SAW Components

SAW IF filter

IF Filter for Video Applications

Series/type:	**K 7292 M**
Ordering code:	**B39389-K7292-M100**
Date:	August 13, 2009
Version:	2.0

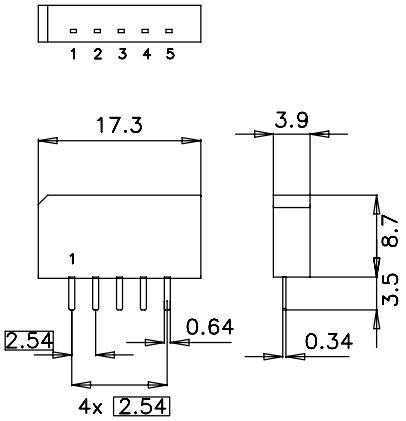
Data Sheet

Application

- Standard: B/G, L/L', M/N
- 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

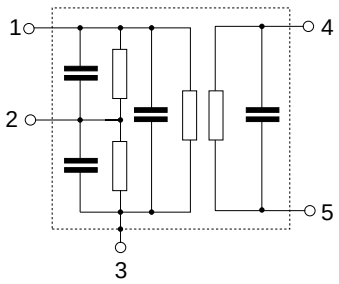
Features

- Plastic package **SIP5K**
- Approximate weight 1.0 g
- RoHS compatible
- Tinned CuFe alloy terminals



Pin configuration

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



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. @ 25 °C	max.	
Insertion attenuation		α				
Reference level for the following data	37.40 MHz		13.4	14.9	16.4	dB
Relative attenuation		α_{rel}				
Picture carrier	38.90 MHz		4.7	5.7	6.7	dB
Picture carrier	33.90 MHz		—	9.3	—	dB
Color carrier	34.47 MHz		–0.3	0.7	1.7	dB
Sound carrier	33.40 MHz		34.0	40.0	—	dB
	33.45 MHz		28.0	34.0	—	dB
NICAM sound carrier	33.05 MHz		—	38.0	—	dB
Adj. picture carrier	30.90 MHz		42.0	55.0	—	dB
	31.90 MHz		44.0	49.0	—	dB
	32.40 MHz		45.0	49.0	—	dB
	40.15 MHz		36.0	41.0	—	dB
Adj. sound carrier	40.40 MHz		38.0	45.0	—	dB
	41.40 MHz		40.0	47.0		dB
Lower sidelobe						
	25.00 ... 31.90 MHz		41.0	47.0	—	dB
Upper sidelobe						
	40.40 ... 45.00 MHz		35.0	41.0	—	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)			—	56.0	—	dB
Group delay predistortion (reference frequency 38.90 MHz)		$\Delta\tau$				
	36.90 MHz		—	–45	—	ns
	34.47 MHz		—	65	—	ns
Impedance at 37.40 MHz						
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$			—	1.3 || 15.9	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$			—	1.6 || 4.2	—	kΩ || pF
Temperature coefficient of frequency		TC_f	—	–72	—	ppm/K

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

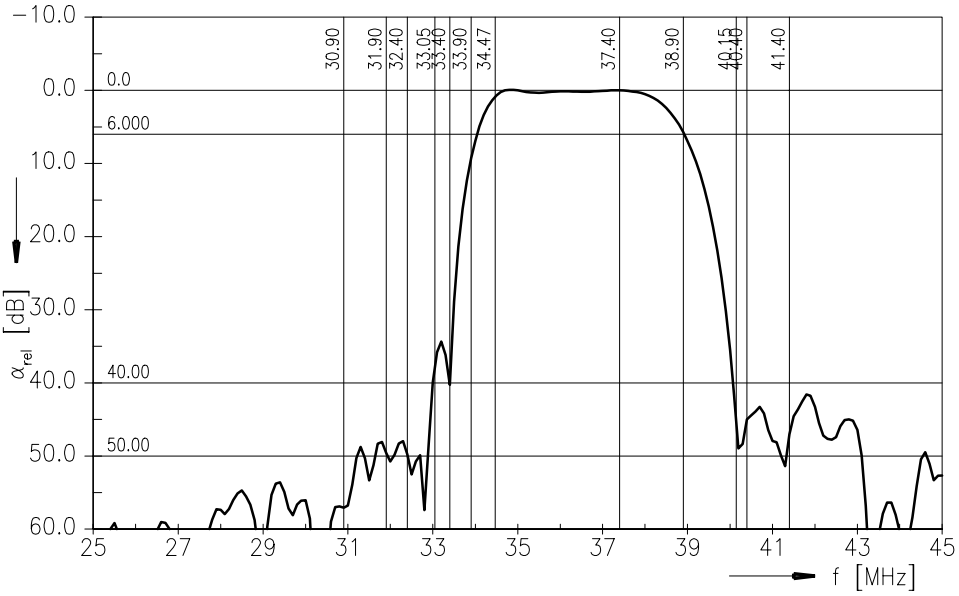
Reference temperature: T_A = 25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 2 kΩ || 3 pF

