



# 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The following products presented in this data sheet are being withdrawn.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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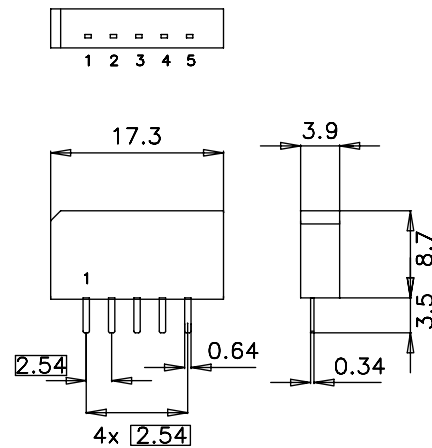
EPCOS AG is a TDK Group Company.

**Data Sheet**
**Application**

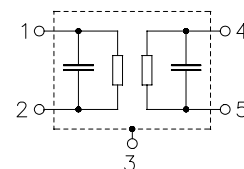
- Standard: M/N
- TV IF filter with Nyquist slope and sound suppression
- High color carrier level
- Constant group delay


**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**
**45.75 MHz**
**Data Sheet**
**Characteristics**

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

	<b>min.</b>	<b>typ. @ 25 °C</b>	<b>max.</b>	
<b>Insertion attenuation</b> $\alpha$				
Reference level for 44.06 (44.00) MHz the following data	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

**SAW Components**

**M 3953 M**

**SAW IF filter**

**45.75 MHz**

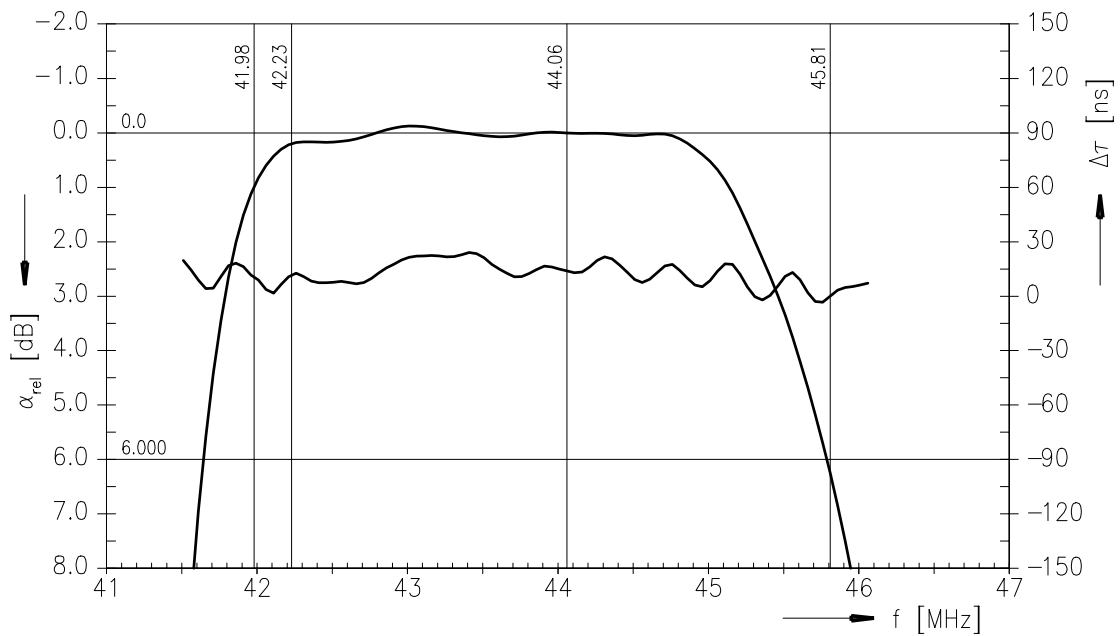
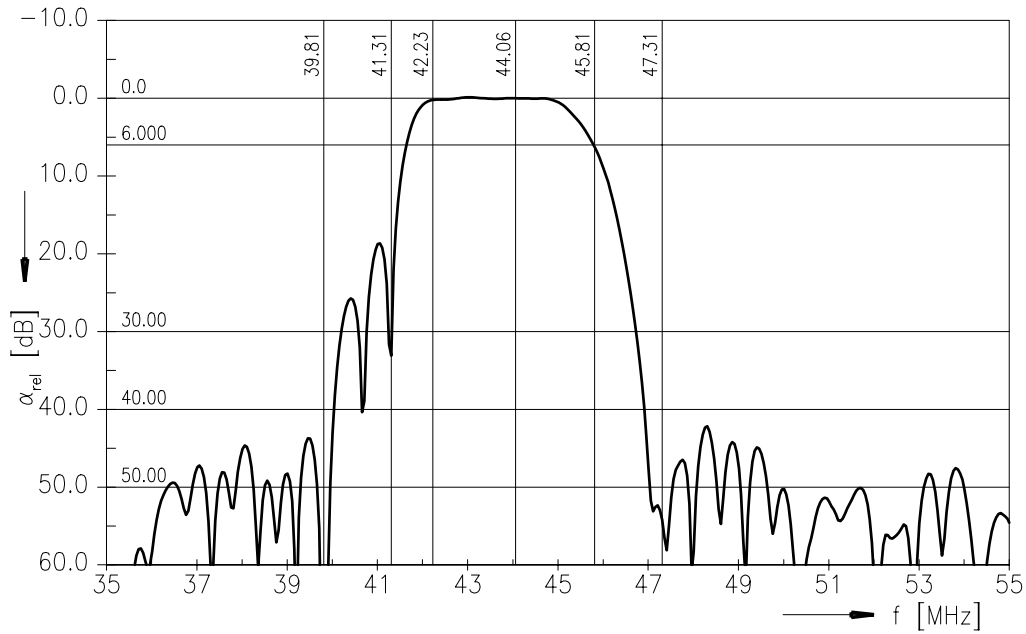
**Data Sheet**

