



# SAW Components

Data Sheet B1603

Data Sheet

EPCOS



## SAW Components

**B1603**

## Low-Loss Filter for Digital Television

**1220,0 MHz**

### Data Sheet



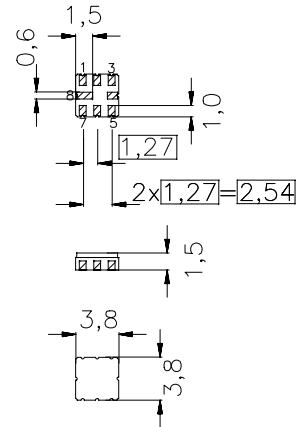
SMD ceramic package **QCC8B**

### Features

- Low loss RF filter for up down conversion
- Usable passband 8 MHz
- No matching network required for operation at 200  $\Omega$
- Balanced to balanced operation
- Ceramic package for **Surface Mounted Technology (SMT)**

### Terminals

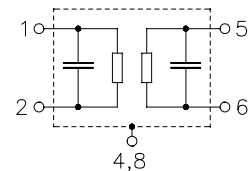
- Ni, gold-plated



Dimensions in mm, approx. weight 0,07 g

### Pin configuration

- |     |                |
|-----|----------------|
| 1   | Input          |
| 2   | Input          |
| 5   | Output         |
| 6   | Output         |
| 3,7 | To be grounded |
| 4,8 | Case - ground  |



Type	Ordering code	Marking and package according to	Packing according to
B1603	B39122-B1603-Z810	C61157-A7-A46	F61074-V8167-Z000

Electrostatic Sensitive Device (ESD)

### Maximum ratings

Operable temperature range	$T$	-40/+85	$^{\circ}\text{C}$	
Storage temperature range	$T_{\text{stg}}$	-40/+85	$^{\circ}\text{C}$	
DC voltage	$V_{\text{DC}}$	0	V	
Source power	$P_{\text{S}}$	0	dBm	source impedance 200 $\Omega$



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### Characteristics

Operating temperature range:  $T = -40^{\circ}\text{C} \dots +85^{\circ}\text{C}$   
Terminating source impedance:  $Z_S = 200\ \Omega$   
Terminating load impedance:  $Z_L = 200\ \Omega$

		min.	typ.	max.	
<b>Center frequency</b>	$f_c$	—	1220,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$				
1216,00 ... 1224,00 MHz		3,5	4,7	5,8	dB
<b>Amplitude ripple in passband (p-p)</b>	$\Delta\alpha$				
1216,00 ... 1224,00 MHz		—	0,8	1,5	dB
<b>Attenuation</b>	$\alpha$				
500,00 ... $f_c-91,00$ MHz		50,0	60,0	—	dB
$f_c-91,00$ ... $f_c-85,00$ MHz		50,0	60,0	—	dB
$f_c-76,00$ ... $f_c-68,00$ MHz		46,0	55,0	—	dB
$f_c-88,00$ MHz		50,0	60,0	—	dB
$f_c-72,00$ MHz		48,0	58,0	—	dB
$f_c-44,00$ MHz		50,0	60,0	—	dB
$f_c-36,00$ MHz		46,0	52,0	—	dB
$f_c+70,00$ ... 2000,00 MHz		50,0	55,0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
Aperture 500 kHz 1216,00 ... 1224,00 MHz		—	15	—	ns



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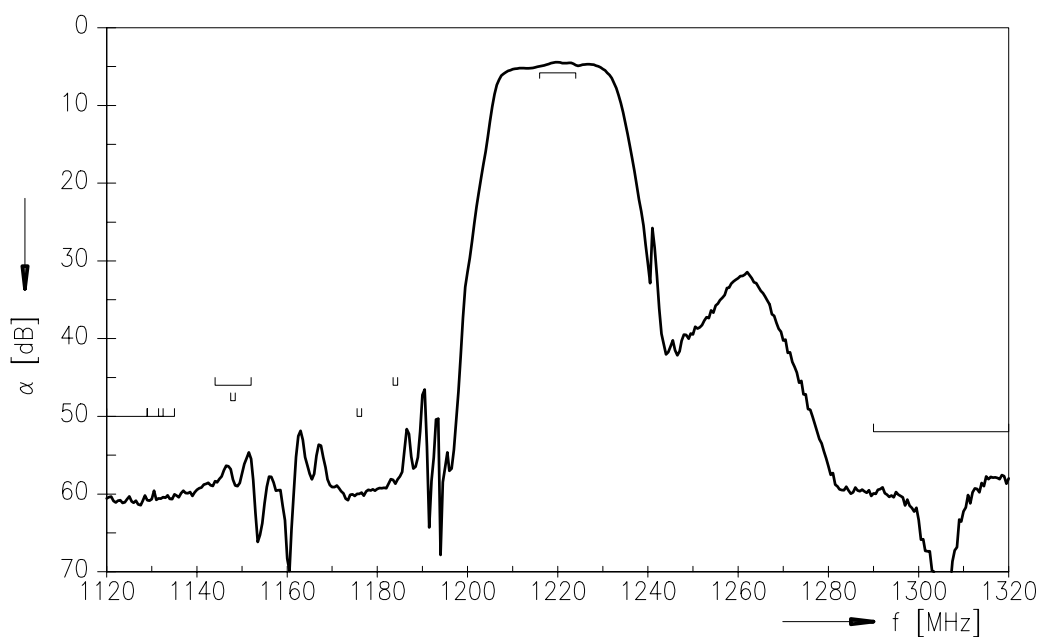
Low-Loss Filter for Digital Television

