EPCOS

SAW Components

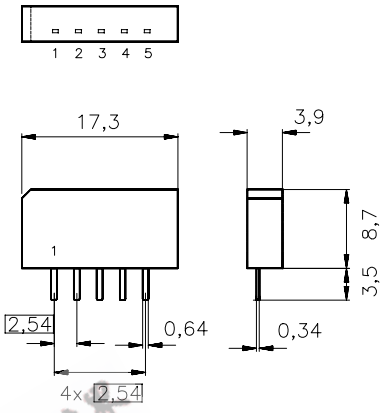
Data Sheet K 7257 M

Data Sheet

Standard

Plastic package **SIP5K**

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



Dimensions in mm, approx. weight 1,0 g

Features

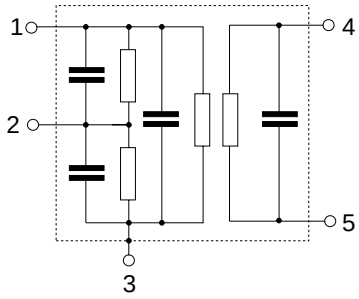
- TV IF filter switchable from B/G,L/L' mode to M/N mode
- B/G,L/L' mode with Nyquist slope and sound suppression
- Highly reduced group delay predistortion as compared to standard B/G, half
- M/N mode with Nyquist slope and sound suppression
- Constant group delay

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

Characteristics in B/G, L/L' mode (switching input 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

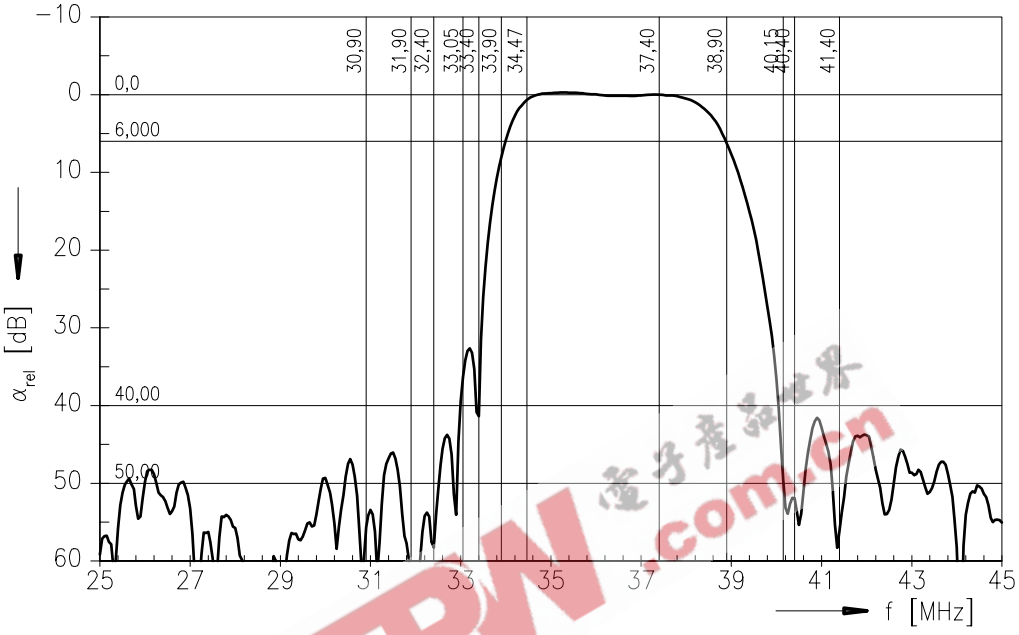
			min.	typ.	max.	
Insertion attenuation		α				
Reference level for the following data	37,40 MHz		15,1	16,6	18,1	dB
Relative attenuation		α_{rel}				
Picture carrier	38,90 MHz		5,0	6,0	7,0	dB
Picture carrier	33,90 MHz		—	7,9	—	dB
Color carrier	34,47 MHz		-0,5	0,5	1,5	dB
Sound carrier	33,40 MHz		28,0	43,0	—	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
Reflected wave signal suppression						
1,2 µs ... 6,0 µs after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)			42,0	52,0	—	dB
Feedthrough signal suppression						
1,3 µs ... 1,2 µs before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)			50,0	56,0	—	dB
Group delay predistortion		$\Delta\tau$				ns
(reference frequency 38,90 MHz)						
	36,90 MHz		—	–50	—	ns
	34,47 MHz		—	50	—	ns
Impedance at 37,40 MHz						
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$			—	1,2 ‖18,6	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$			—	1,8 ‖ 4,2	—	kΩ || pF
Temperature coefficient of frequency		TC_f	—	–72	—	ppm/K

