



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

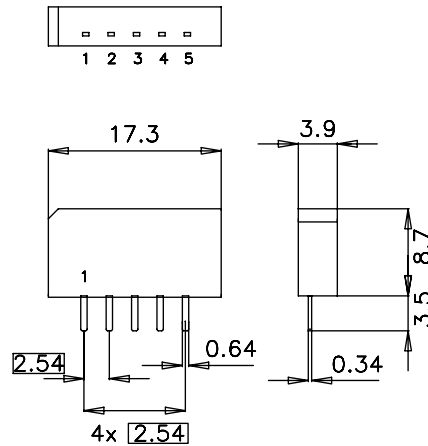
Application

- 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



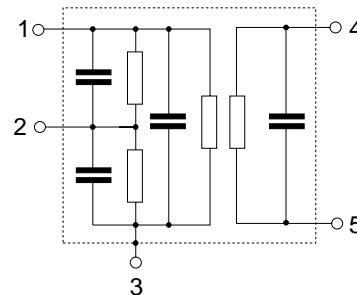
Features

- 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





SAW Components	K 7292 M
SAW IF filter	38.90 MHz

Data Sheet

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

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

		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 $\Delta\tau$					
(reference frequency 38.90 MHz)					
	36.90 MHz	—	-45	—	ns
	34.47 MHz	—	65	—	ns
Impedance at 37.40 MHz					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1.3 \parallel 15.9	—	$\text{k}\Omega \parallel \text{pF}$
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1.6 \parallel 4.2	—	$\text{k}\Omega \parallel \text{pF}$
Temperature coefficient of frequency TC_f		—	-72	—	ppm/K

Please read *cautions and warnings and important notes* at the end of this document.



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

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

		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: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1.1 \parallel 17.9	—	k Ω \parallel pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1.6 \parallel 4.2	—	k Ω \parallel pF
Temperature coefficient of frequency	TC_f	—	-72	—	ppm/K