1220,0 MHz

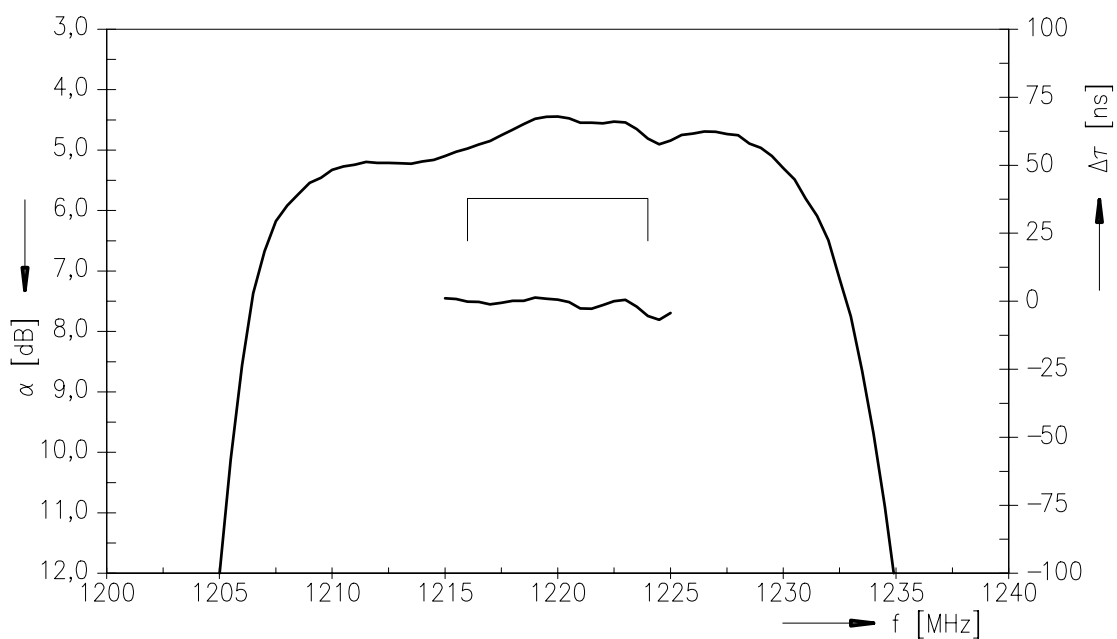
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### Transfer function



