



# SAW Components

Data Sheet N3954D





**SAW Components**

**N3954D**

**IF Filter for Video Applications**

**58,75 MHz**

**Data Sheet**

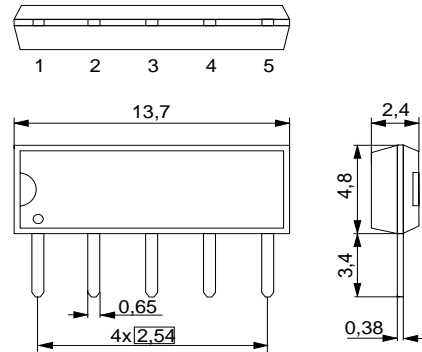
**Standard**

Duroplast package **SIP5D**

- M

**Features**

- TV IF filter with Nyquist slope and sound suppression
- High color carrier level
- Constant group delay
- Standard IC package



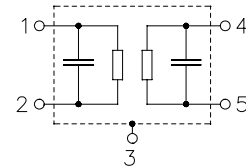
**Terminals**

- Tinned CuFe alloy

Dimensions in mm, approx. weight 0,5 g

**Pin configuration**

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



| Type     | Ordering code | Marking and package according to | Packing according to |
|----------|---------------|----------------------------------|----------------------|
| N 3954 D |               | C61157-A1-A21                    | F61074-V8049-Z000    |

**Maximum ratings**

|                            |           |           |    |                       |
|----------------------------|-----------|-----------|----|-----------------------|
| Operable temperature range | $T_A$     | - 25/+ 65 | °C |                       |
| 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**

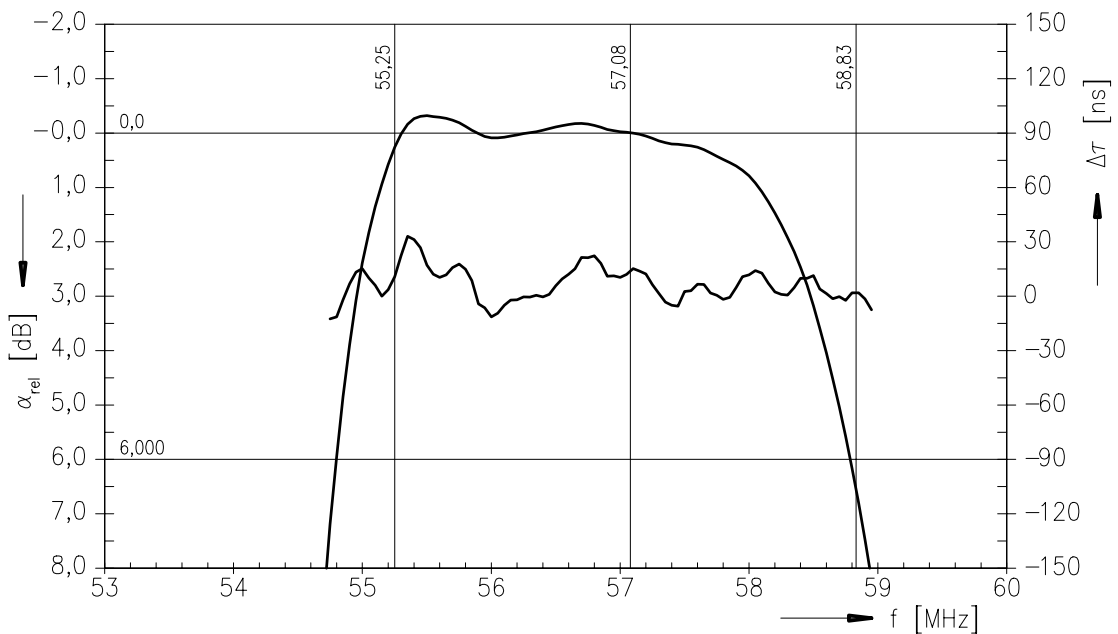
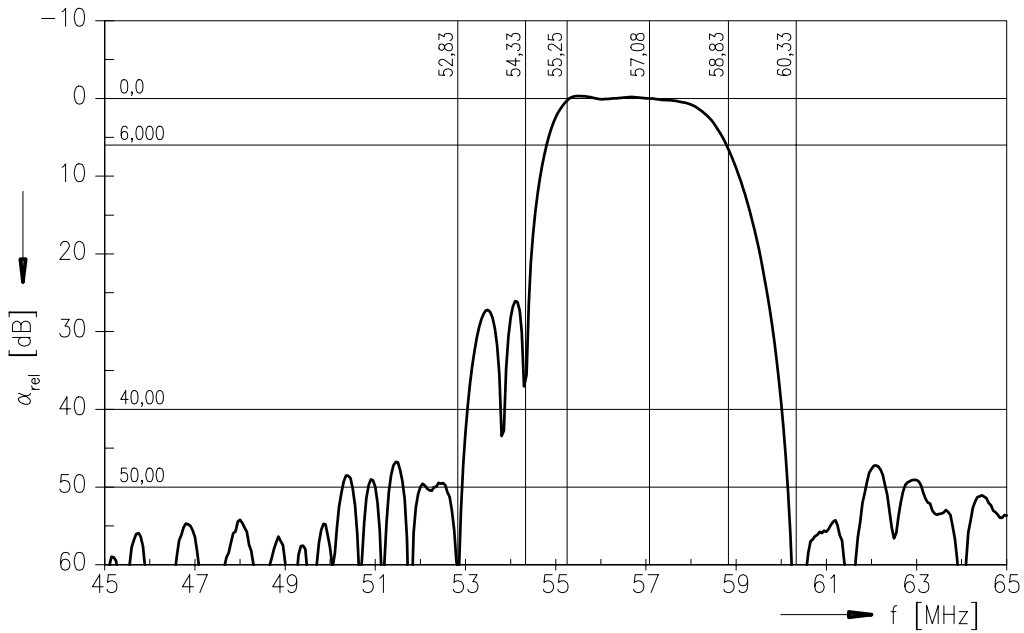
Reference temperature:  $T_A = 25 (45) ^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 2 \text{ k}\Omega \parallel 3 \text{ pF}$