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Data Sheet

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



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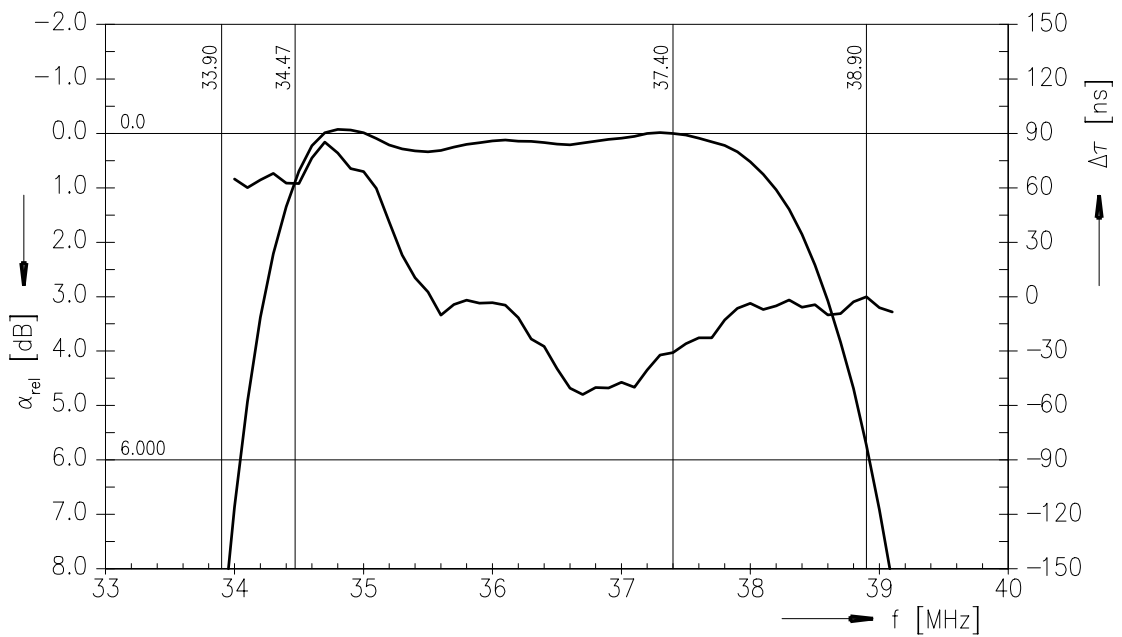
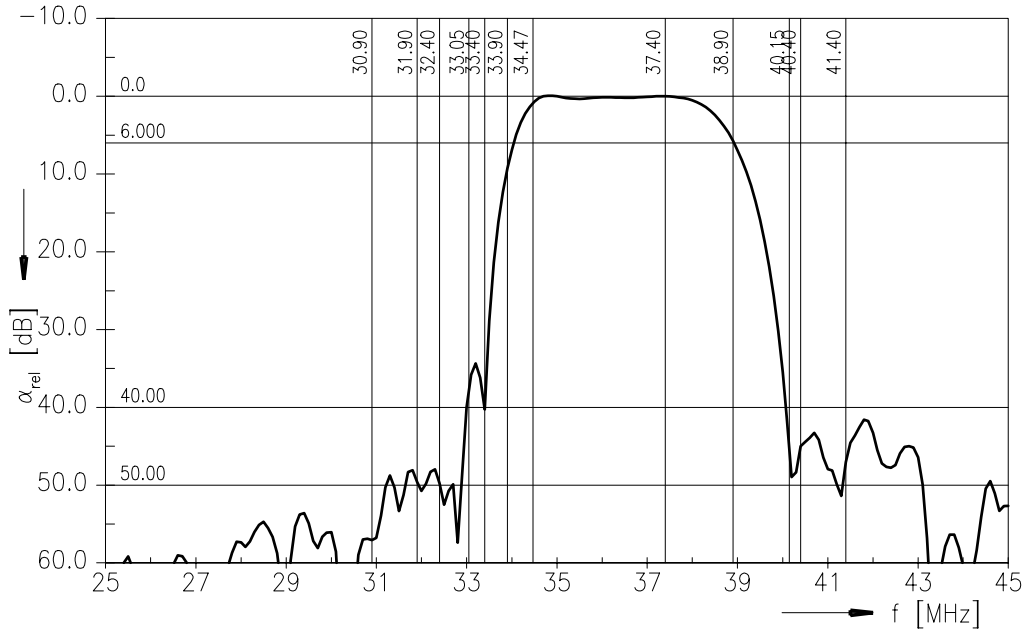
K 7292 M

SAW IF filter

38.90 MHz

Data Sheet

Frequency response in B/G, D/K mode



Please read *cautions and warnings* and *important notes* at the end of this document.



