



## SAW multimedia filters

### Series/Type: M3953M

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39458M3953M100		2011-01-14	2011-09-30	2012-09-30

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## SAW Components

M 3953 M

## SAW IF filter

45.75 MHz

### Data Sheet

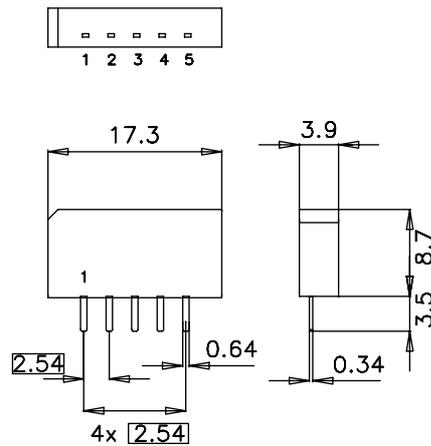
#### Application

- Standard: M/N
- TV IF filter with Nyquist slope and sound suppression
- High color carrier level
- Constant group delay



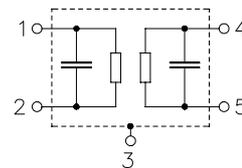
#### Features

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



#### Pin configuration

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




**SAW Components**
**M 3953 M**
**SAW IF filter**
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**Characteristics**

Reference temperature:  $T_A = 25 (45) \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF}$

		min.	typ. @ 25 °C	max.	
<b>Insertion attenuation</b>	$\alpha$				
Reference level for the following data	44.06 (44.00) MHz	11.2	12.7	14.2	dB
<b>Relative attenuation</b>	$\alpha_{rel}$				
Picture carrier	45.81 (45.75) MHz	5.2	6.2	7.2	dB
Color carrier	42.23 (42.17) MHz	-0.5	0.2	0.9	dB
	41.98 (41.92) MHz	0.2	0.9	1.6	dB
Sound carrier	41.31 (41.25) MHz	25.0	37.0	—	dB
Adj. picture carrier	39.81 (39.75) MHz	48.0	63.0	—	dB
Adj. sound carrier	47.31 (47.25) MHz	46.0	57.0	—	dB
Lower sidelobe	35.06 ... 39.81 (35.00 ... 39.75) MHz	40.0	45.0	—	dB
Upper sidelobe	47.31 ... 55.06 (47.25 ... 55.00) MHz	37.0	43.0	—	dB
<b>Reflected wave signal suppression</b>					
1.3 $\mu\text{s}$ ... 6.0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 44.06 MHz)		42.0	52.0	—	dB
<b>Feedthrough signal suppression</b>					
1.3 $\mu\text{s}$ ... 1.2 $\mu\text{s}$ before main pulse (test pulse 250 ns, carrier frequency 44.06 MHz)		50.0	56.0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$	—	40	—	ns
<b>Impedance at 44.06 MHz</b>					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1.1 $\parallel$ 15.6	—	k $\Omega$ $\parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1.0 $\parallel$ 4.0	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



