



# SAW multimedia filters

## Series/Type: X7050L

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39438X7050L100		2011-01-14	2011-09-30	2012-09-30

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SAW Components

X 7050 L

Bandpass Filter

43,75 MHz

Data Sheet

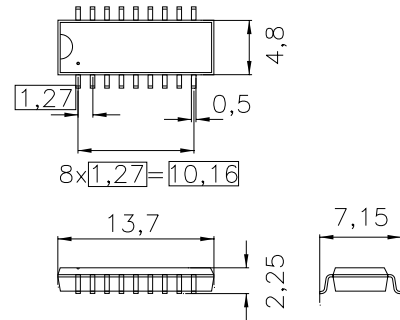
Duroplast package **DIP18D**

**Features**

- IF filter for digital cable TV
- Constant group delay
- Surface Mounted Technology (SMT)
- Standard IC small outline (SO) package

**Terminals**

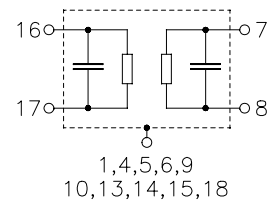
- Tinned CuFe alloy



Dimensions in mm, approx. weight 0,5 g

**Pin configuration**

- 17 Input
- 16 Input - ground
- 7,8 Output
- 1,4,5,6,9,10, 13,14,15,18 Chip carrier - ground
- 2,3,11,12 Not connected



Type	Ordering code	Marking and package according to	Packing according to
X 7050 L	B39438-X7050-L100	C61157-A2-A4	F61074-V8058-Z000

**Maximum ratings**

Operable temperature range	$T_A$	-25/+65	°C	0 V between any terminals
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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**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.	max.	
<b>Center frequency</b> (center between 3 dB points)	$f_C$	43,68	43,75	43,82	MHz
<b>Insertion attenuation</b> Reference level for the following data	$\alpha$ 43,81 (43,75) MHz	13,0	14,5	16,0	dB
<b>Pass bandwidth</b> $\alpha_{\text{rel}} \leq 3 \text{ dB}$	$B_{3\text{dB}}$	—	6,0	—	MHz
$\alpha_{\text{rel}} \leq 30 \text{ dB}$	$B_{30\text{dB}}$	—	7,6	—	MHz
<b>Relative attenuation</b>	$\alpha_{\text{rel}}$				
	41,28 (41,22) MHz	-0,7	0,3	1,3	dB
	46,34 (46,28) MHz	-0,7	0,3	1,3	dB
	40,81 (40,75) MHz	1,5	2,7	3,9	dB
	46,81 (46,75) MHz	1,5	2,7	3,9	dB
	39,81 (39,75) MHz	38,0	50,0	—	dB
	47,81 (47,75) MHz	36,0	48,0	—	dB
<b>Lower sidelobe</b>					
	35,06 ... 38,81 (35,00 ... 38,75) MHz	42,0	49,0	—	dB
	38,81 ... 39,81 (38,75 ... 39,75) MHz	37,0	43,0	—	dB
<b>Upper sidelobe</b>					
	47,81 ... 48,81 (47,75 ... 48,75) MHz	35,0	41,0	—	dB
	48,81 ... 55,06 (48,75 ... 55,00) MHz	42,0	47,0	—	dB
<b>Reflected wave signal suppression</b> 1,2 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse (test pulse 250 ns, carrier frequency 43,81 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 43,81 MHz)		—	56,0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
	40,81 ... 46,81 (40,75 ... 46,75) MHz	—	40	—	ns
<b>Impedance at 43,81 MHz</b>					
Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$		—	1,2    16,6	—	k $\Omega$    pF
Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$		—	1,2    4,6	—	k $\Omega$    pF
<b>Temperature coefficient of frequency</b>	$TC_f$	—	-72	—	ppm/K