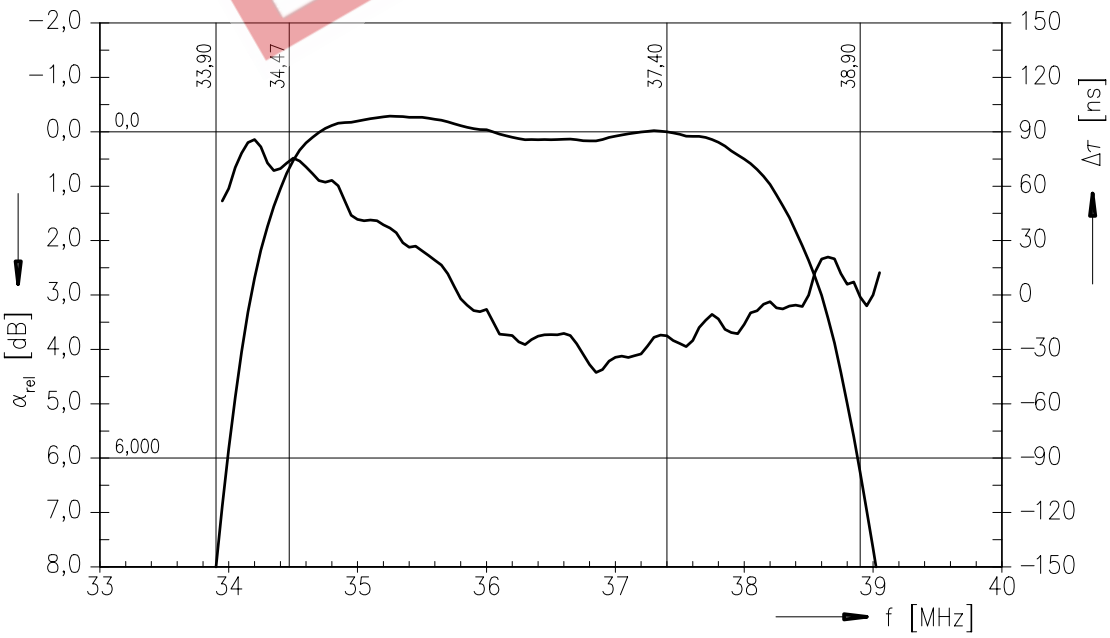
Characteristics in M/N mode (switching input pin 2 connected to pin 1)