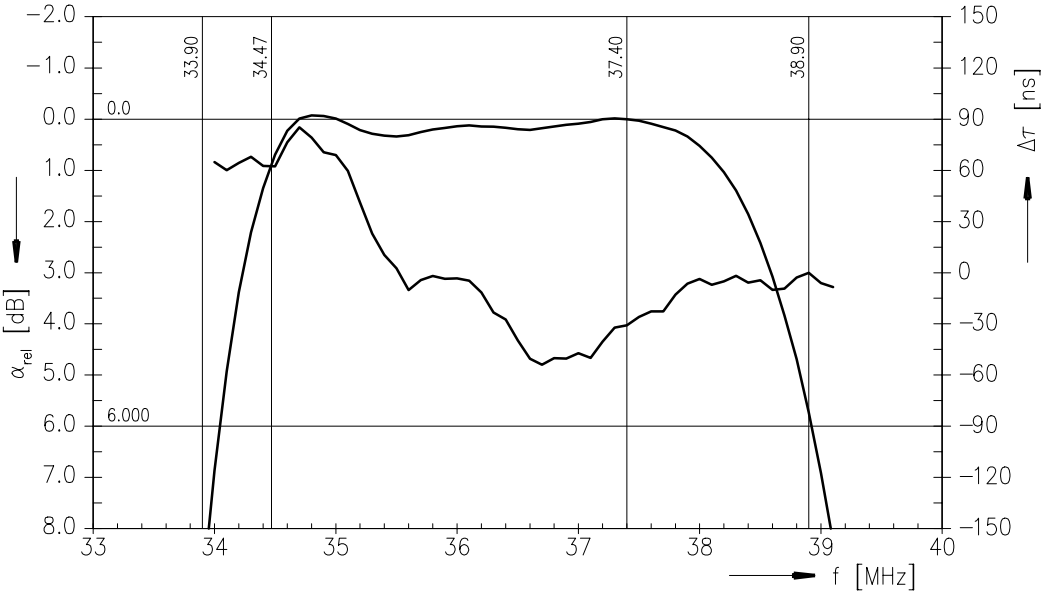
		min.	typ. @ 25 °C	max.	
Insertion attenuation	α				
Reference level for the following data	37.40 MHz	12.2	13.7	15.2	dB
Relative attenuation	α_{rel}				
Picture carrier	38.90 MHz	4.6	5.6	6.6	dB
Color carrier	35.32 MHz	0.9	1.9	2.9	dB
Sound carrier	34.40 MHz	25.0	31.0	—	dB
Adj. picture carrier	32.90 MHz	45.0	56.0	—	dB
Adj. sound carrier	40.40 MHz	42.0	57.0	—	dB
Lower sidelobe					
	25.00 ... 32.90 MHz	37.0	43.0	—	dB
Upper sidelobe					
	40.40 ... 45.00 MHz	39.0	45.0	—	dB
Reflected wave signal suppression					
1.2 µs ... 6.0 µs after main pulse (test pulse 250 ns, carrier frequency 37.40 MHz)		44.0	54.0	—	dB
Feedthrough signal suppression					
1.3 µs ... 1.2 µs before main pulse (test pulse 250 ns, carrier frequency 37.40 MHz)		—	52.0	—	dB
Group delay ripple (p-p)	$\Delta\tau$				
	35.32 ... 38.90 MHz	—	50	—	ns
Impedance at 37.40 MHz					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1.1 || 17.9	—	kΩ || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1.6 || 4.2	—	kΩ || pF
Temperature coefficient of frequency	TC_f	—	–72	—	ppm/K