|  |                                       | min. | typ.                 | max. |                           |
|--|---------------------------------------|------|----------------------|------|---------------------------|
| <b>Insertion attenuation</b>   |                                       |      |                      |      |                           |
|  | $\alpha$                              |      |                      |      |                           |
| Reference level for the following data   | 57,08 (57,00) MHz                     | 10,5 | 12,0                 | 13,5 | dB                        |
| <b>Relative attenuation</b>  |                                       |      |                      |      |                           |
|  | $\alpha_{\text{rel}}$                 |      |                      |      |                           |
| Picture carrier  | 58,83 (58,75) MHz                     | 5,7  | 6,7                  | 7,7  | dB                        |
| Color carrier  | 55,25 (55,17) MHz                     | -0,9 | 0,1                  | 1,1  | dB                        |
| Sound carrier  | 54,33 (54,25) MHz                     | 25,0 | 30,0                 | —    | dB                        |
| Adjacent picture carrier   | 52,83 (52,75) MHz                     | 46,0 | 52,0                 | —    | dB                        |
| Adjacent sound carrier   | 60,33 (60,25) MHz                     | 44,0 | 55,0                 | —    | dB                        |
| Lower sidelobe   |                                       |      |                      |      |                           |
|  | 45,08 ... 52,83 (45,00 ... 52,75) MHz | 40,0 | 46,0                 | —    | dB                        |
| Upper sidelobe   |                                       |      |                      |      |                           |
|  | 60,33 ... 65,08 (60,25 ... 65,00) MHz | 38,0 | 44,0                 | —    | dB                        |
| <b>Reflected wave signal suppression</b>   |                                       |      |                      |      |                           |
| 1,2 $\mu\text{s}$ ... 6,0 $\mu\text{s}$ after main pulse<br>(test pulse 250 ns,<br>carrier frequency 57,08 MHz)  |                                       | 42,0 | 50,0                 | —    | dB                        |
| <b>Feedthrough signal suppression</b>  |                                       |      |                      |      |                           |
| 1,3 $\mu\text{s}$ ... 1,2 $\mu\text{s}$ before main pulse<br>(test pulse 250 ns,<br>carrier frequency 57,08 MHz) |                                       | 50,0 | 56,0                 | —    | dB                        |
| <b>Group delay ripple (p-p)</b>  | $\Delta\tau$                          | —    | 60                   | —    | ns                        |
| <b>Impedance at 57,08 MHz</b>  |                                       |      |                      |      |                           |
| Input: $Z_{\text{IN}} = R_{\text{IN}} \parallel C_{\text{IN}}$   |                                       | —    | 1,1 $\parallel$ 12,0 | —    | k $\Omega$ $\parallel$ pF |
| Output: $Z_{\text{OUT}} = R_{\text{OUT}} \parallel C_{\text{OUT}}$   |                                       | —    | 0,7 $\parallel$ 3,3  | —    | k $\Omega$ $\parallel$ pF |
| <b>Temperature coefficient of frequency</b>  | $TC_f$                                | —    | -72                  | —    | ppm/K                     |