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

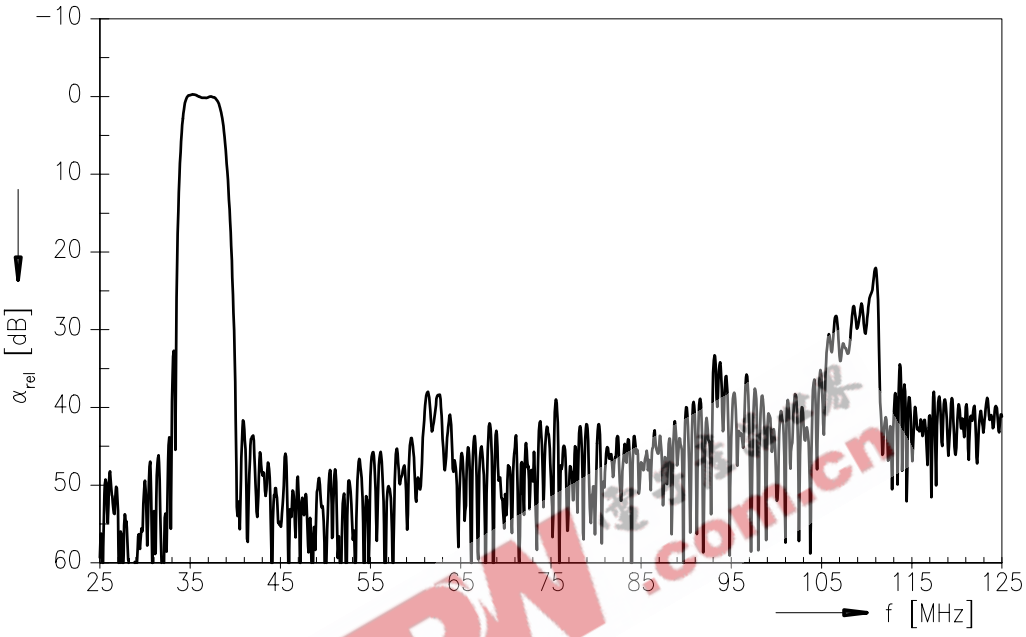
			min.	typ.	max.	
Insertion attenuation		α				
Reference level for the following data	37,40 MHz		14,8	16,3	17,8	dB
Relative attenuation		α_{rel}				
Picture carrier	38,90 MHz		5,4	6,4	7,4	dB
Color carrier	35,32 MHz		1,6	2,6	3,6	
Sound carrier	34,40 MHz		28,0	39,0	—	dB
Adjacent picture carrier	32,90 MHz		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
Reflected wave signal suppression						
1,3 µs ... 6,0 µs after main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)			42,0	52,0	—	dB
Feedthrough signal suppression						
1,3 µs ... 1,2 µs before main pulse (test pulse 250 ns, carrier frequency 37,40 MHz)			—	50,0	—	dB
Group delay ripple (p-p)		Δτ				
	35,32 ... 38,90 MHz		—	50	—	ns
Impedance at 37,40 MHz						
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$			—	1,3 ‖19,5	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$			—	1,8 ‖ 4,2	—	kΩ || pF
Temperature coefficient of frequency		TC_f	—	–72	—	ppm/K

