



SAW Components

Data Sheet B1603





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Low-Loss Filter for Digital Television

1220,0 MHz

Data Sheet



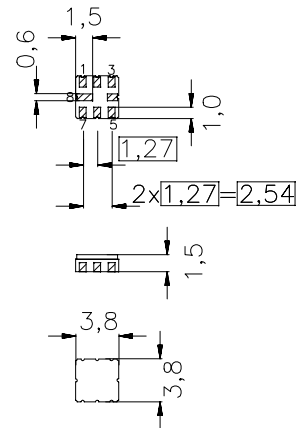
SMD ceramic package QCC8B

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

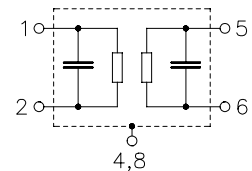
- Ni, gold-plated



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: $Z_L = 200 \Omega$

		min.	typ.	max.	
Center frequency	f_c	—	1220,0	—	MHz
Maximum insertion attenuation	α_{\max}				
	1216,00 ... 1224,00 MHz	3,5	4,7	5,8	dB
Amplitude ripple in passband (p-p)	$\Delta\alpha$				
	1216,00 ... 1224,00 MHz	—	0,8	1,5	dB
Attenuation	α				
	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
Group delay ripple (p-p)	$\Delta\tau$				
Aperture 500 kHz	1216,00 ... 1224,00 MHz	—	15	—	ns



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B1603

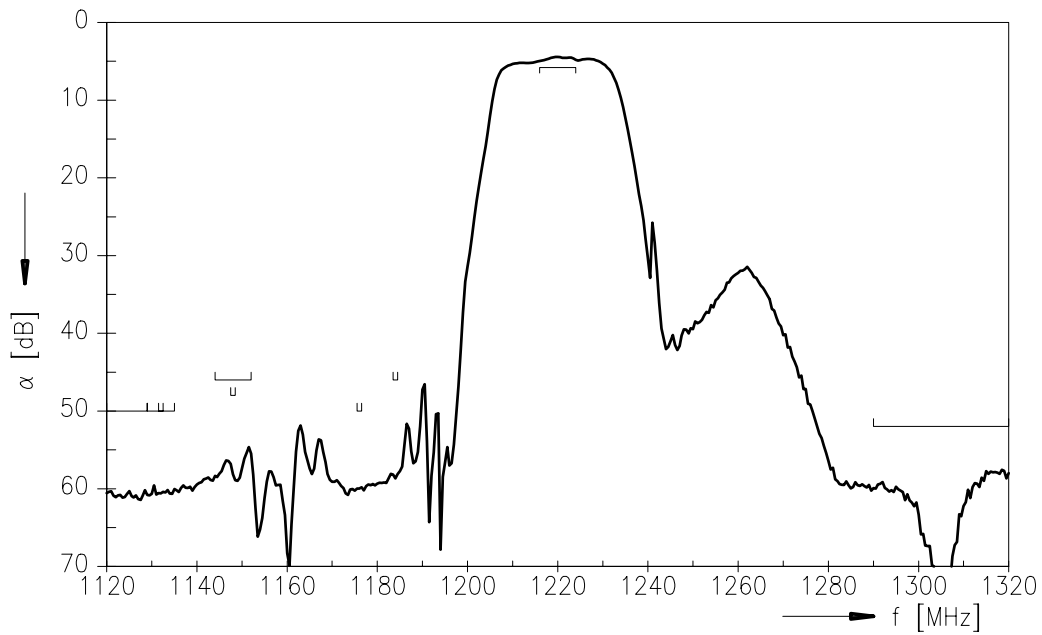
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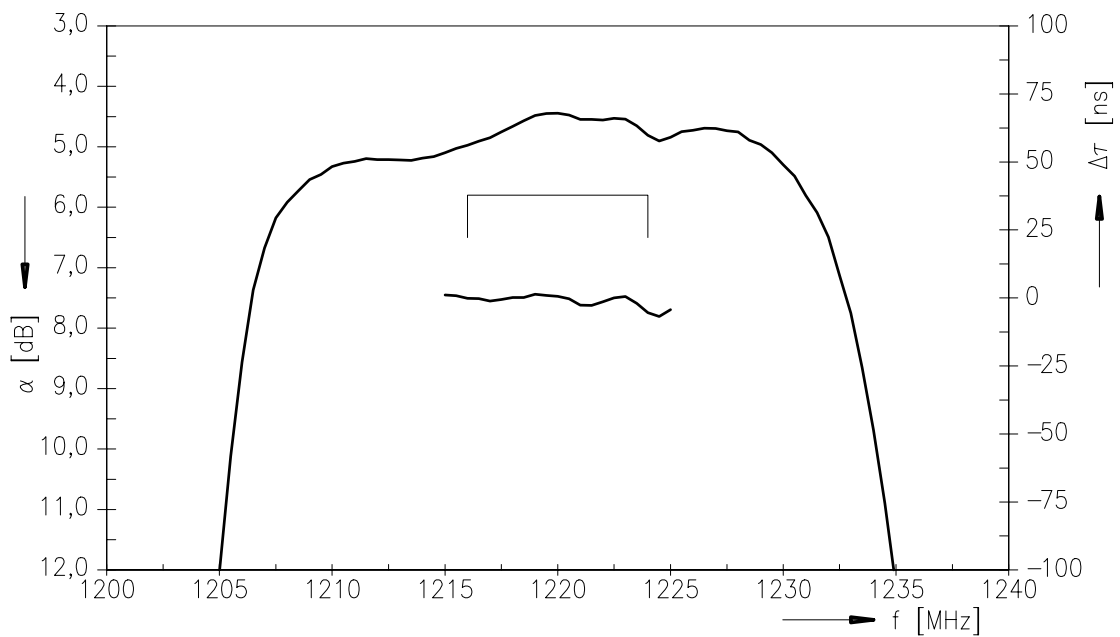
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Transfer function