SAW Components

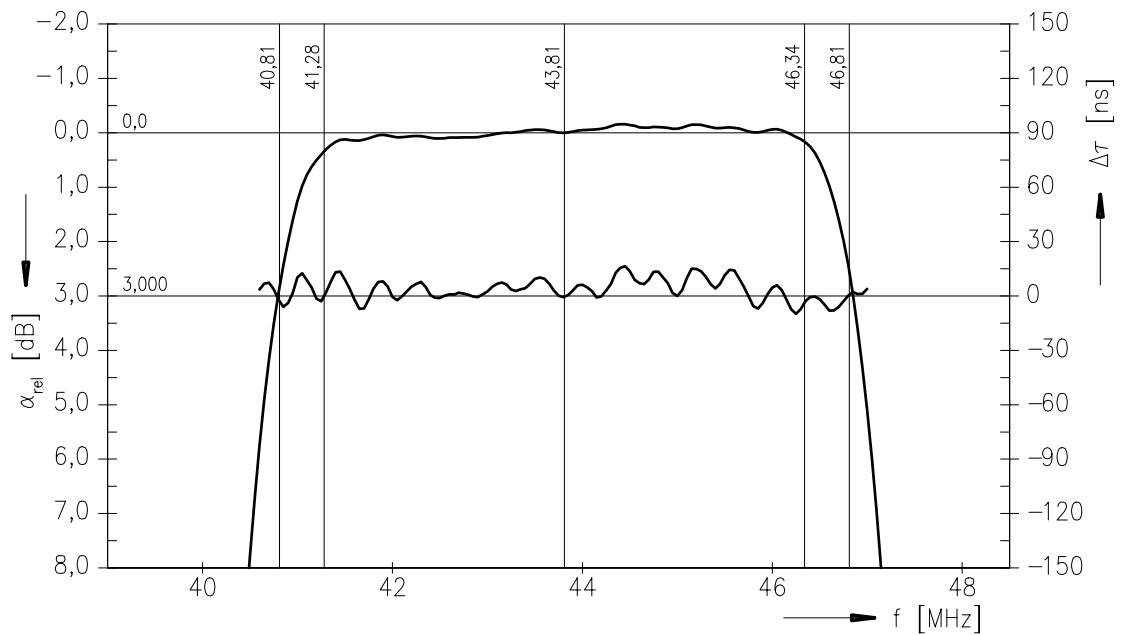
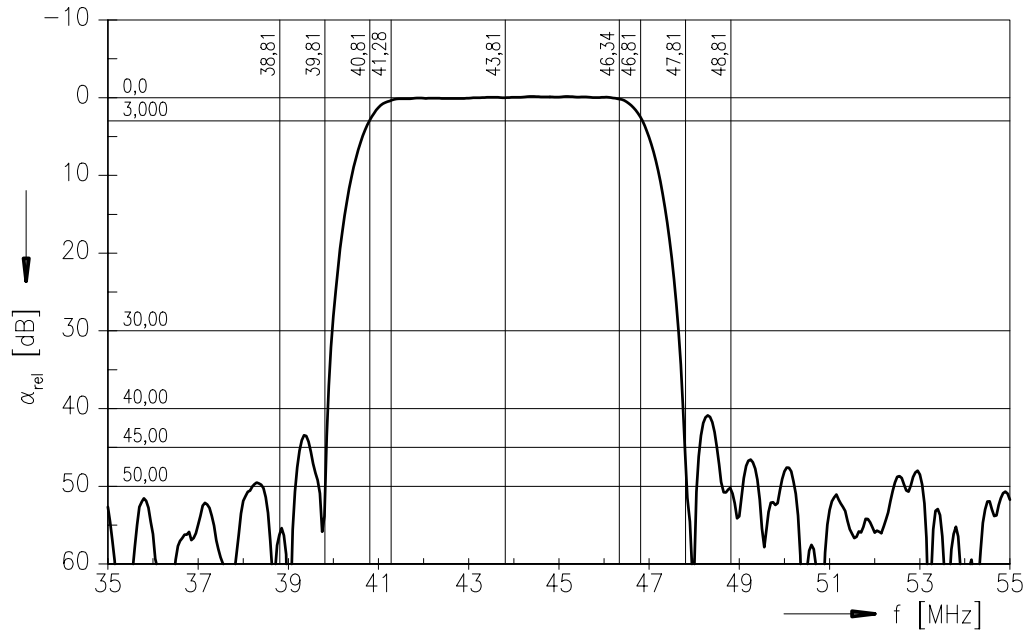
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Bandpass Filter

