



# SAW Components

Data Sheet B1603





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B1603

Low-Loss Filter for Digital Television

1220,0 MHz

Data Sheet



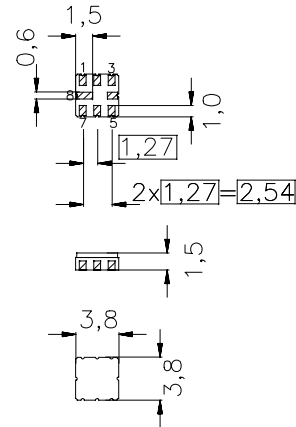
SMD ceramic package **QCC8B**

**Features**

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

**Terminals**

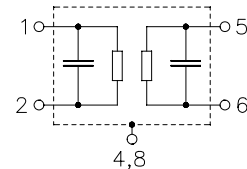
- Ni, gold-plated



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	°C	
Storage temperature range	$T_{stg}$	-40/+85	°C	
DC voltage	$V_{DC}$	0	V	
Source power	$P_S$	0	dBm	source impedance 200 Ω



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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:  $Z_L = 200\ \Omega$

		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<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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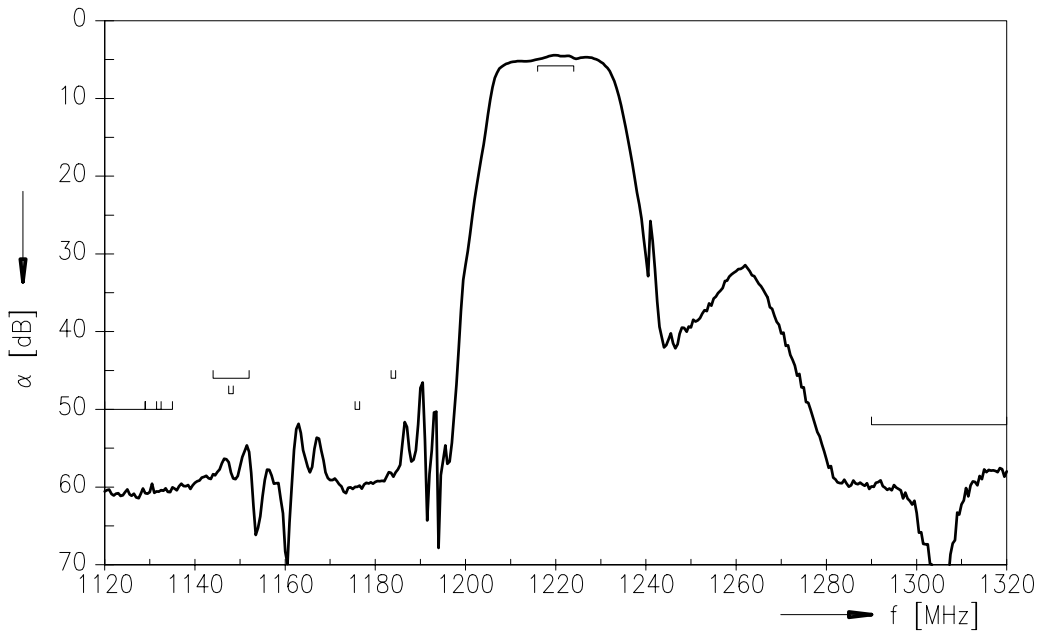
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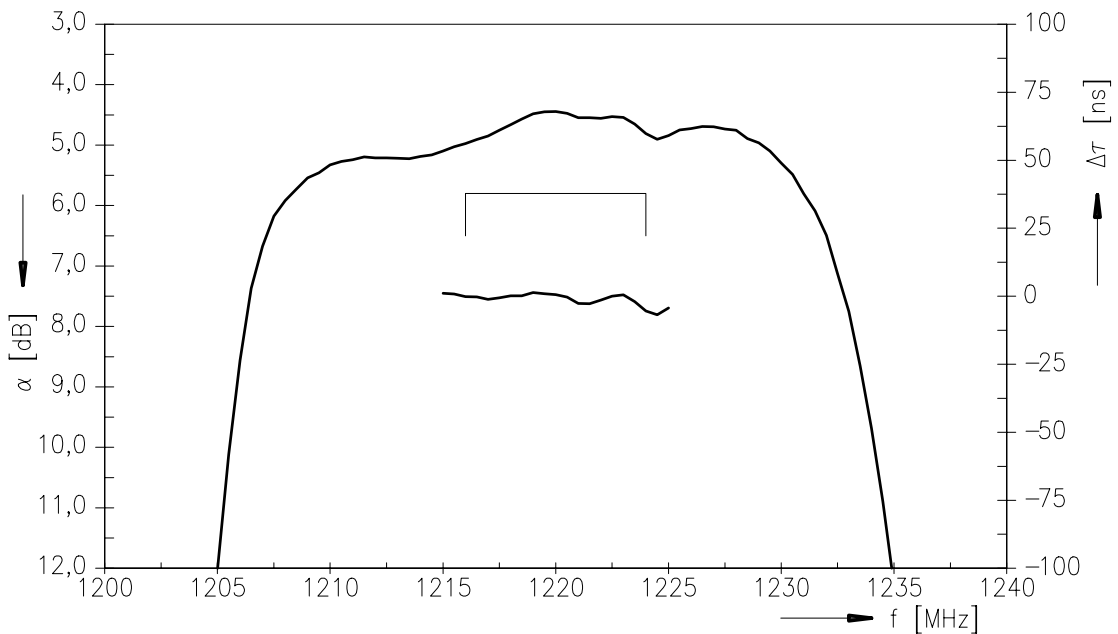
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Transfer function



