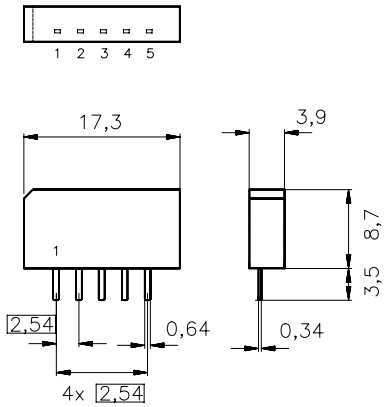
Data Sheet K 7253 M

Data Sheet

Standard

- B/G
- D/K
- M/N

Plastic package **SIP5K**



Features

- TV IF filter switchable from B/G, D/K mode to M/N mode
- M/N mode with Nyquist slope and sound shelf
- Customized group delay predistortion
- B/G, D/K mode with Nyquist slope and sound shelf
- Customized group delay predistortion

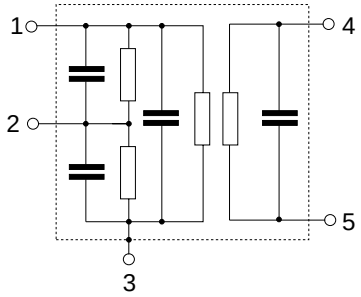
Terminals

- Tinned CuFe alloy

Dimensions in mm, approx. weight 1,0 g

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 7253 M	B39380-K7253-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

Characteristics in B/G, D/K mode (switching pin 2 connected to ground)

Reference temperature: T_A = 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

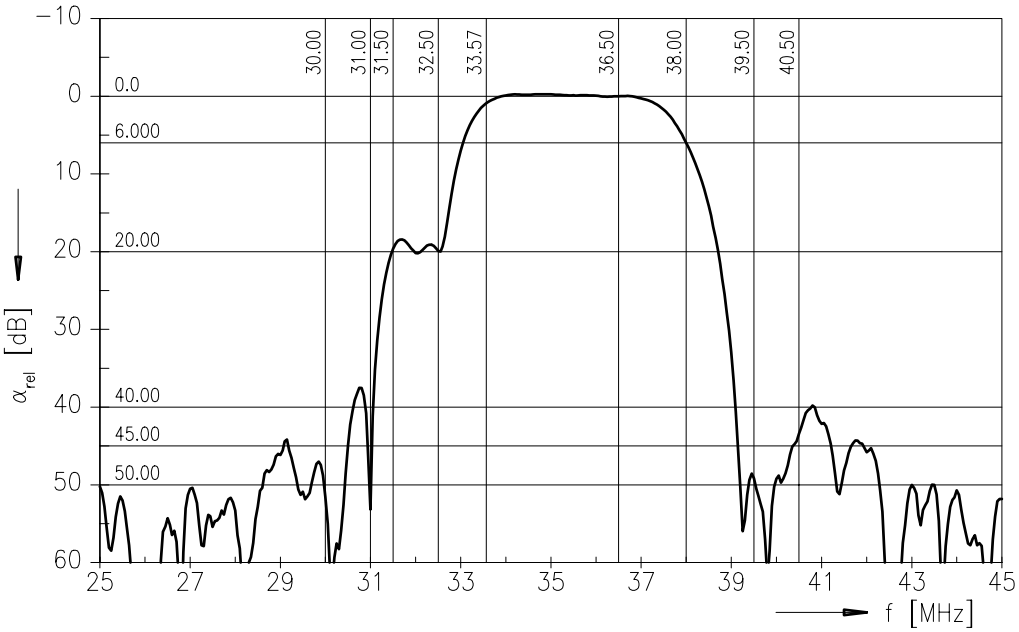
			min.	typ.	max.	
Insertion attenuation		α				
Reference level for the following data	36,50 MHz		15,9	17,4	18,9	dB
Relative attenuation		α_{rel}				
Picture carrier	38,00 MHz		4,7	5,7	6,7	dB
Color carrier	33,57 MHz		0,2	1,2	2,2	dB
Sound carrier	31,50 MHz		18,5	20,0	21,5	dB
	32,50 MHz		18,1	19,6	—	dB
Adjacent picture carrier	30,00 MHz		42,0	50,0	—	dB
	31,00 MHz		40,0	55,0	—	dB
Adjacent sound carrier	39,50 MHz		40,0	46,0	—	dB
	40,50 MHz		37,0	42,0	—	dB
Lower sidelobe	25,00 ..... 30,00 MHz		38,0	44,0	—	dB
Upper sidelobe	39,50 ..... 45,00 MHz		33,0	39,0	—	dB
Reflected wave signal suppression						
1,3 µs ... 6,0 µs after main pulse (test pulse 250 ns, carrier frequency 36,50 MHz)			42,0	51,0	—	dB
Feedthrough signal suppression						
1,2 µs ... 1,1 µs before main pulse (test pulse 250 ns, carrier frequency 36,50 MHz)			50,0	56,0	—	dB
Group delay predistortion (reference frequency 38,00 MHz)		$\Delta\tau$				
	33,57 MHz		—	–40	—	ns
Impedance at 36,50 MHz						
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$			—	1,2 ‖16,5	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$			—	2,5 ‖ 3,9	—	kΩ || pF
Temperature coefficient of frequency		TC_f	—	–72	—	ppm/K