43,75 MHz

Data Sheet

Frequency response





SAW Components

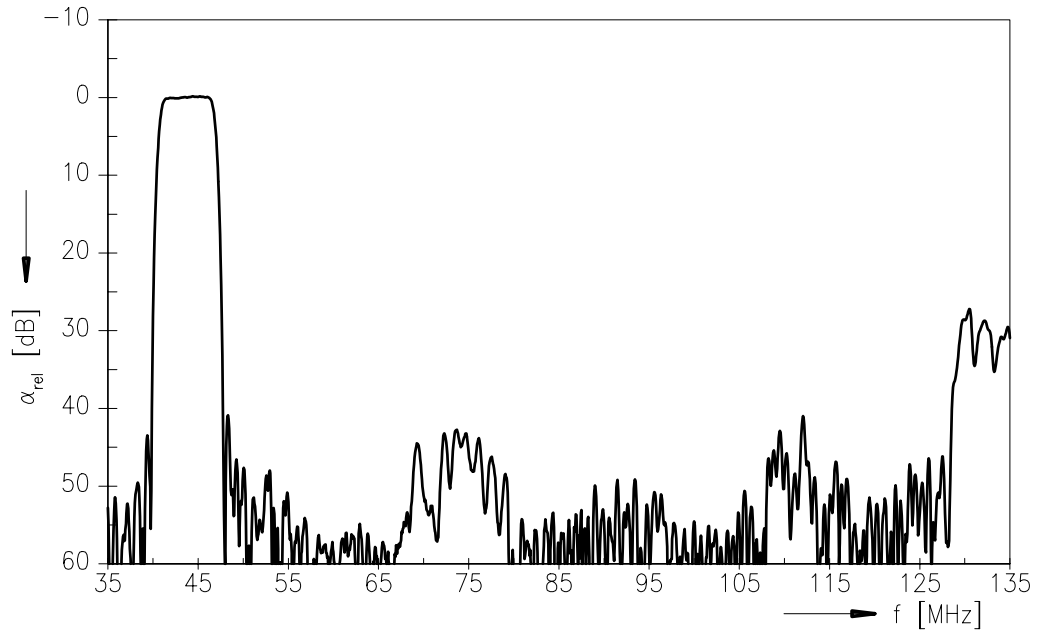
X 7050 L

Bandpass Filter

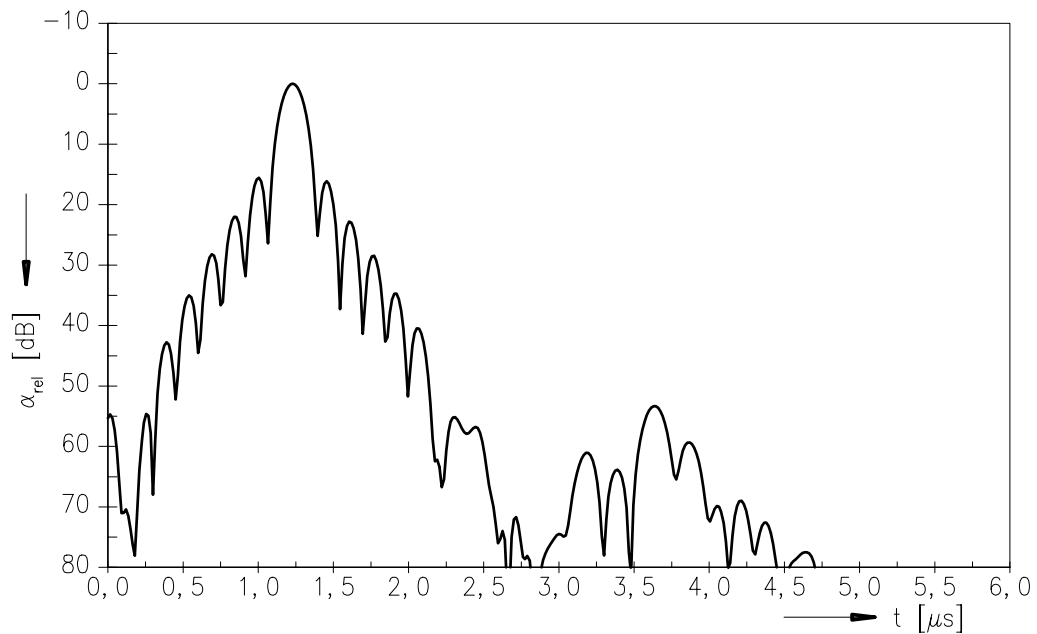
43,75 MHz

Data Sheet

Frequency response



Time domain response





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Data Sheet

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