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**Data Sheet**

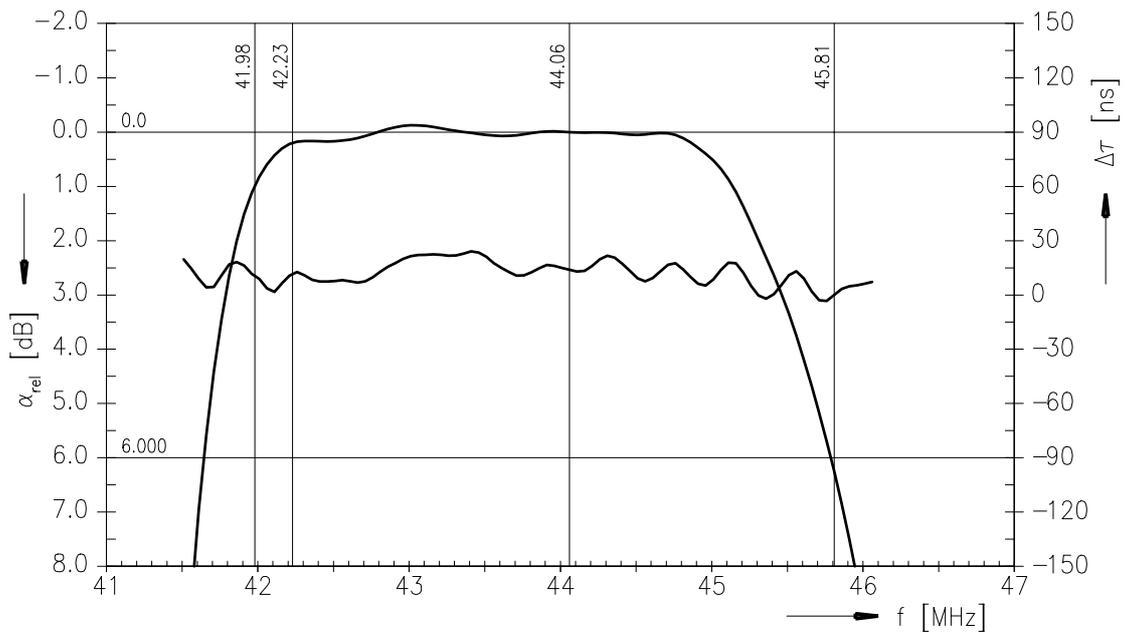
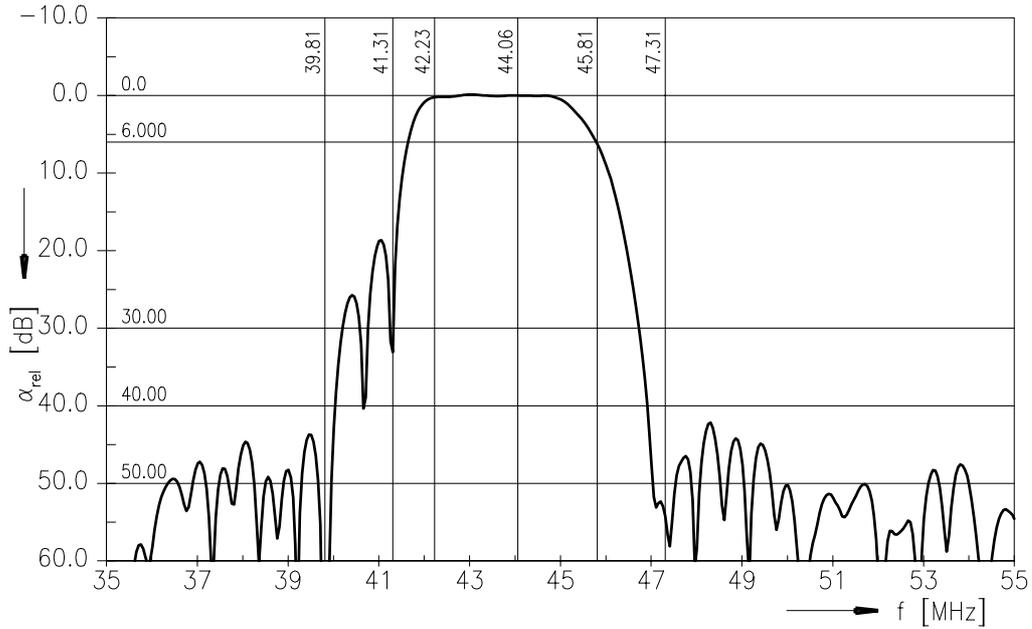
**Maximum ratings**

Operable temperature range	T	-25 / +65	°C	
Storage temperature range	T <sub>stg</sub>	-40 / +85	°C	
DC voltage	V <sub>DC</sub>	5	V	
AC voltage	V <sub>pp</sub>	10	V	between any terminals