### Transfer function (passband)





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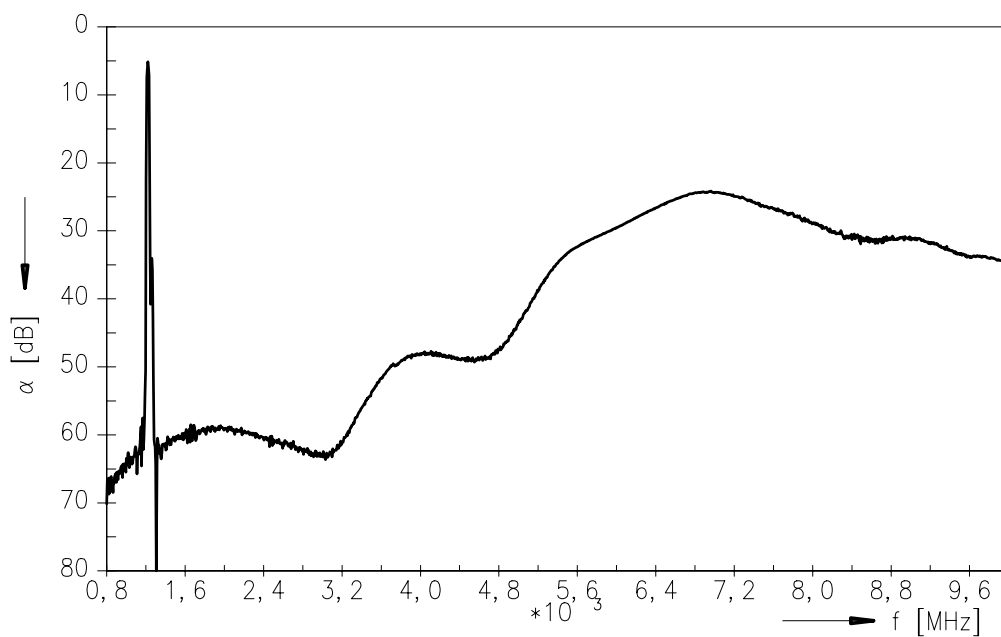
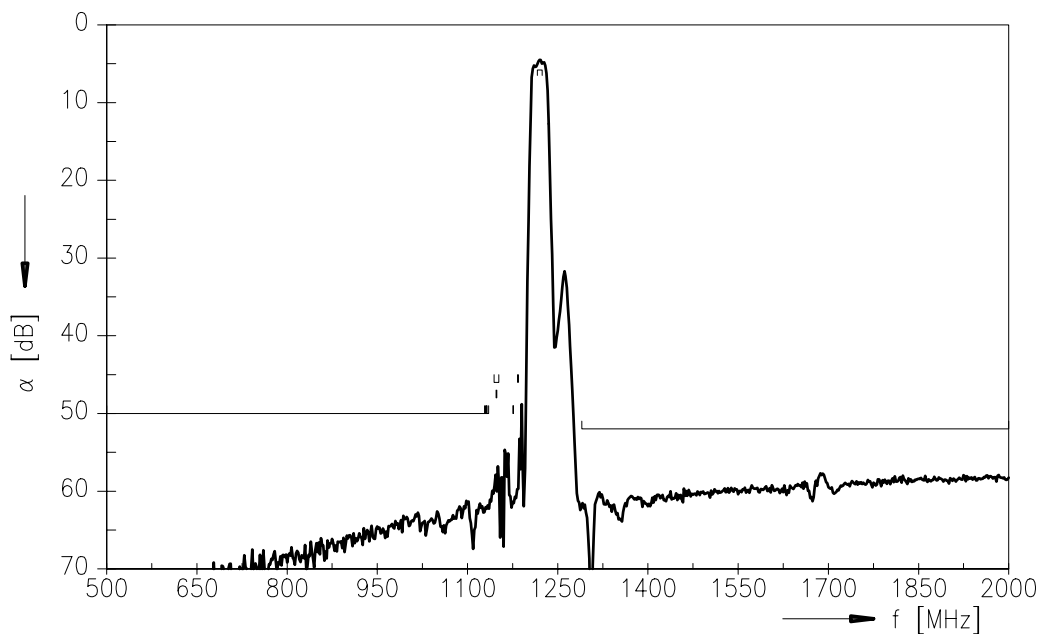
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1220,0 MHz

Data Sheet



Transfer function (wideband)





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1220,0 MHz

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### Characteristics

Operating temperature range:  $T = 20^{\circ}\text{C} \dots 70^{\circ}\text{C}$   
 Terminating source impedance:  $Z_S = 200\ \Omega$   
 Terminating load impedance:  $Z_L = 200\ \Omega$

		min.	typ.	max.	
<b>Center frequency</b>	$f_c$	—	1220,0	—	MHz
<b>Minimum insertion attenuation</b>	$\alpha_{\min}$				
1210,00 ... 1229,00 MHz		3,5	4,5	5,8	dB
<b>Amplitude ripple in passband (p-p)</b>	$\Delta\alpha$				
1210,00 ... 1229,00 MHz		—	1,0	3,0	dB
<b>Relative attenuation (relative to <math>\alpha_{\min}</math>)</b>	$\alpha_{\text{rel}}$				
500,00 ... $f_c - 91,00$ MHz		46,0	56,0	—	dB
$f_c - 91,00$ ... $f_c - 85,00$ MHz		46,0	56,0	—	dB
$f_c - 76,00$ ... $f_c - 68,00$ MHz		42,0	51,0	—	dB
$f_c - 88,00$ MHz		46,0	56,0	—	dB
$f_c - 72,00$ MHz		44,0	54,0	—	dB
$f_c - 44,00$ MHz		46,0	56,0	—	dB
$f_c - 36,00$ MHz		42,0	48,0	—	dB
$f_c + 70,00$ ... 2000,00 MHz		46,0	51,0	—	dB
<b>Group delay ripple (p-p)</b>	$\Delta\tau$				
Aperture 500 kHz 1210,00 ... 1229,00 MHz		—	40	—	ns