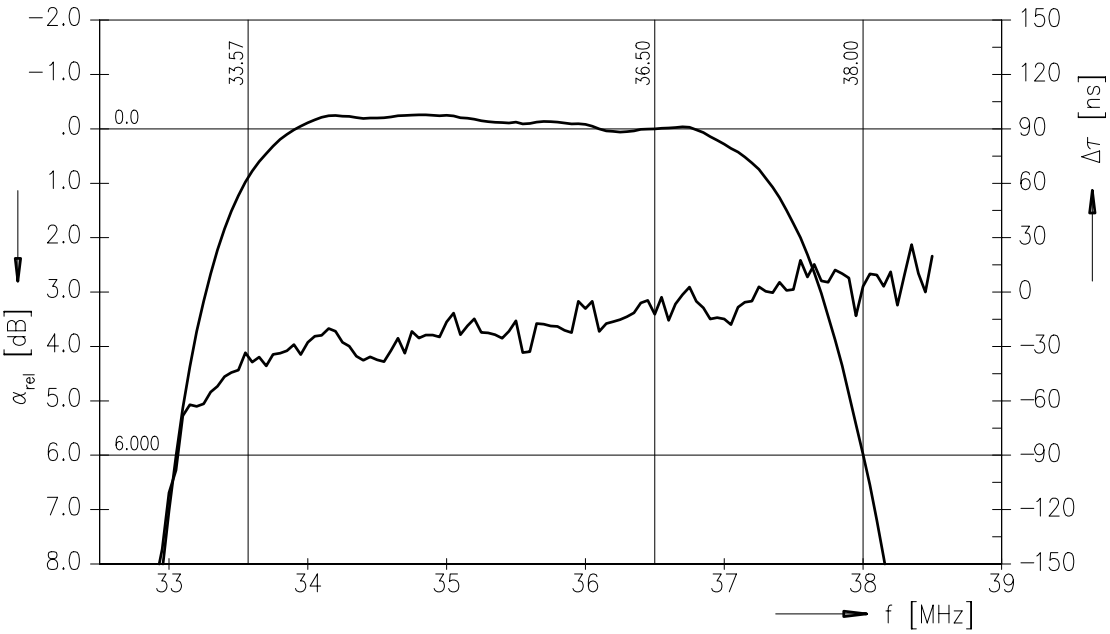
Characteristics in M/N mode (switching pin 2 connected to pin 1)

Reference temperature: T_A = 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

