



## SAW multimedia filters

### Series/Type: M3575D

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39458M3575N301		2011-01-14	2011-09-30	2012-09-30

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## SAW Components

M 3575 D

## SAW IF filter

45.75 MHz

### Data Sheet

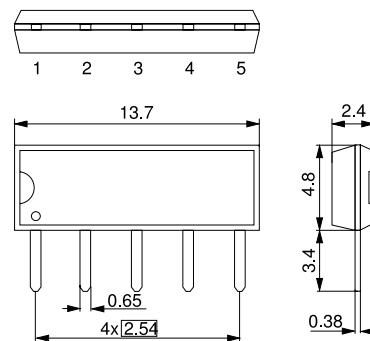
#### Application

- Standard: M/N
- TV IF filter for quasi/split sound applications (separate picture and sound channel)
- Picture channel with Nyquist slope and sound suppression, symmetrical output
- High color carrier level
- Customized group delay predistortion
- Sound channel with pass band for sound carrier only



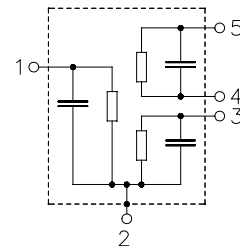
#### Features

- Duroplast package **SIP5D**
- Approximate weight 0.5 g
- Standard IC package
- RoHS compatible
- Tinned CuFe alloy terminals



#### Pin configuration

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



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


**SAW Components**
**M 3575 D**
**SAW IF filter**
**45.75 MHz**
**Data Sheet**
**Characteristics of picture channel**

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	12.8	14.3	15.8	dB
<b>Relative attenuation</b> $\alpha_{rel}$				
Picture carrier 45.81 (45.75) MHz	5.1	6.1	7.1	dB
Color carrier 42.23 (42.17) MHz	-0.7	0.3	1.3	dB
Sound carrier 41.31 (41.25) MHz	24.0	36.0	—	dB
Adj. picture carrier 39.81 (39.75) MHz	48.0	60.0	—	dB
Adj. sound carrier 47.31 (47.25) MHz	46.0	60.0	—	dB
Lower sidelobe 35.06 ... 39.81 (35.00 ... 39.75) MHz	40.0	46.0	—	dB
Upper sidelobe 47.31 ... 55.06 (47.25 ... 55.00) MHz	35.0	41.0	—	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)	—	56.0	—	dB
<b>Group delay predistortion</b> $\Delta t$				
(reference frequency 45.81 MHz)				
43.26 (43.20) MHz	—	-40	—	ns
42.23 (42.17) MHz	—	0	—	ns
<b>Impedance</b> at 44.06 MHz				
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	—	1.0 $\parallel$ 20.3	—	k $\Omega$ $\parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	1.4 $\parallel$ 4.3	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b> $TC_f$	—	-72	—	ppm/K



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**Data Sheet**

**Characteristics of sound channel**

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 41.31 (41.25) MHz the following data	9.9	11.4	12.9	dB
<b>Relative attenuation</b> $\alpha_{rel}$				
Picture carrier 45.81 (45.75) MHz	38.0	45.0	—	dB
Color carrier 42.23 (42.17) MHz	23.0	32.0	—	dB
Adj. picture carrier 39.81 (39.75) MHz	35.0	41.0	—	dB
Adj. sound carrier 47.31 (47.25) MHz	40.0	43.0	—	dB
Lower sidelobe 35.06 ... 39.81 (35.00 ... 39.75) MHz	35.0	40.0	—	dB
Upper sidelobe 47.31 ... 55.06 (47.25 ... 55.00) MHz	34.0	39.0	—	dB
<b>Impedance</b> at 41.31 MHz				
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$	—	0.6 $\parallel$ 24.7	—	k $\Omega$ $\parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	—	1.3 $\parallel$ 4.2	—	k $\Omega$ $\parallel$ pF
<b>Temperature coefficient of frequency</b> $TC_f$	—	-72	—	ppm/K