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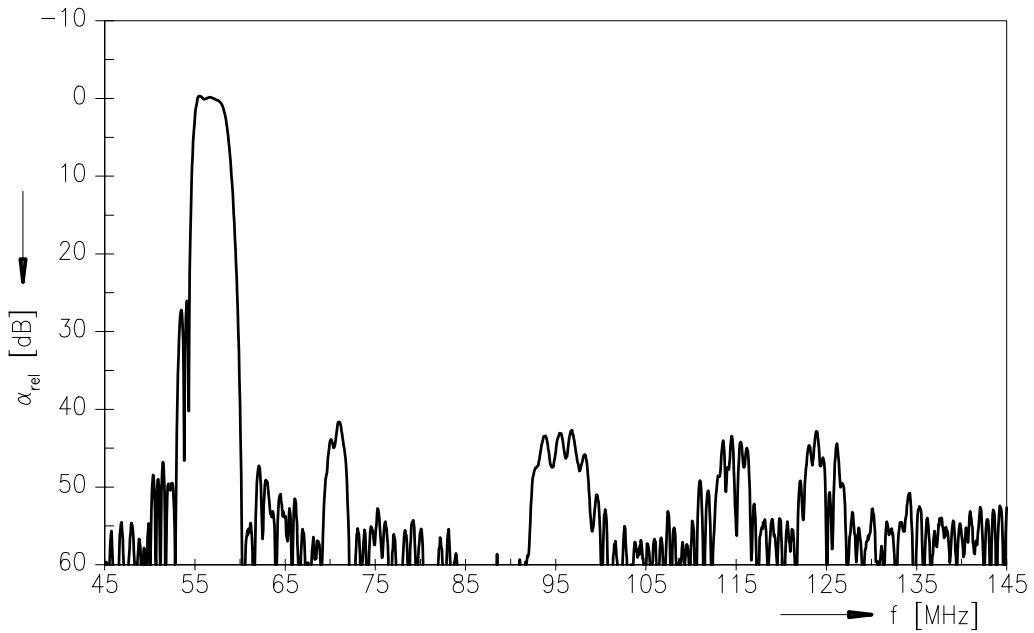
Frequency response



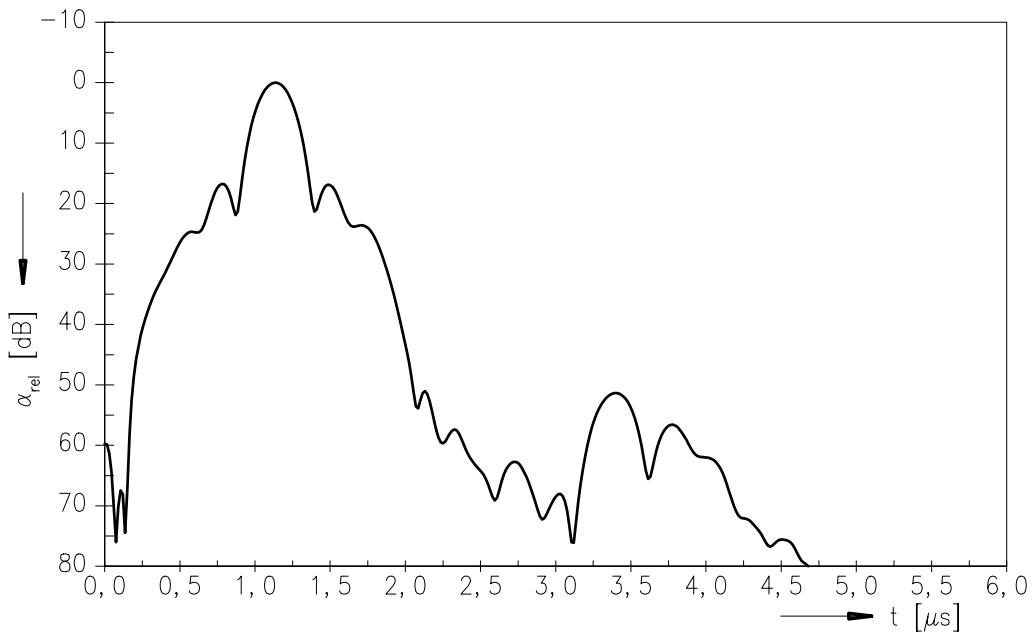


Data Sheet

Frequency response



Time domain response





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