Maximum ratings

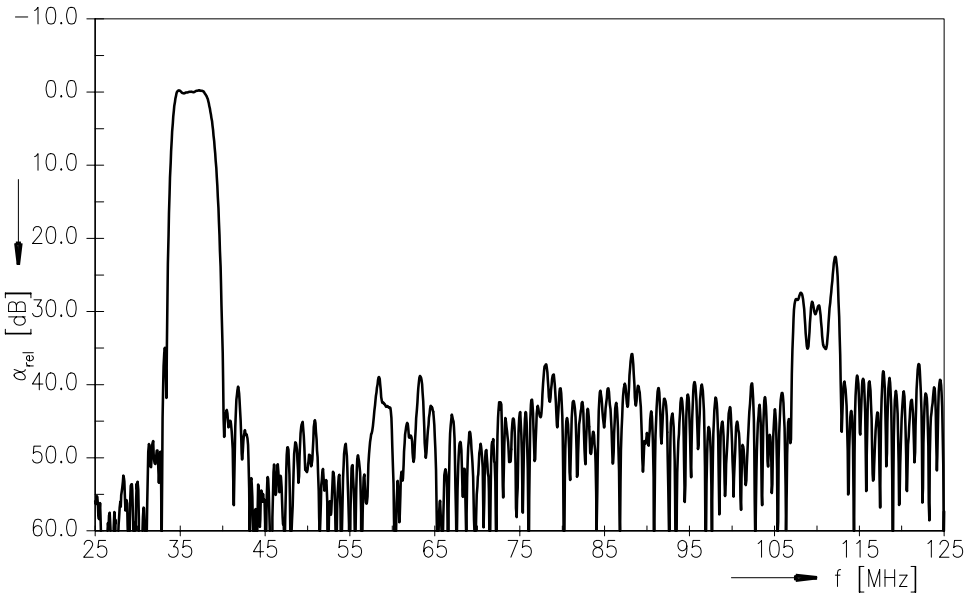
Operable temperature range	T	–25 / +65	˚C	
Storage temperature range	T_{stg}	–40 / +85	˚C	
DC voltage	V_{DC}	5	V	between any terminals
AC voltage	V_{pp}	10	V	between any terminals