Transfer function (passband)





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B1603

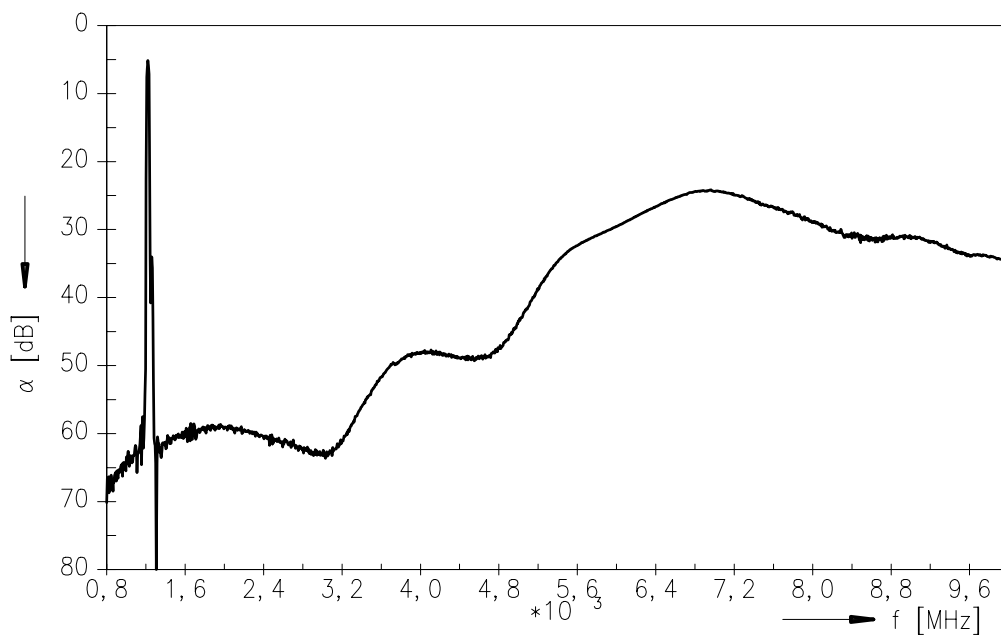
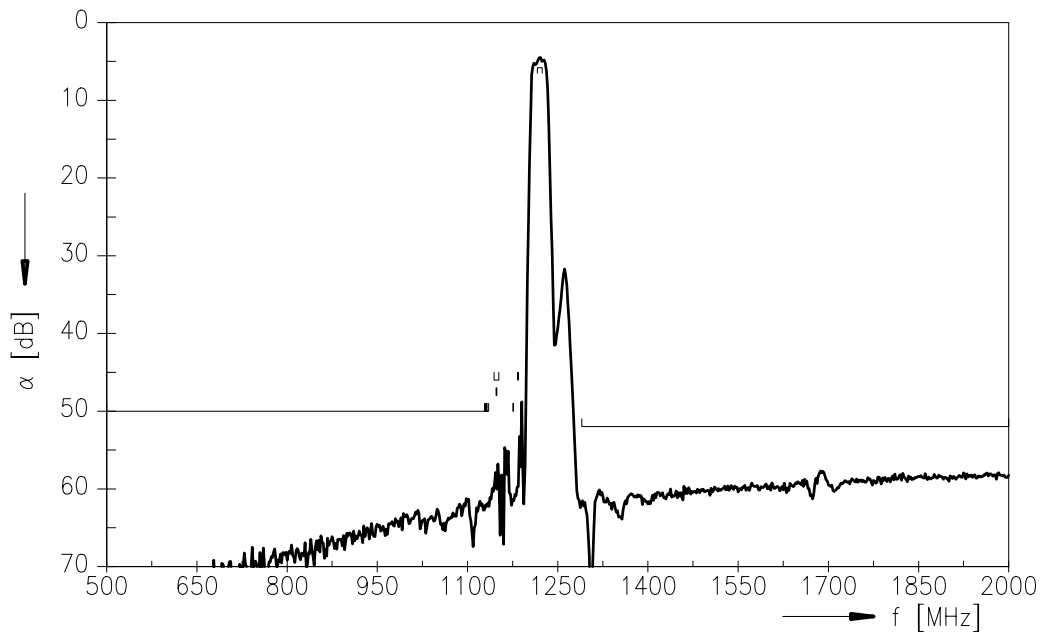
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Data Sheet



Transfer function (wideband)





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Low-Loss Filter for Digital Television

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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.	
Center frequency	f_c	—	1220,0	—	MHz
Minimum insertion attenuation	α_{\min}				
1210,00 ... 1229,00 MHz		3,5	4,5	5,8	dB
Amplitude ripple in passband (p-p)	$\Delta\alpha$				
1210,00 ... 1229,00 MHz		—	1,0	3,0	dB
Relative attenuation (relative to α_{\min})	α_{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
Group delay ripple (p-p)	$\Delta\tau$				
Aperture 500 kHz 1210,00 ... 1229,00 MHz		—	40	—	ns