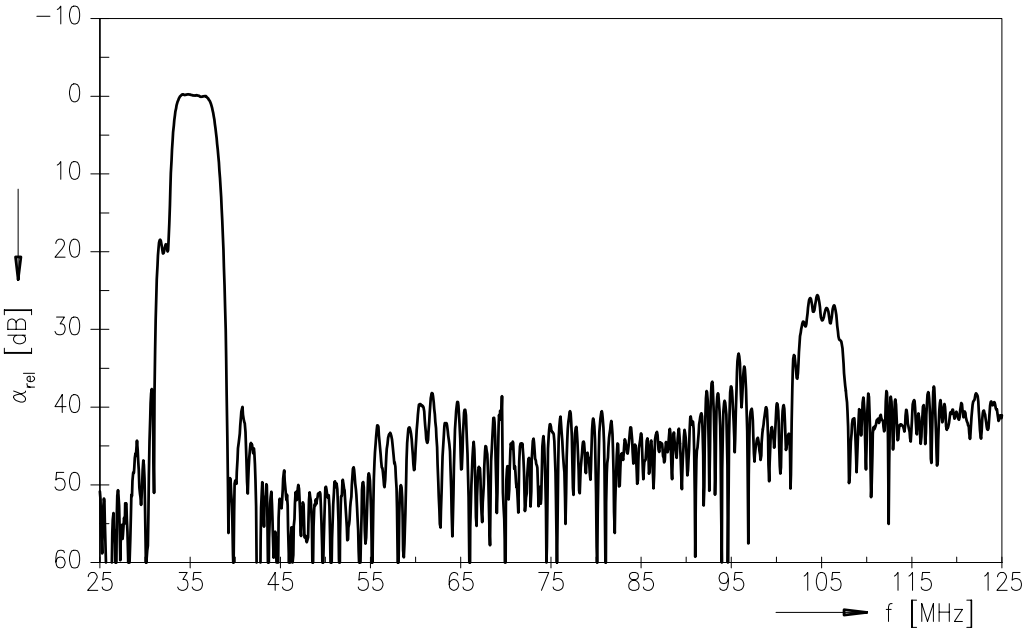
			min.	typ.	max.	
Insertion attenuation		α				
Reference level for the following data	36,50 MHz		15,5	17,0	18,5	dB
Relative attenuation		α_{rel}				
Picture carrier	38,00 MHz		5,2	6,2	7,2	dB
Color carrier	34,42 MHz		2,8	3,8	4,8	dB
Sound carrier	33,50 MHz		18,3	19,8	21,3	dB
Adjacent picture carrier	32,00 MHz		38,0	46,0	—	dB
Adjacent sound carrier	39,50 MHz		36,0	43,0	—	dB
Lower sidelobe	25,00 ..... 32,00 MHz		36,0	42,0	—	dB
Upper sidelobe	39,50 ..... 45,00 MHz		31,0	37,0	—	dB
Reflected wave signal suppression						
1,2 µs ... 6,0 µs after main pulse (test pulse 250 ns, carrier frequency 36,50 MHz)			42,0	51,0	—	dB
Feedthrough signal suppression						
1,2 µs ... 1,1 µs before main pulse (test pulse 250 ns, carrier frequency 36,50 MHz)			50,0	56,0	—	dB
Group delay predistortion (reference frequency 38,00 MHz)		$\Delta\tau$				
	34,42 MHz		—	–50	—	ns
Impedance at 36,50 MHz						
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$			—	1,2 ‖18,9	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$			—	2,5 ‖ 3,9	—	kΩ || pF
Temperature coefficient of frequency		TC_f	—	–72	—	ppm/K