Frequency response in B/G, D/K mode

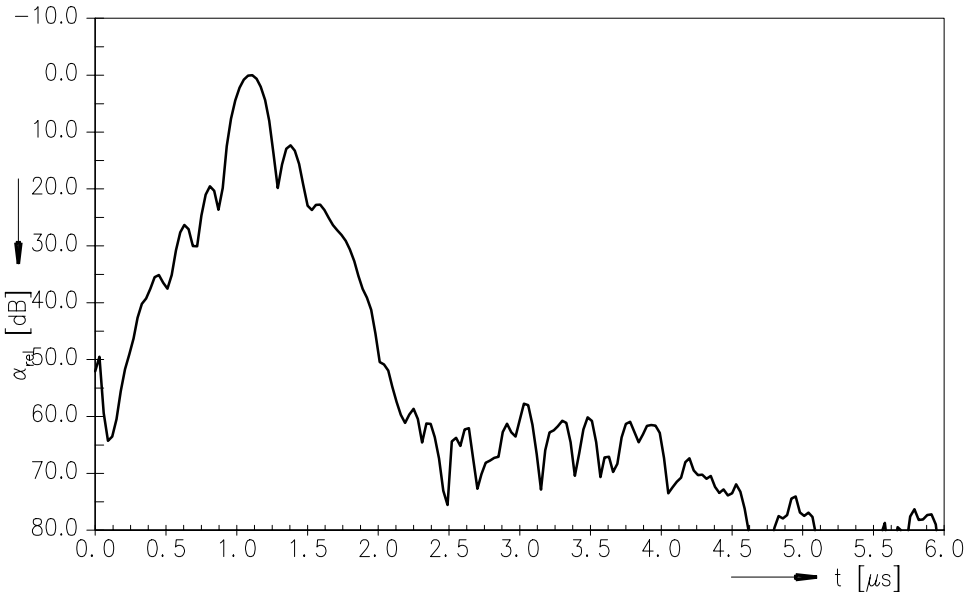




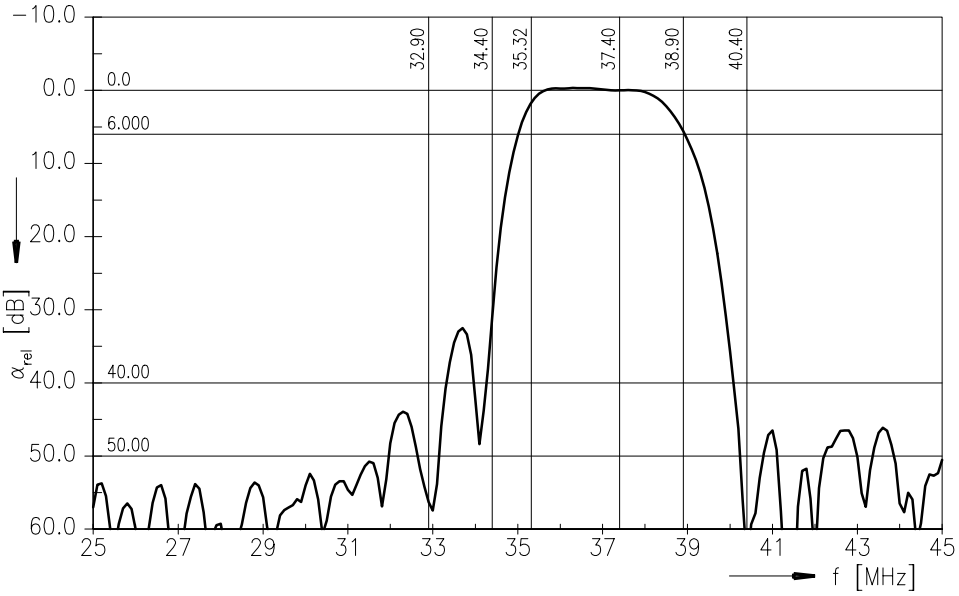
Frequency response B/G, D/K mode

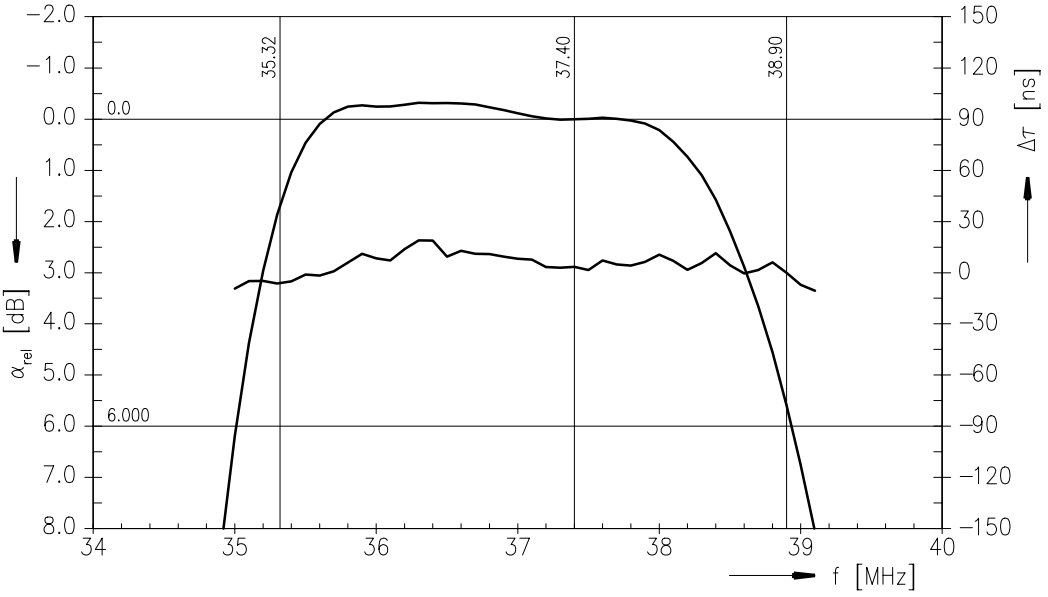


Time domain response B/G, D/K mode

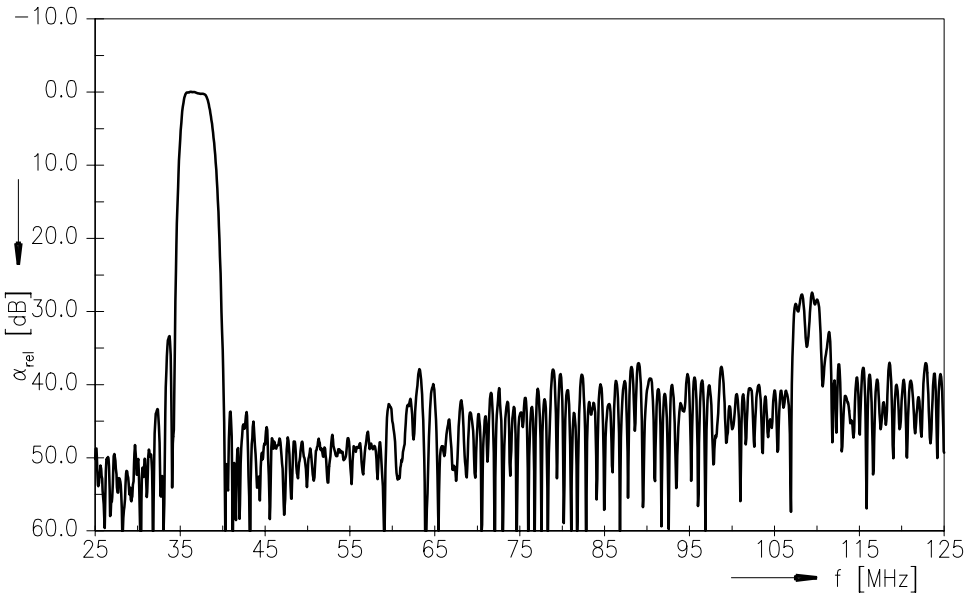


Frequency response in M/N mode

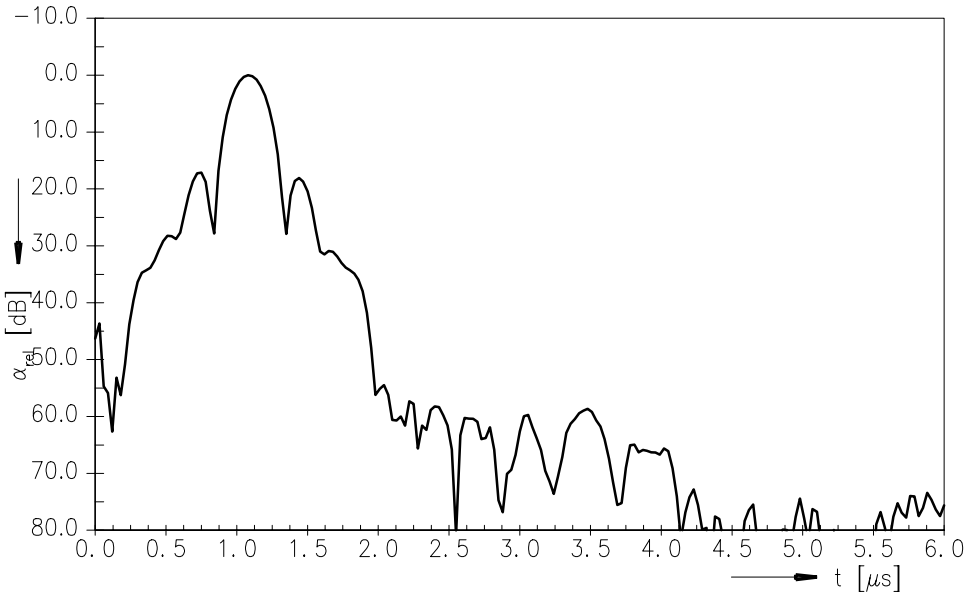




Frequency response M/N mode



Time domain response M/N mode



References

Type	K 7292 M
Ordering code	B39389-K7292-M100
Marking and package	C61157-A1-A15
Packaging	F61074-V8067-Z000
Date codes	L_1126
S-parameters	
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

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