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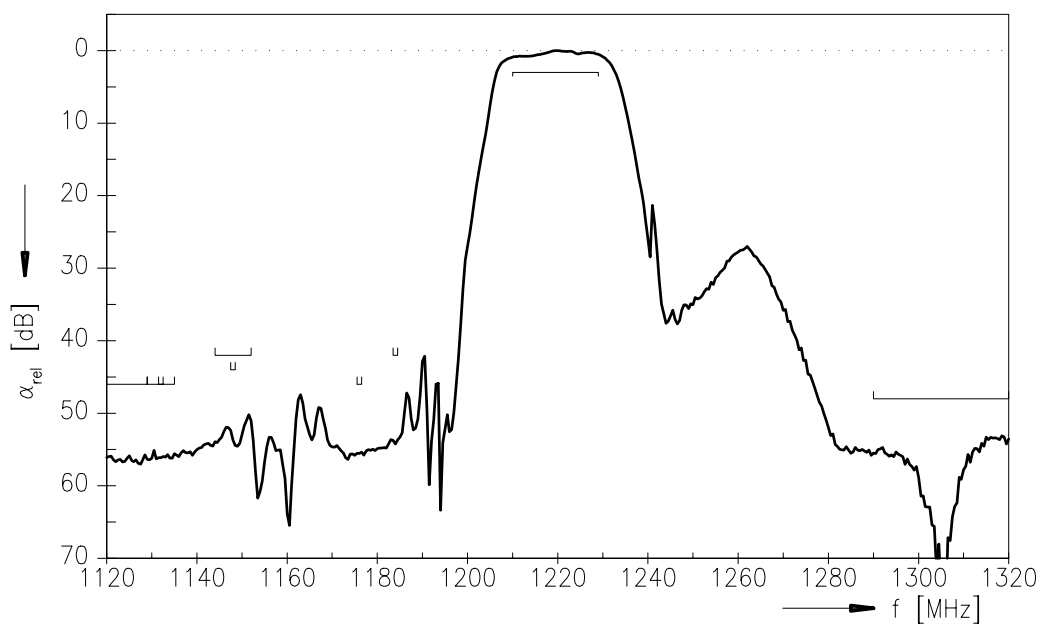
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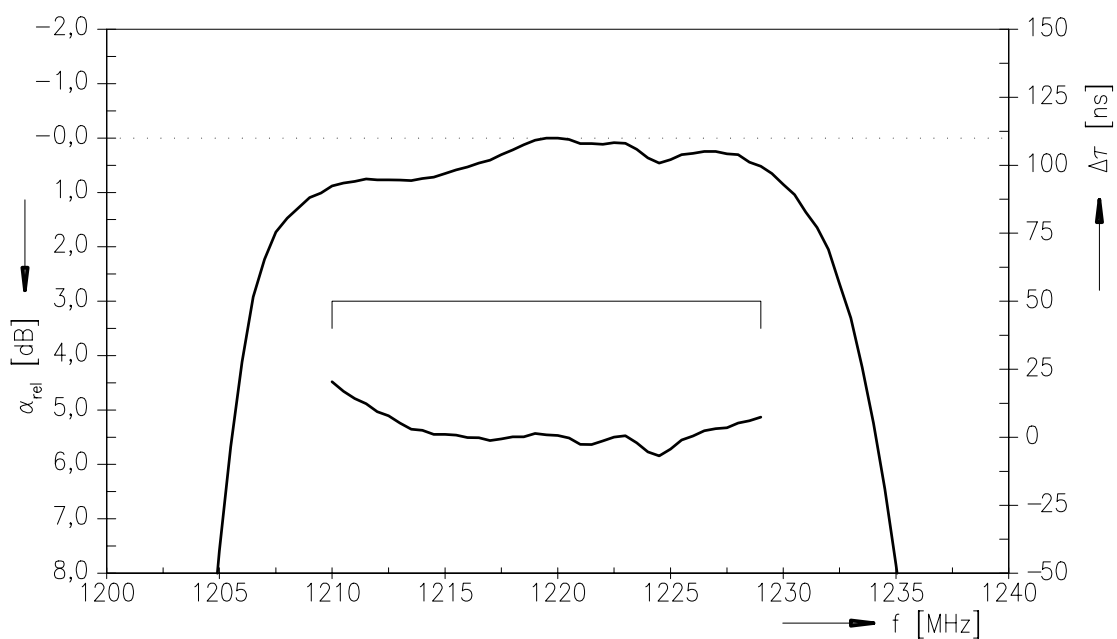
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Transfer function



Transfer function (passband)





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**P.O. Box 80 17 09, 81617 Munich, GERMANY**

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