

# SAW Components

Data Sheet K 3953 M





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# **IF Filter for Video Applications**

33,90 MHz and 38,90 MHz

#### **Data Sheet**

#### Standard

- B/G
- D/K
- L/L'

#### **Features**

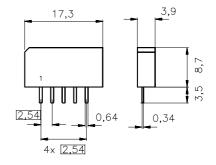
- TV IF filter with Nyquist slopes at 33,90 MHz and 38,90 MHz
- Constant group delay
- Suitable for CENELEC EN 55020

#### **Terminals**

■ Tinned CuFe alloy

## Plastic package SIP5K

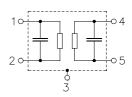




Dimensions in mm, approx. weight 1,0 g

#### Pin configuration

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



Туре	Ordering code	Marking and package according to	Packing according to		
K 3953 M	B39389-K3953-M100	C61157-A1-A15	F61074-V8067-Z000		

#### **Maximum ratings**

Operable temperature range	$T_{A}$	-25/+65	°C	
Storage temperature range	$T_{ m stg}$	-40/+85	°C	
DC voltage	$V_{DC}$	5	V	between any terminals
AC voltage	$V_{\sf pp}$	10	V	between any terminals



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**Characteristics** 

 $\begin{array}{lll} \mbox{Reference temperature:} & T_{\mbox{A}} & = 25 \ ^{\circ}\mbox{C} \\ \mbox{Terminating source impedance:} & Z_{\mbox{S}} & = 50 \ \Omega \\ \mbox{Terminating load impedance:} & Z_{\mbox{L}} & = 2 \ \mbox{k}\Omega \ || \ 3 \ \mbox{pF} \\ \end{array}$ 

				min.	typ.	max.	
Insertion attenuation			α				
Reference level for the	37,40	MHz		12,0	13,5	15,0	dB
following data							
Relative attenuation			$\alpha_{\text{rel}}$				
Picture carrier	38,90			5,0	6,0	7,0	dB
	33,90			6,3	7,5	8,7	dB
Color carrier	34,47			_	1,3	_	dB
Sound carrier	33,40			20,0	24,0	_	dB
	32,90			_	54,0	_	dB
	32,40			<u> </u>	63,0	<del>-</del>	dB
Adjacent picture carrier	30,90			48,0	62,0	_	dB
	31,90			48,0	59,0	_	dB
	40,15			36,0	40,0	_	dB
Adjacent sound carrier	40,40			48,0	59,0	_	dB
	41,40			46,0	60,0	_	dB
	40,90			46,0	59,0	_	dB
Lower sidelobe	25,00 31,90			45,0	52,0	_	dB
Upper sidelobe	40,40 45,00	MHz		38,0	44,0	_	dB
Deflected ways signal							
Reflected wave signal				42.0	50.0		٩D
1,2 μs 6,0 μs after ma	iiri puise			42,0	50,0	_	dB
(test pulse 250 ns,							
carrier frequency 37,40 l	VITZ)						
Feedthrough signal su	nnression						
1,2 μs 1,1 μs before n	• •			50,0	56,0	_	dB
(test pulse 250 ns,				00,0	00,0		uD
carrier frequency 37,40 l							
odinor irequency or, 40 i	VII 12)						
Group delay ripple (p-p	))		Δτ	-	50	_	ns
Impedance at 37,40 MH							
Input: $Z_{IN} = R_{IN}    C_{IN}$				_	1,4    16,9	_	k $\Omega \parallel pF$
Output:	$Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_0$	DUT		_	1,6    4,7	_	$k\Omega \parallel pF$
Temperature coefficient of frequency			$TC_{f}$	_	-72	_	ppm/K
Group delay ripple (p-p)  Impedance at 37,40 MHz  Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$ Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$ Temperature coefficient of frequency				_ _ _ _	1,4    16,9 1,6    4,7	_ _ _ _	kΩ    pF kΩ    pF



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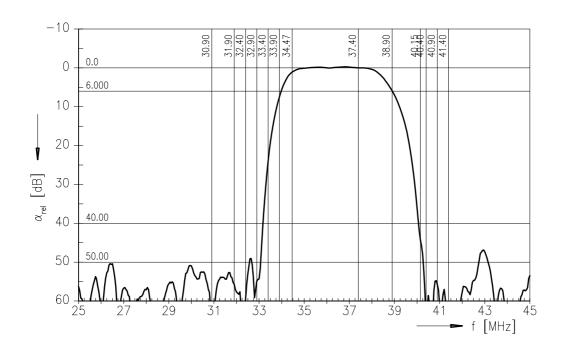
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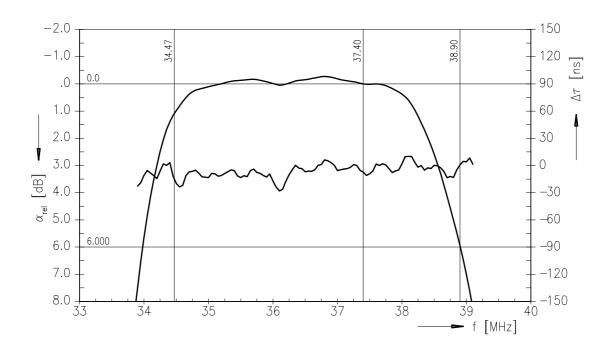
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## Frequency response







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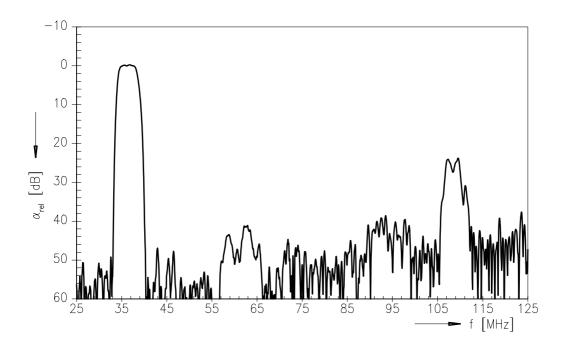
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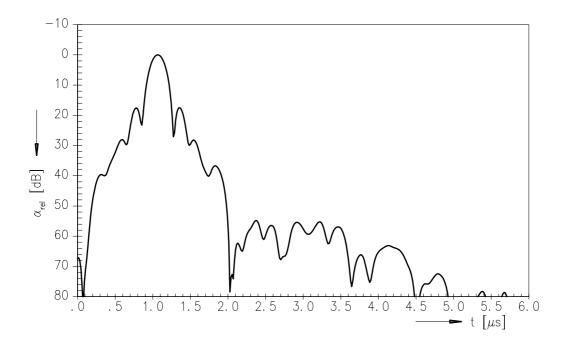
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## Frequency response



# Time domain response





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