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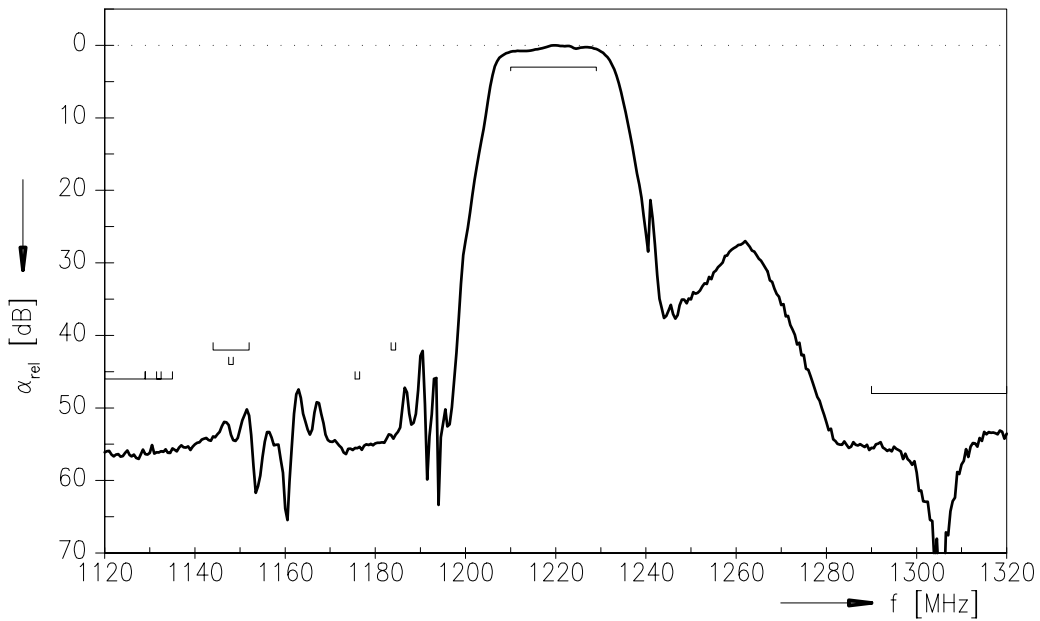
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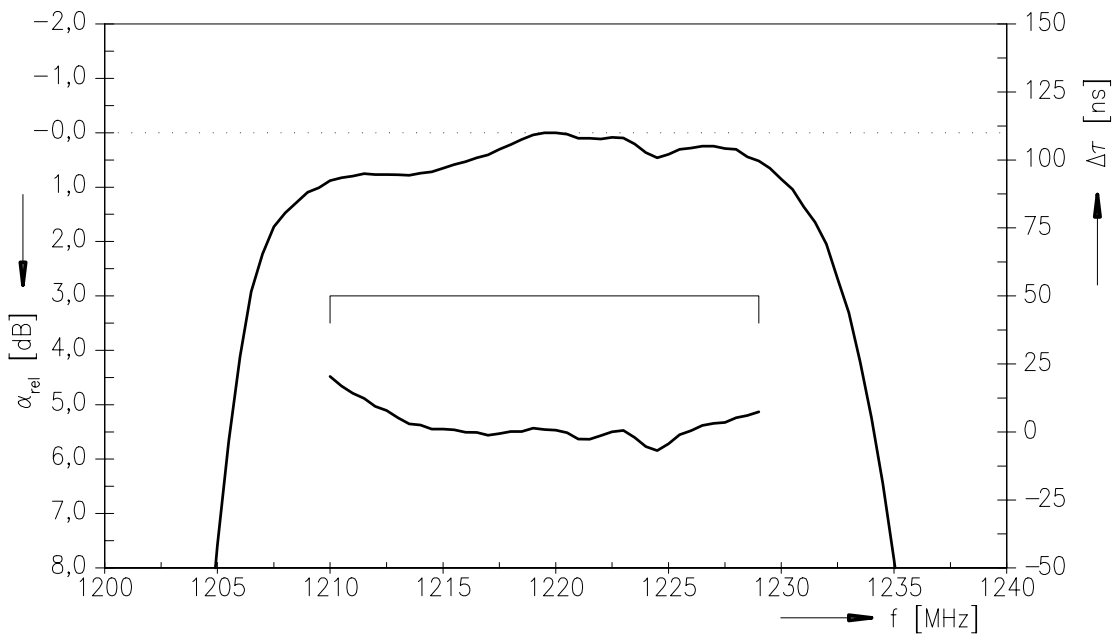
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Transfer function



Transfer function (passband)





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