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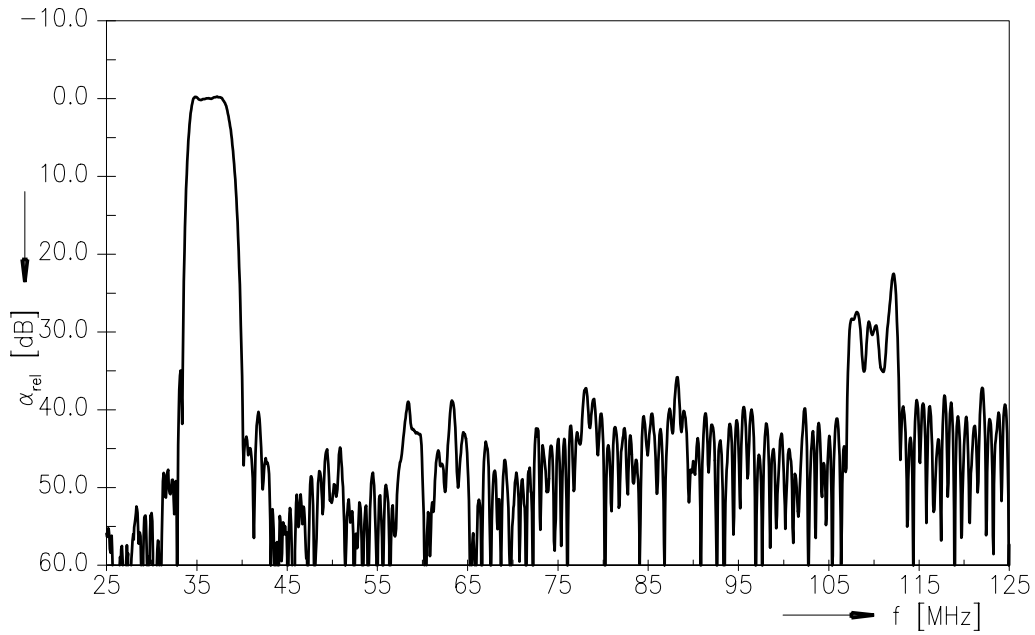
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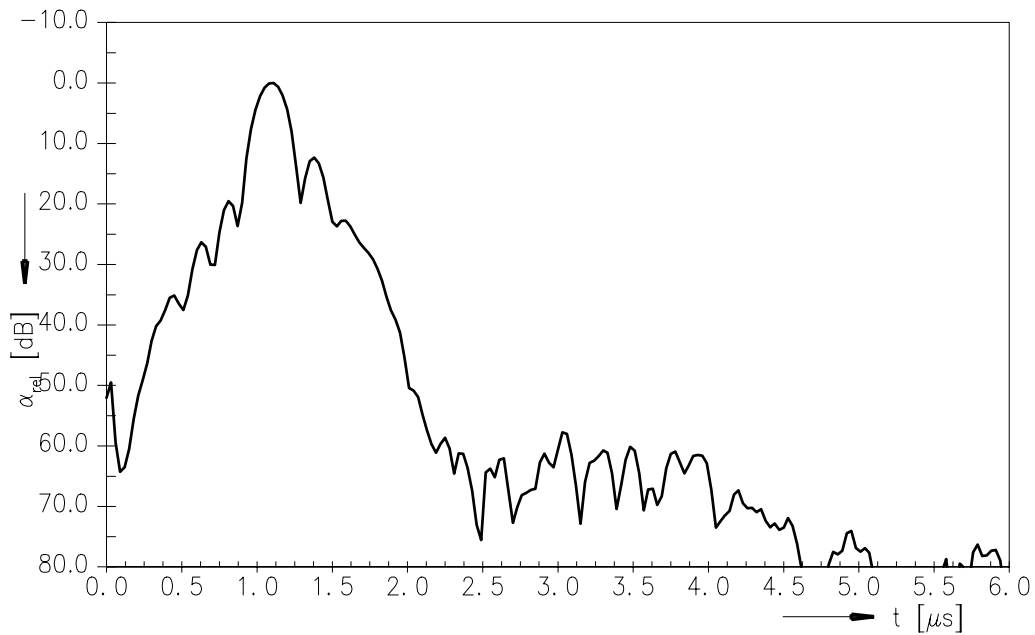
38.90 MHz