Frequency response B/G, D/K mode

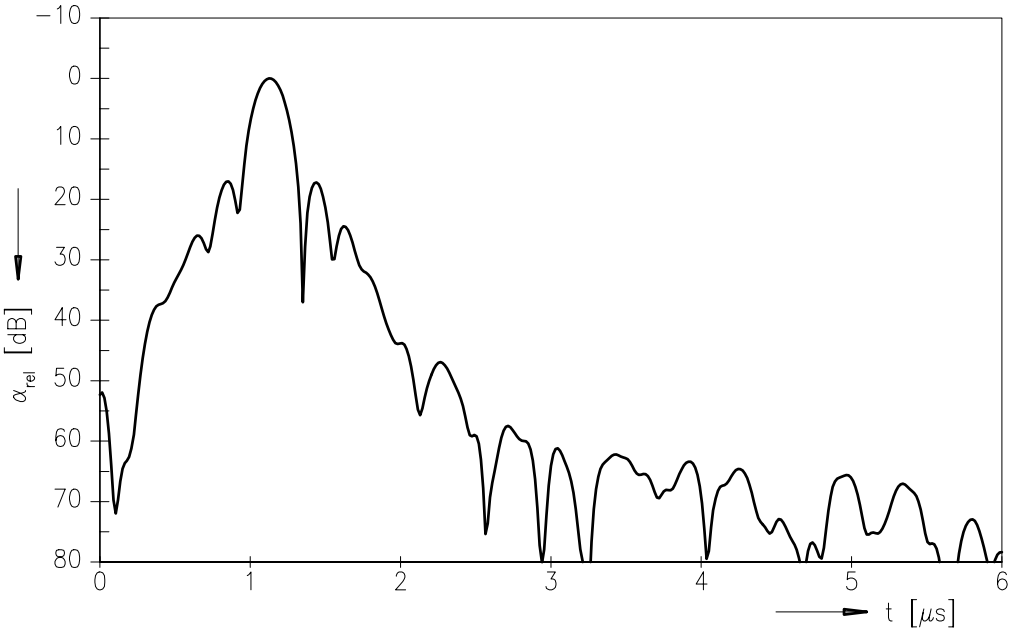




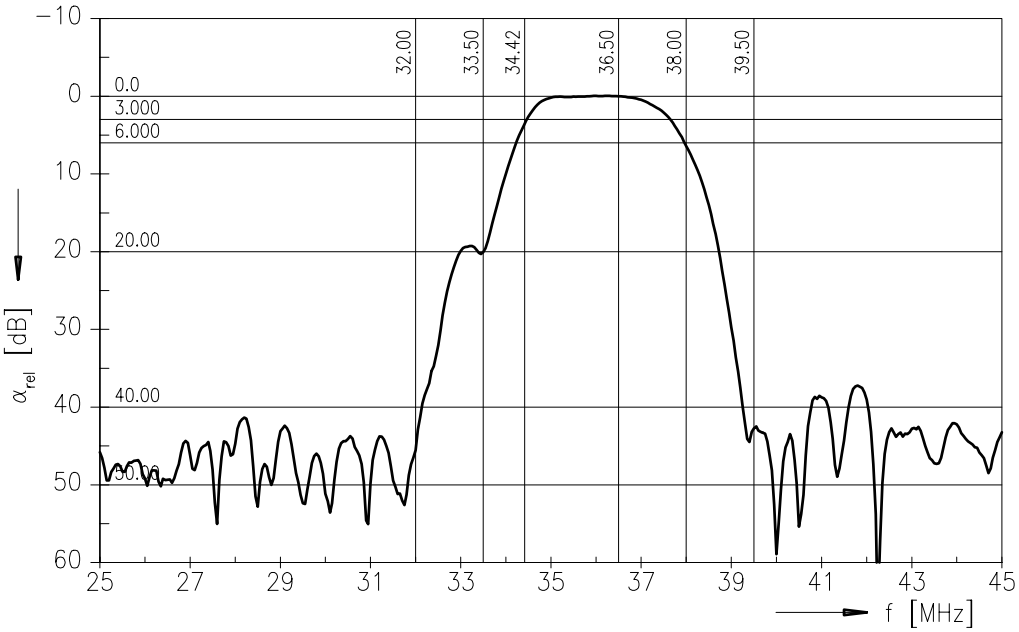
Frequency response B/G, D/K mode

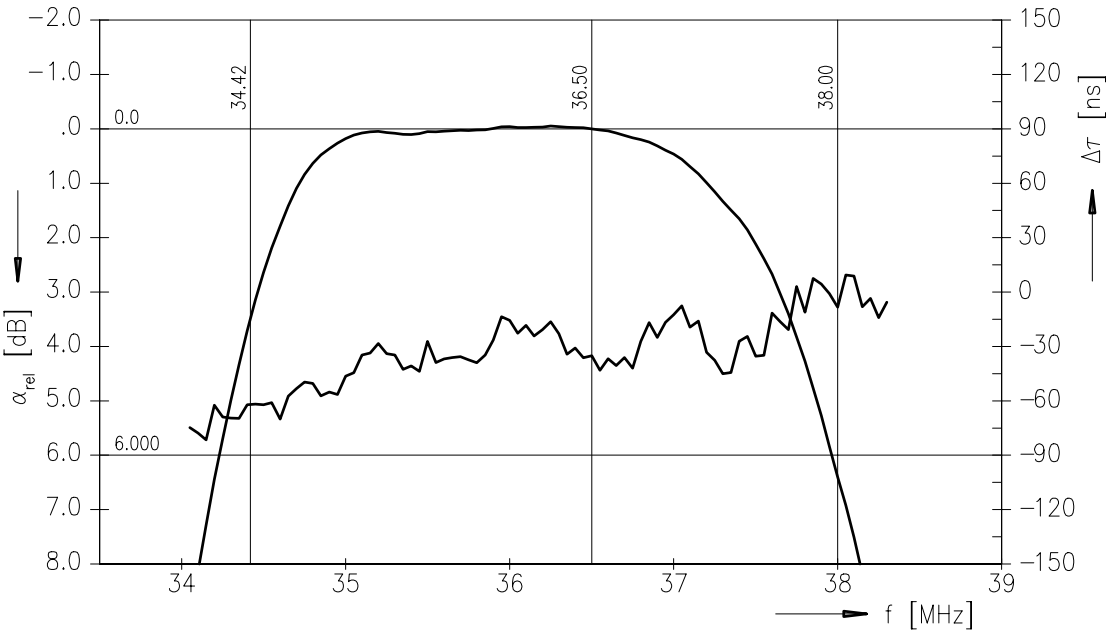


Time domain response B/G, D/K mode