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

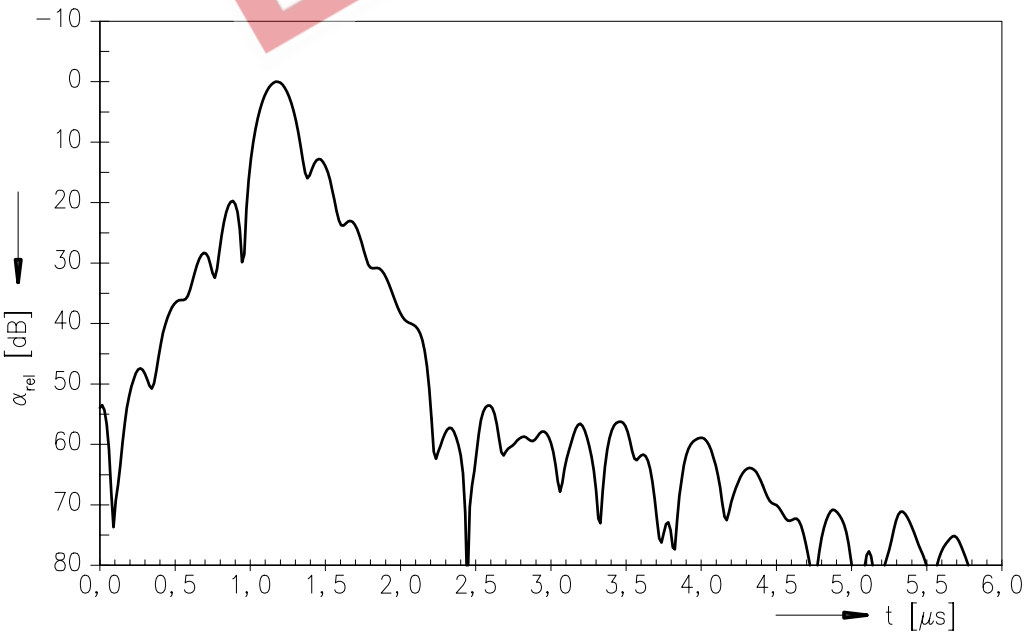




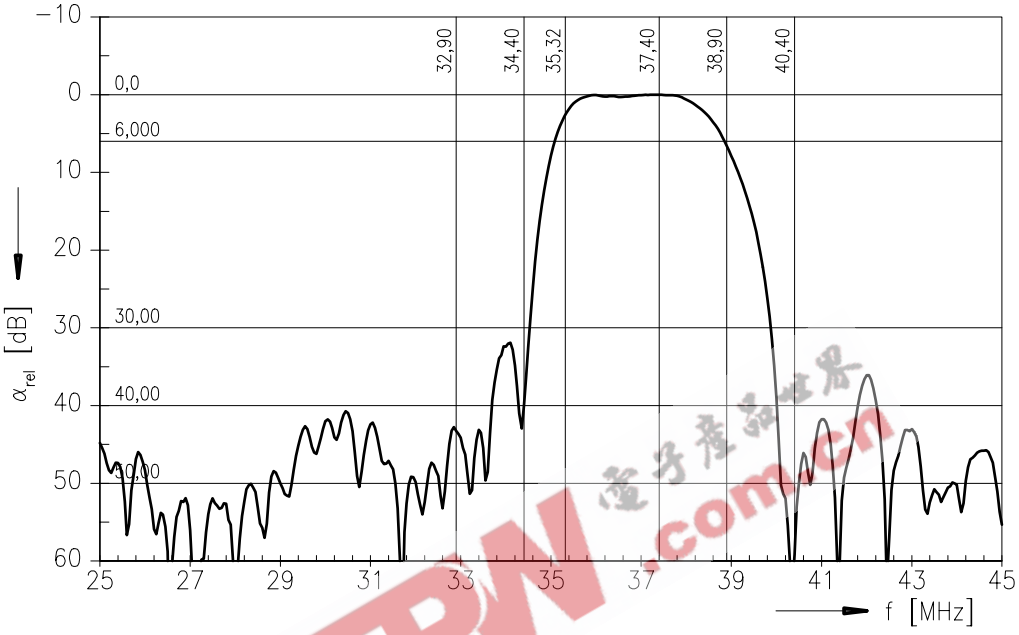
Frequency response in B/G, L/L' mode

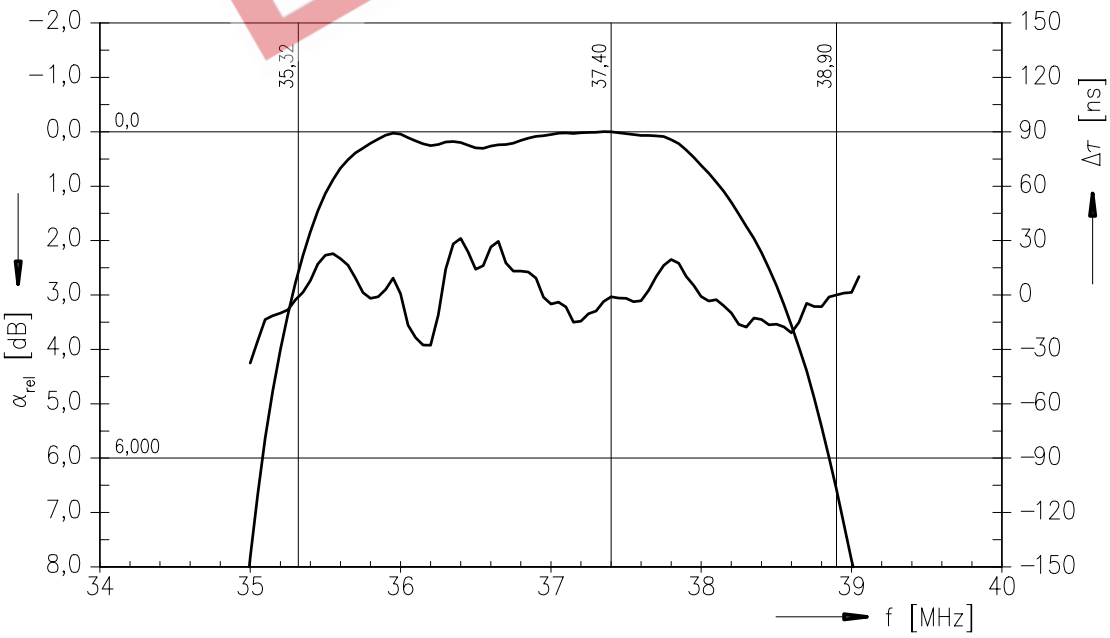


Time domain response in B/G, L/L' mode