Data Sheet

Frequency response B/G, D/K mode



Time domain response B/G, D/K mode



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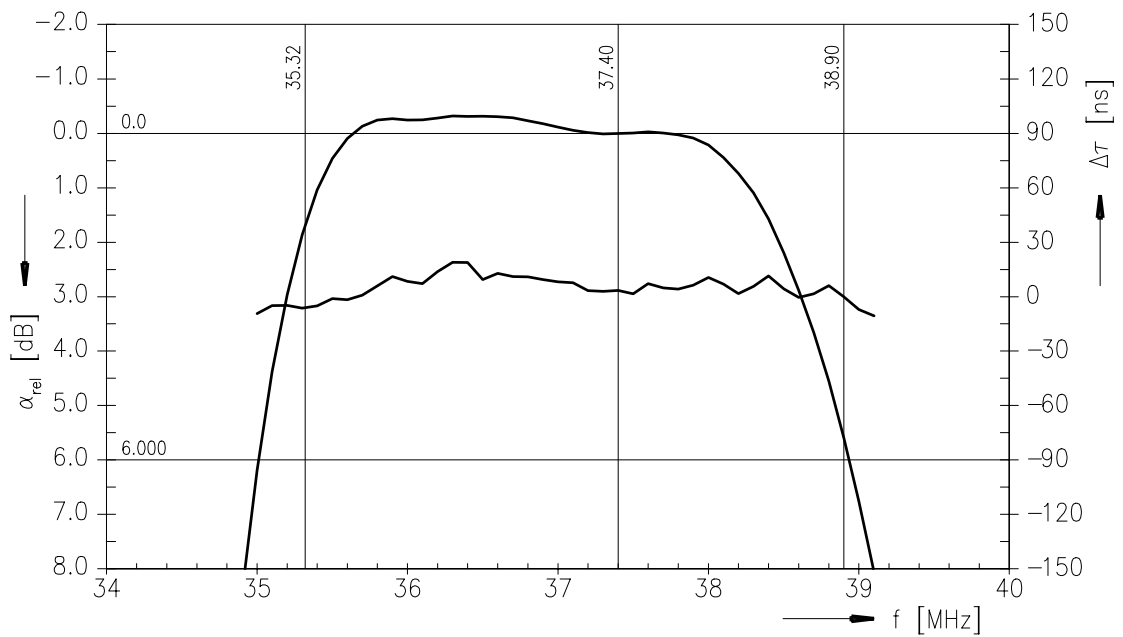
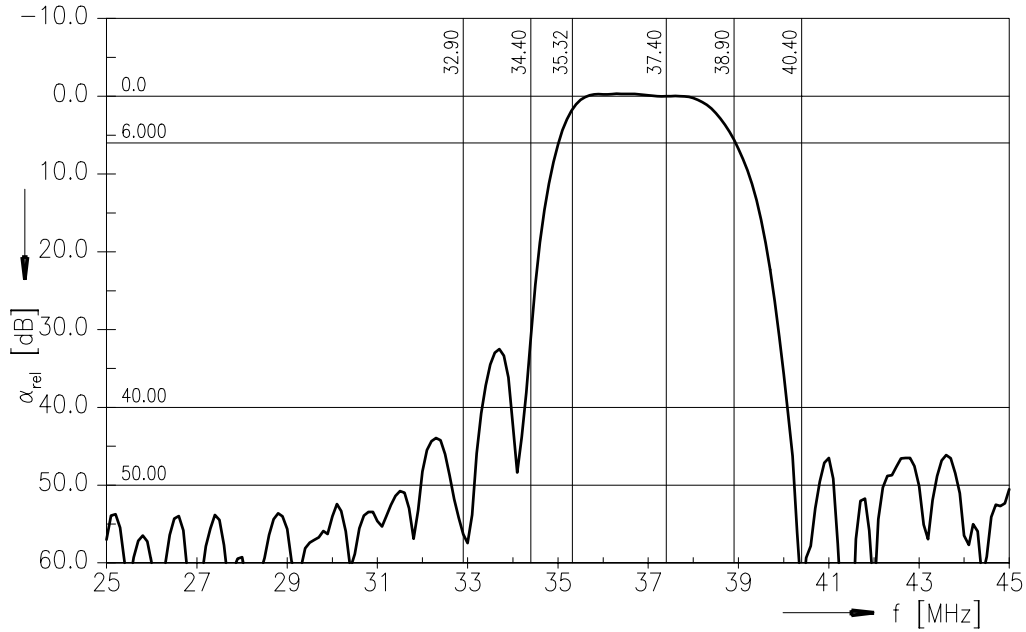
K 7292 M