Data Sheet

Frequency response



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



SAW Components

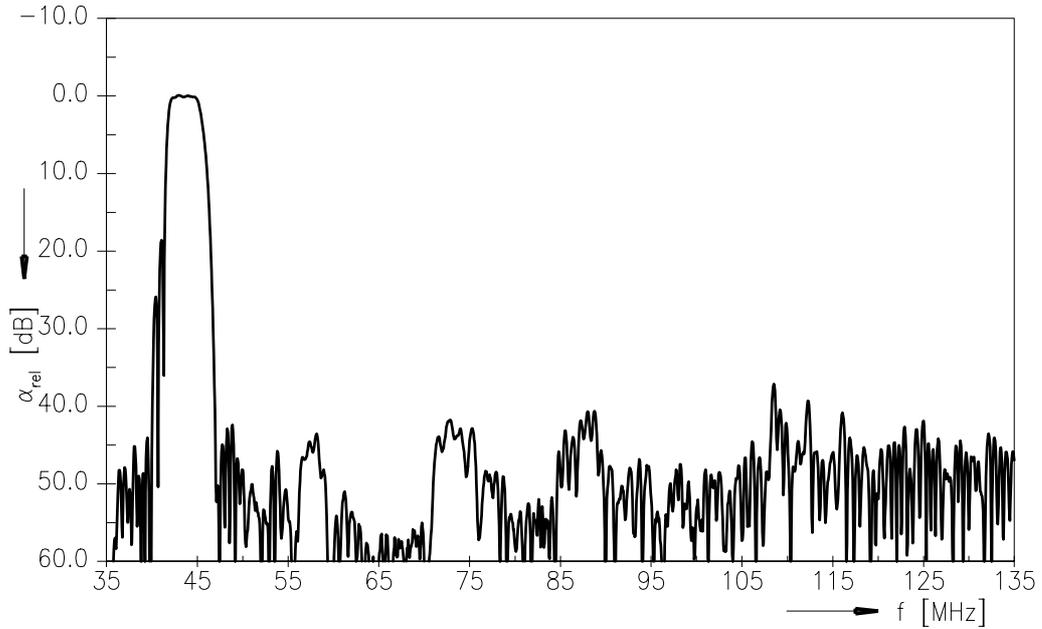
M 3953 M

SAW IF filter

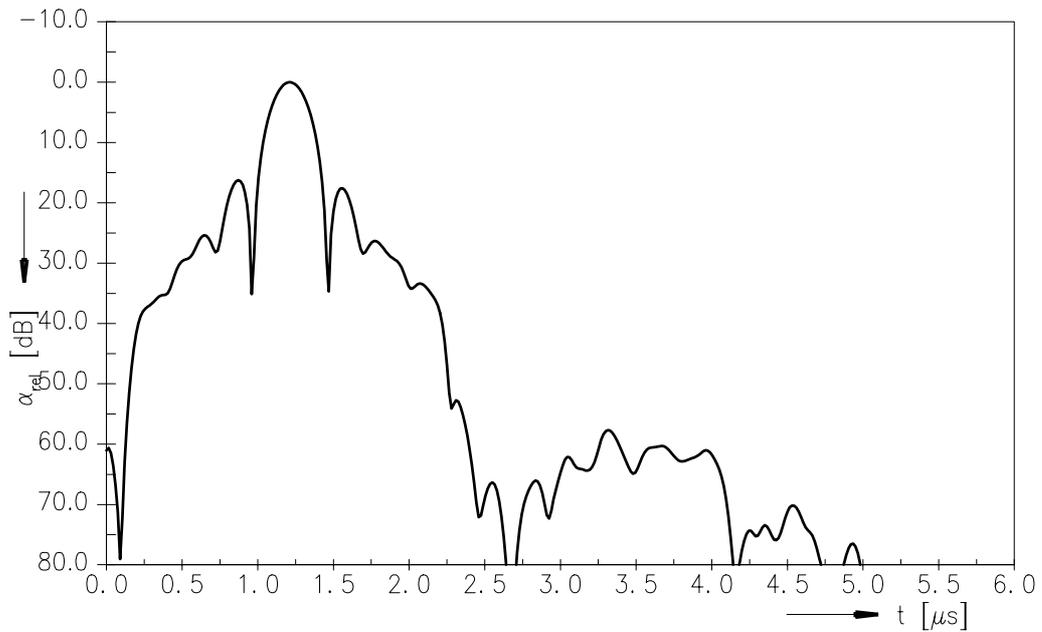
45.75 MHz

Data Sheet

Frequency response



Time domain response



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**SAW IF filter**

**45.75 MHz**

Data Sheet

## References

Type	M 3953 M
Ordering code	B39458-M3953-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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Published by EPCOS AG  
Surface Acoustic Wave Components Division  
P.O. Box 80 17 09, 81617 Munich, GERMANY

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



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