Transfer function (passband)





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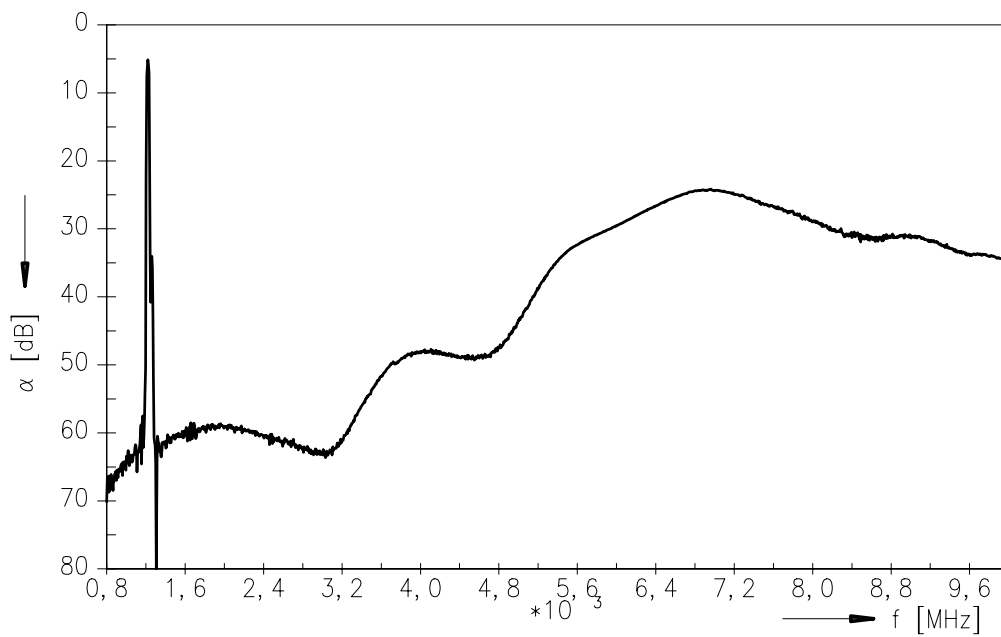
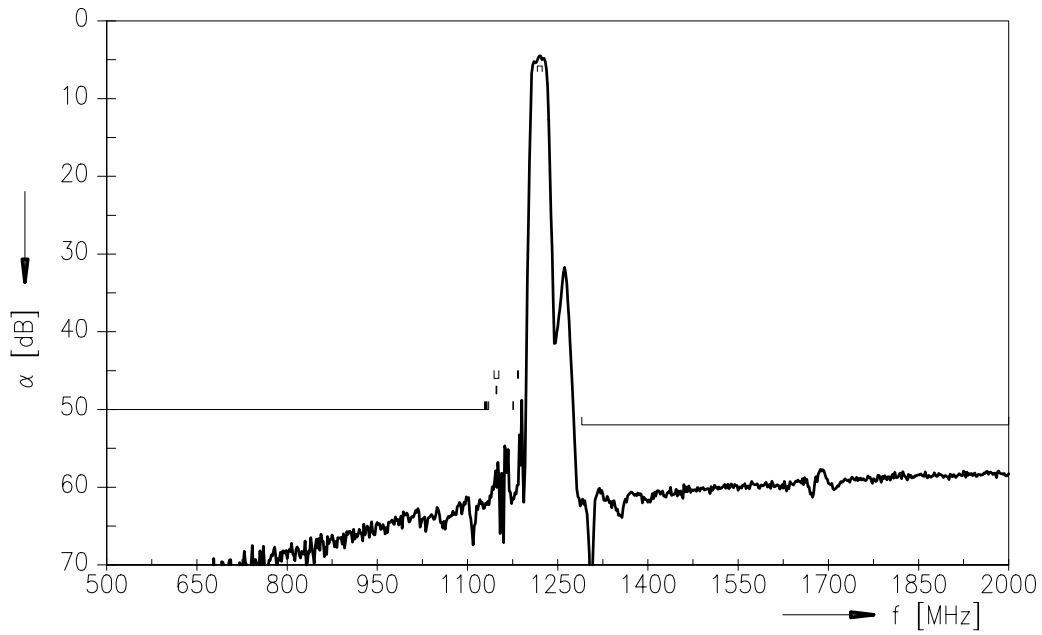
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Data Sheet