SAW IF filter

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Data Sheet

Frequency response in M/N mode



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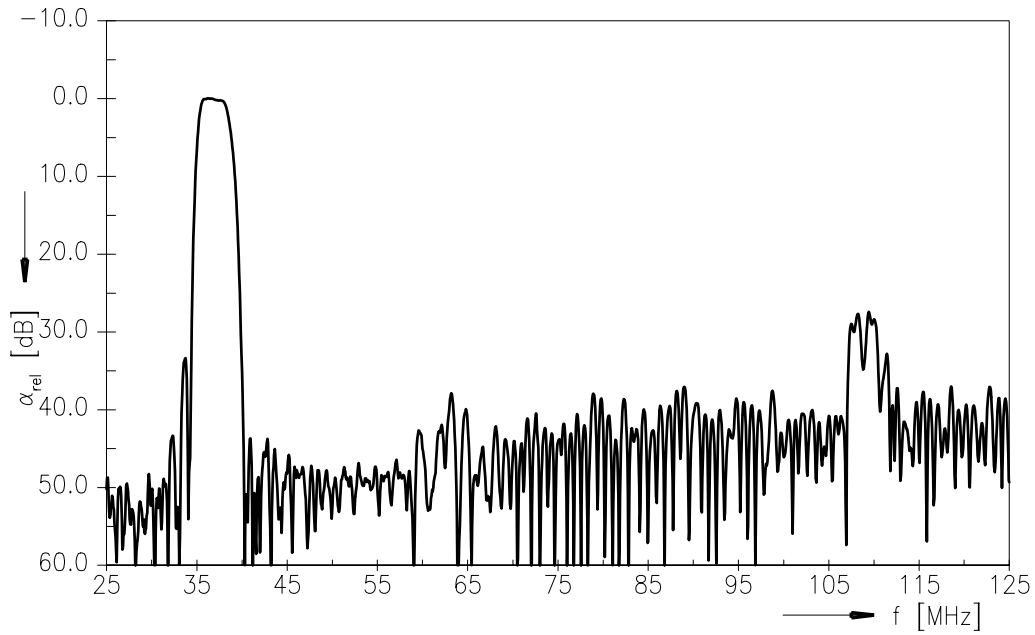
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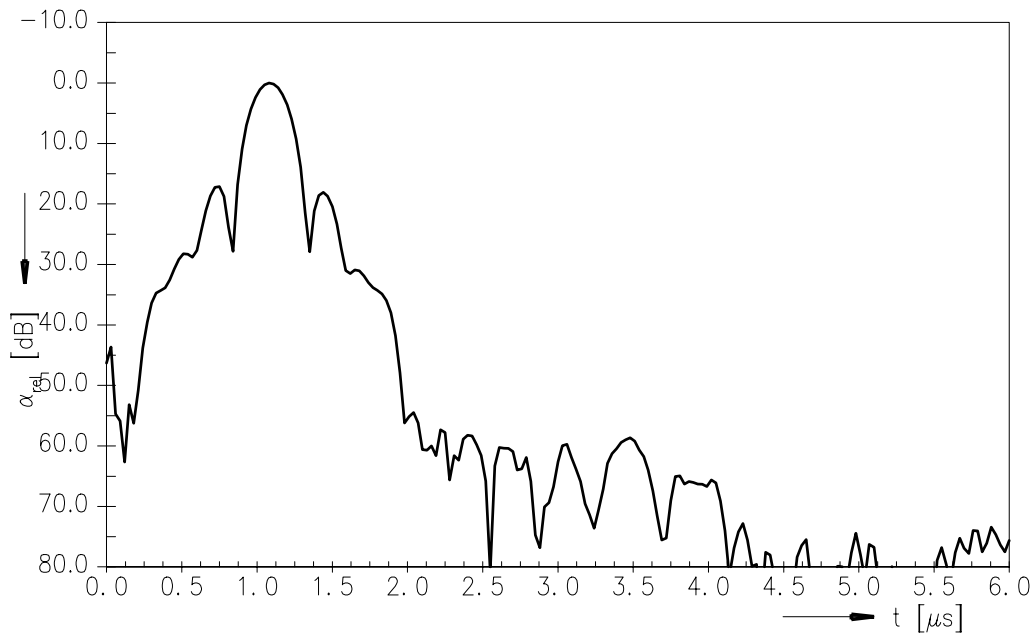
38.90 MHz

Data Sheet

Frequency response M/N mode



Time domain response M/N mode



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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."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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Please read *cautions and warnings and important notes* at the end of this document.



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