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**Data Sheet**

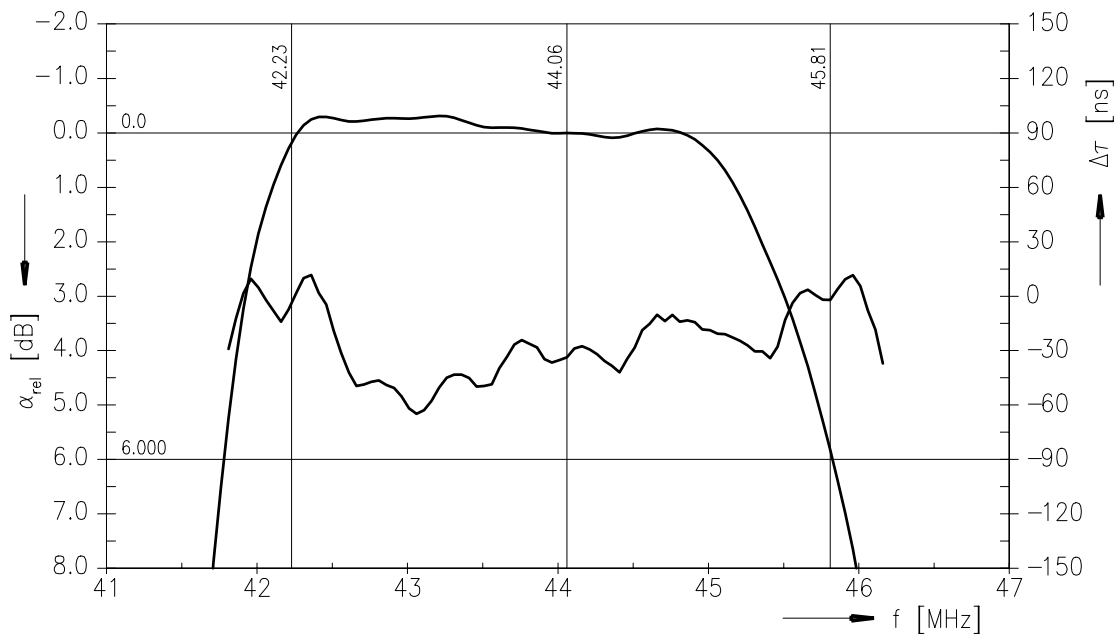
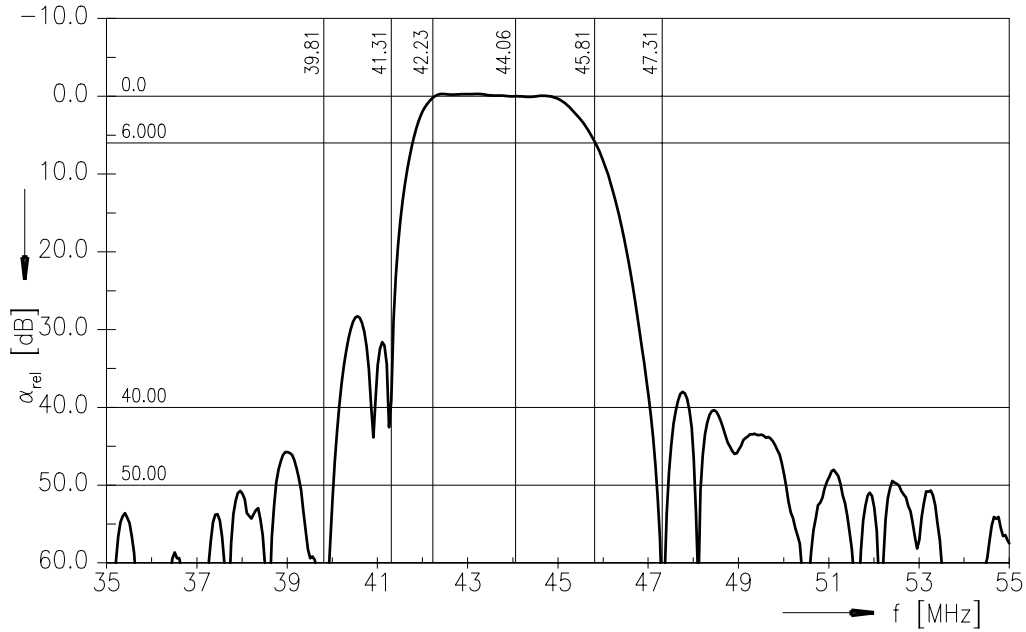
**Maximum ratings**