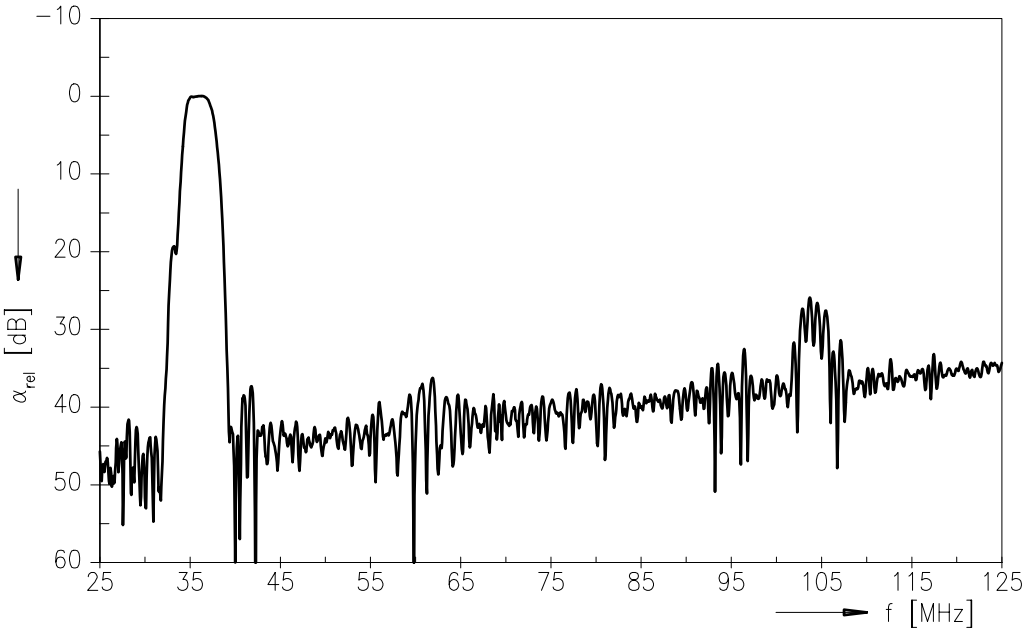


Frequency response M/N mode

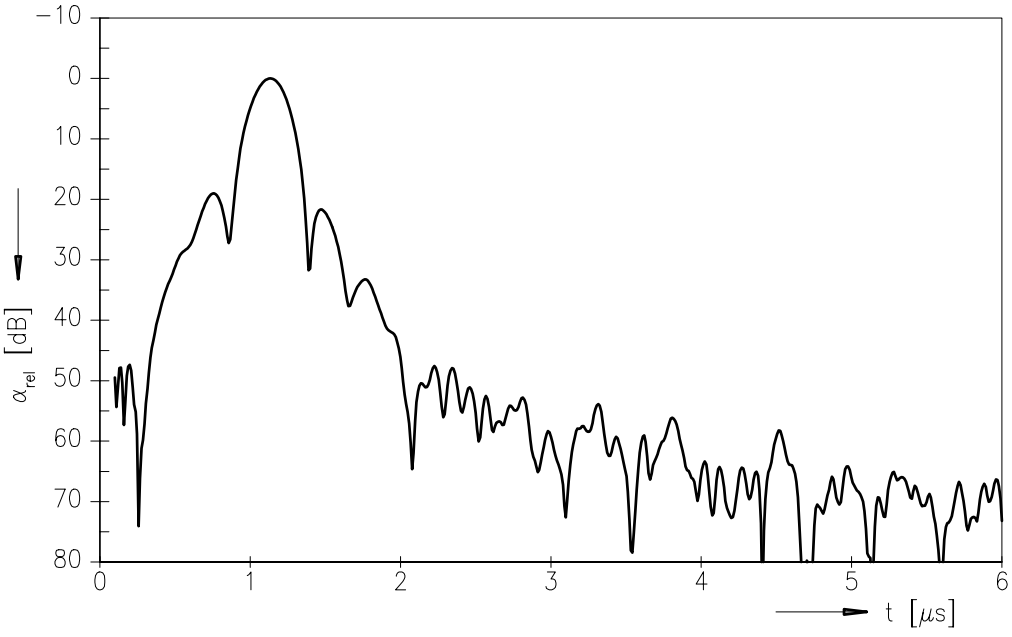




Frequency response M/N mode



Time domain response M/N mode



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