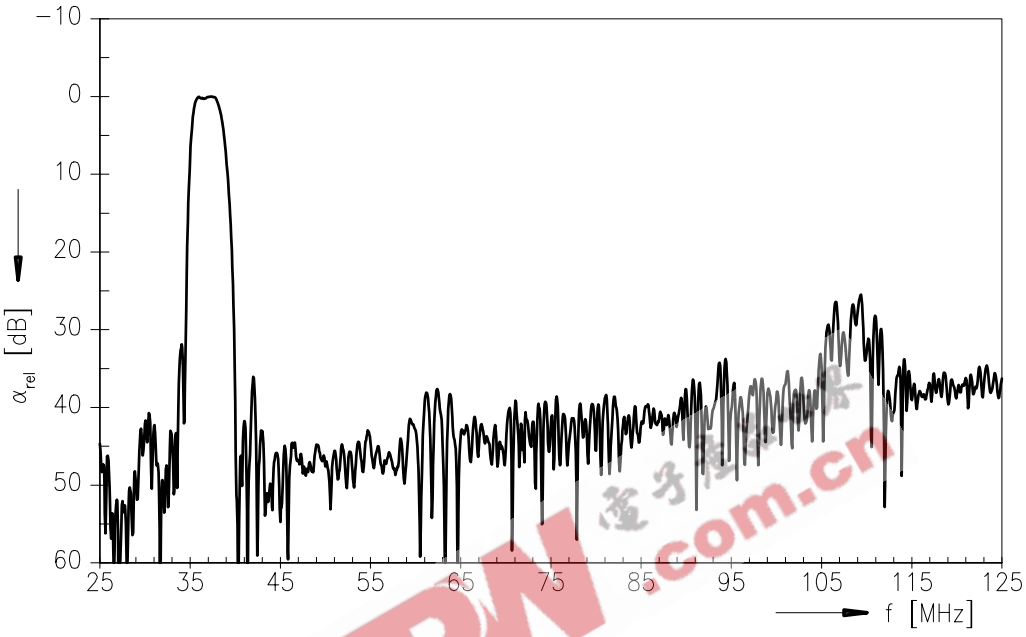


Frequency response in M/N mode

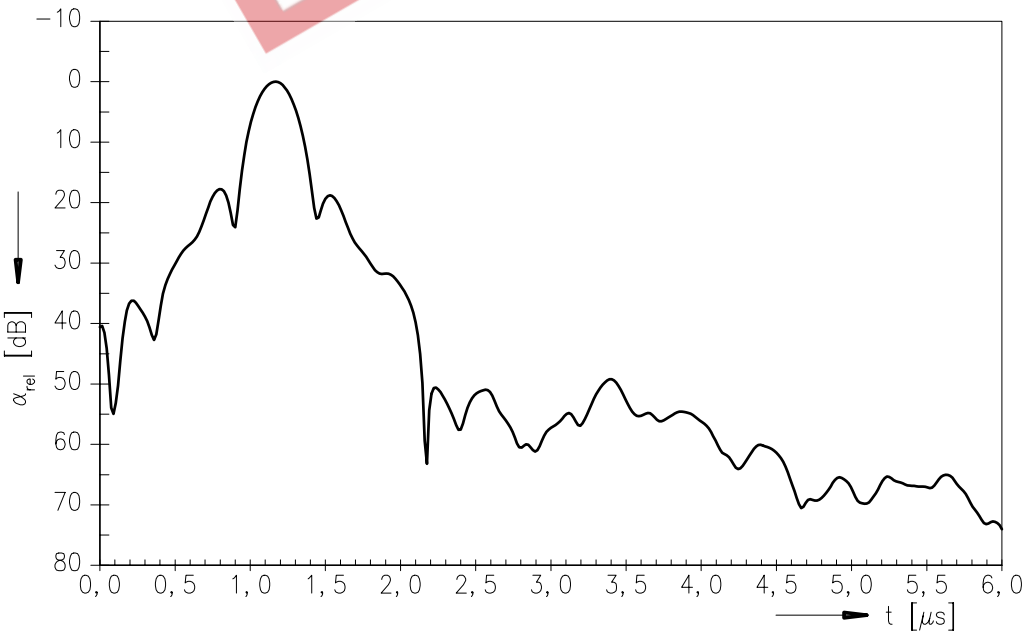




Frequency response in M/N mode



Time domain response in M/N mode



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