Transfer function (wideband)





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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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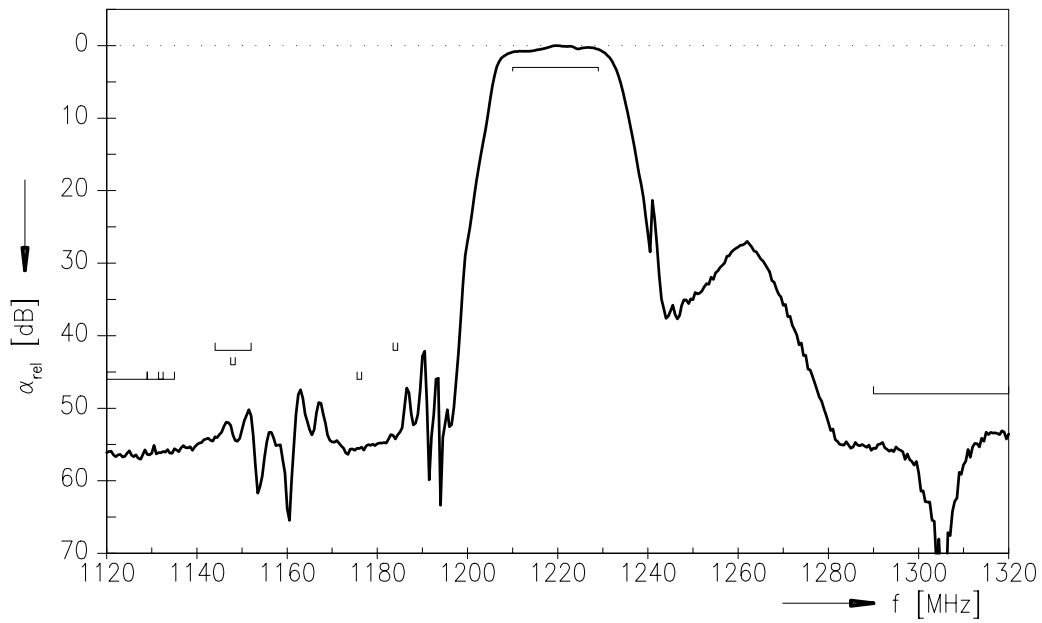
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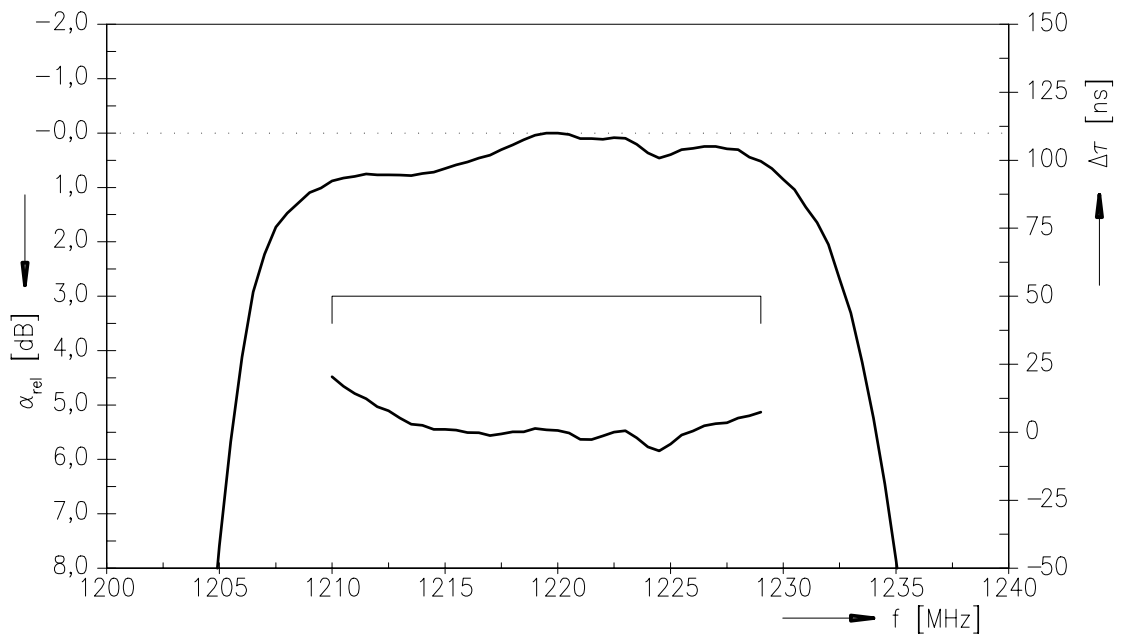
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Transfer function



Transfer function (passband)





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**Published by EPCOS AG**

**Surface Acoustic Wave Components Division, SAW CE MM PD**

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