**Maximum ratings**

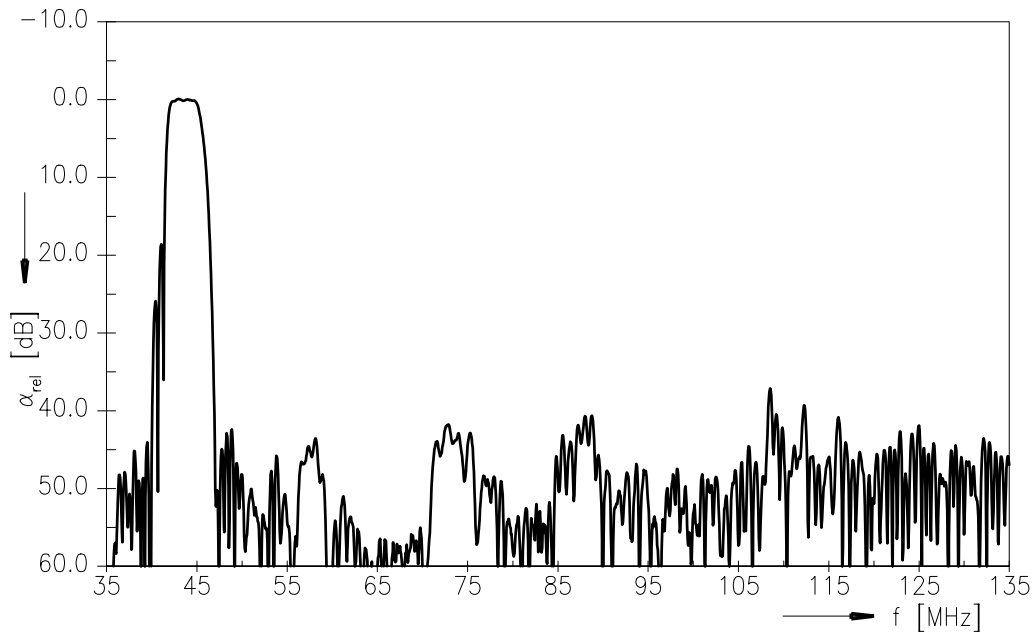
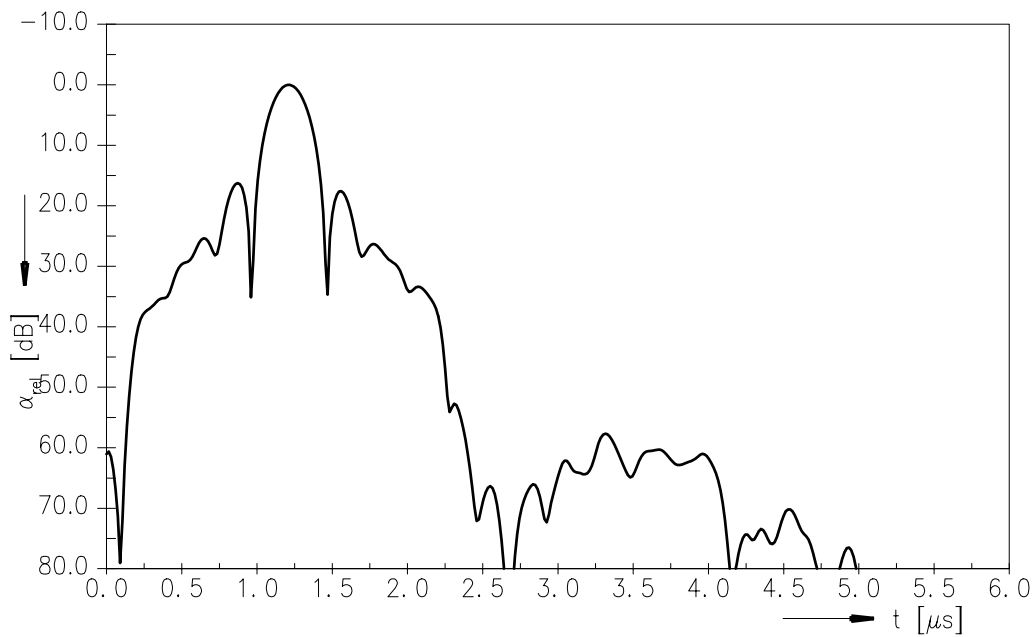
Operable temperature range	T	-25 / +65	°C	
Storage temperature range	T <sub>stg</sub>	-40 / +85	°C	
DC voltage	V <sub>DC</sub>	5	V	
AC voltage	V <sub>pp</sub>	10	V	between any terminals

Data Sheet

Frequency response



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

**Data Sheet**
**Frequency response**

**Time domain response**


<b>SAW Components</b>	<b>M 3953 M</b>
<b>SAW IF filter</b>	<b>45.75 MHz</b>

Data Sheet

References

<b>Type</b>	M 3953 M
<b>Ordering code</b>	B39458-M3953-M100
<b>Marking and package</b>	C61157-A1-A15
<b>Packaging</b>	F61074-V8067-Z000
<b>Date codes</b>	L_1126
<b>S-parameters</b>	
<b>Soldering profile</b>	S_6001
<b>RoHS compatible</b>	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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