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 of picture channel



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



SAW Components

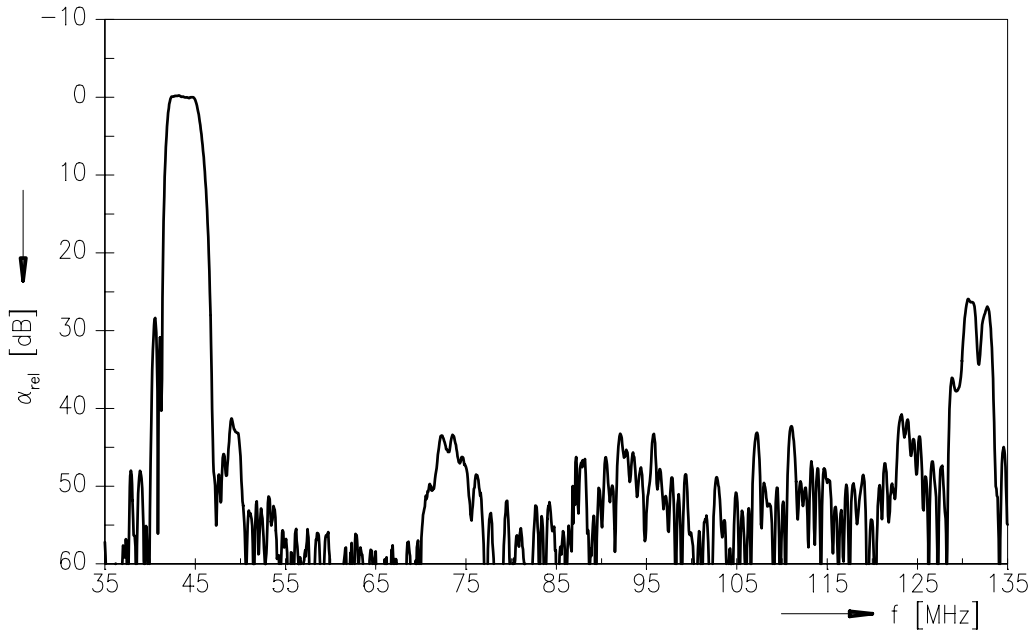
M 3575 D

SAW IF filter

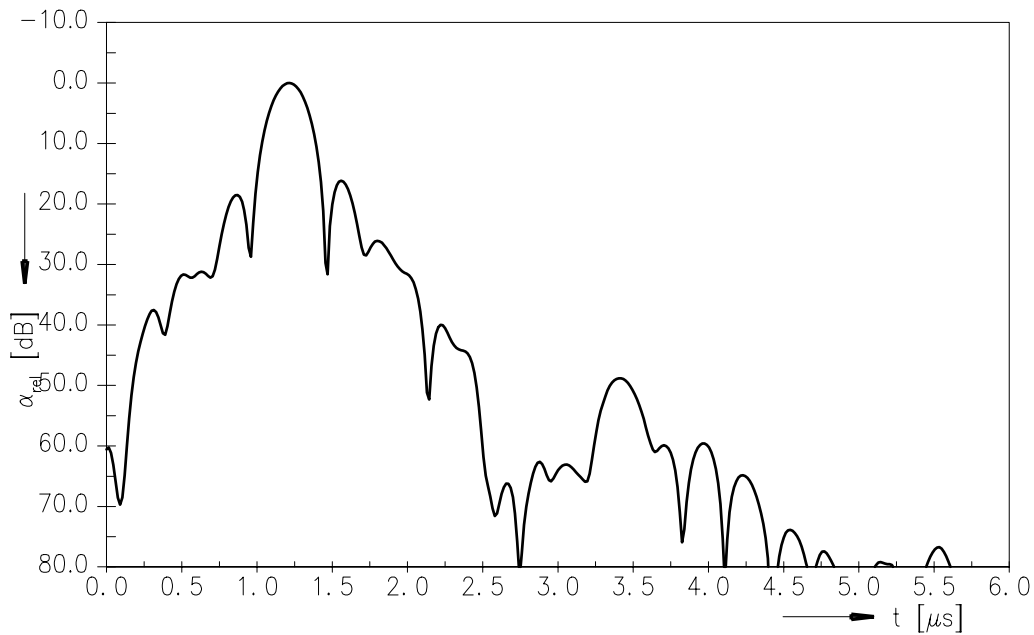
45.75 MHz

Data Sheet

Frequency response of picture channel



Time domain response of picture channel



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SAW Components

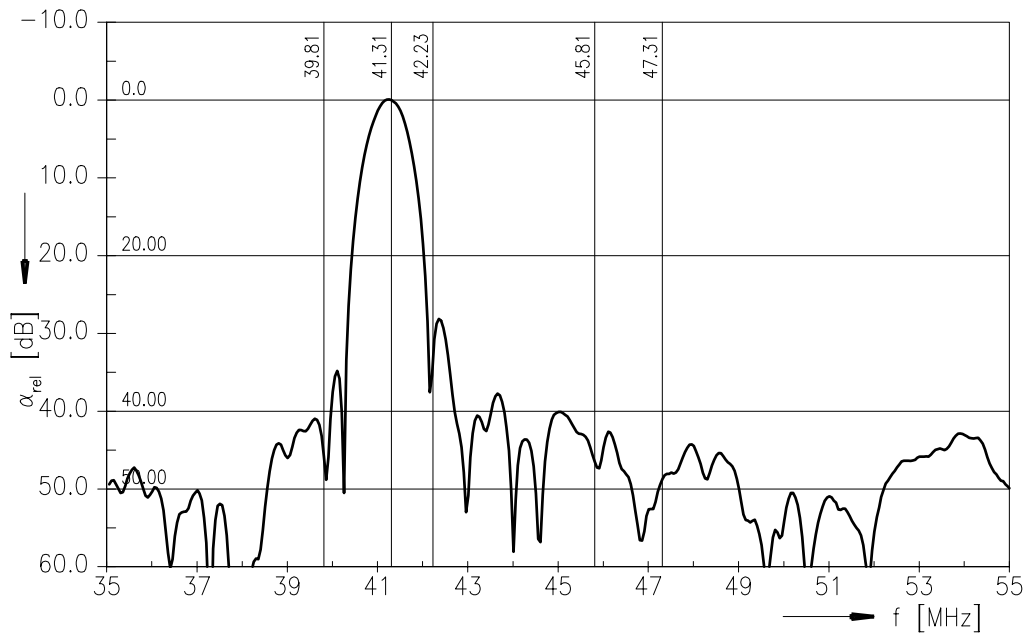
M 3575 D

SAW IF filter

45.75 MHz

Data Sheet

Frequency response of sound channel





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Data Sheet

## References

Type	M 3575 D
Ordering code	B39458-M3575-N301
Marking and package	C61157-A1-A21
Packaging	F61074-V8049-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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