



SAW Components

Data Sheet B1603

Data Sheet

EPCOS



SAW Components

B1603

Low-Loss Filter for Digital Television

1220,0 MHz

Data Sheet



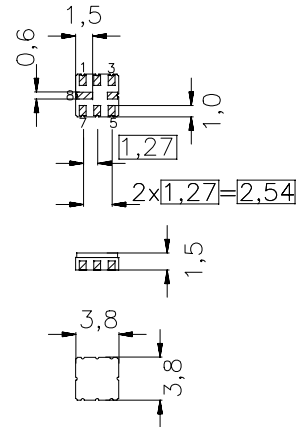
SMD ceramic package **QCC8B**

Features

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

Terminals

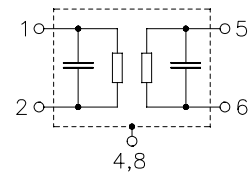
- Ni, gold-plated



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



SAW Components

B1603

Low-Loss Filter for Digital Television

1220,0 MHz

Data Sheet



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	$\alpha_{\max}$				
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		—	15	—	ns



SAW Components

B1603

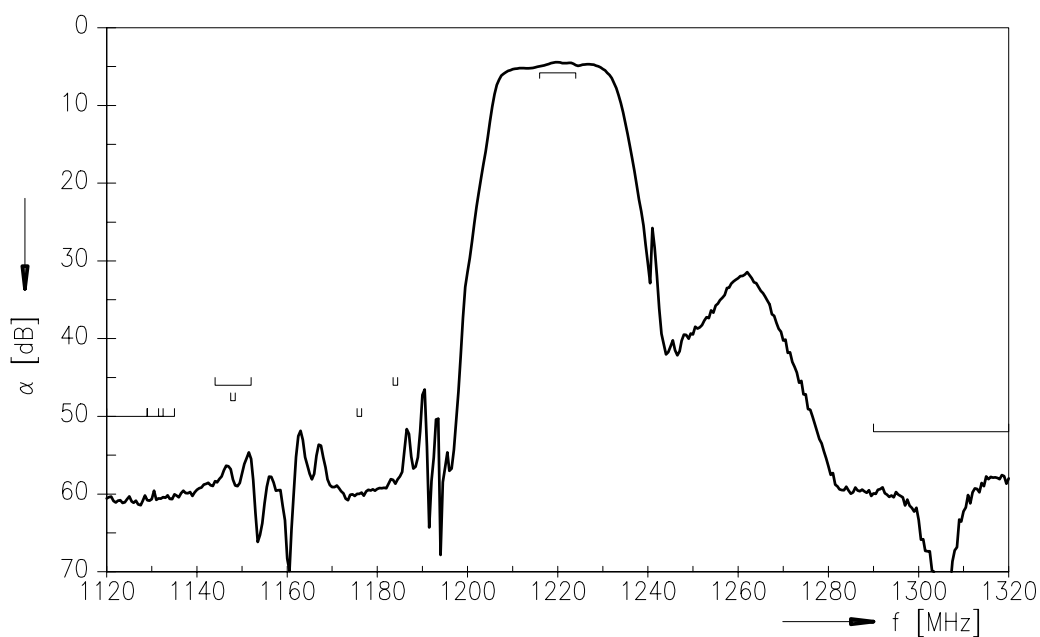
Low-Loss Filter for Digital Television

1220,0 MHz

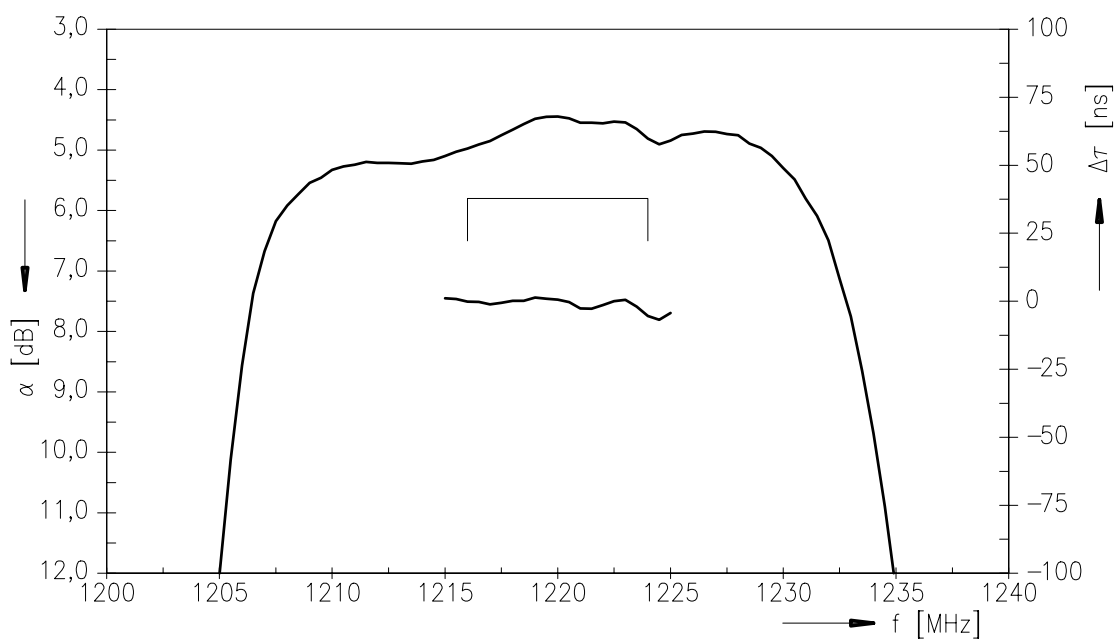
Data Sheet



Transfer function



Transfer function (passband)





SAW Components

B1603

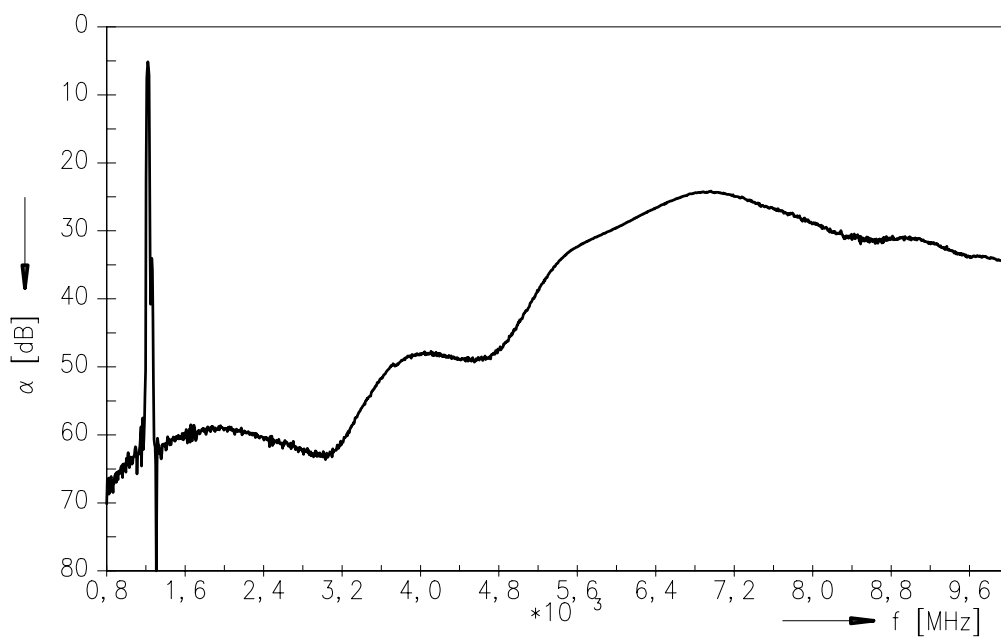
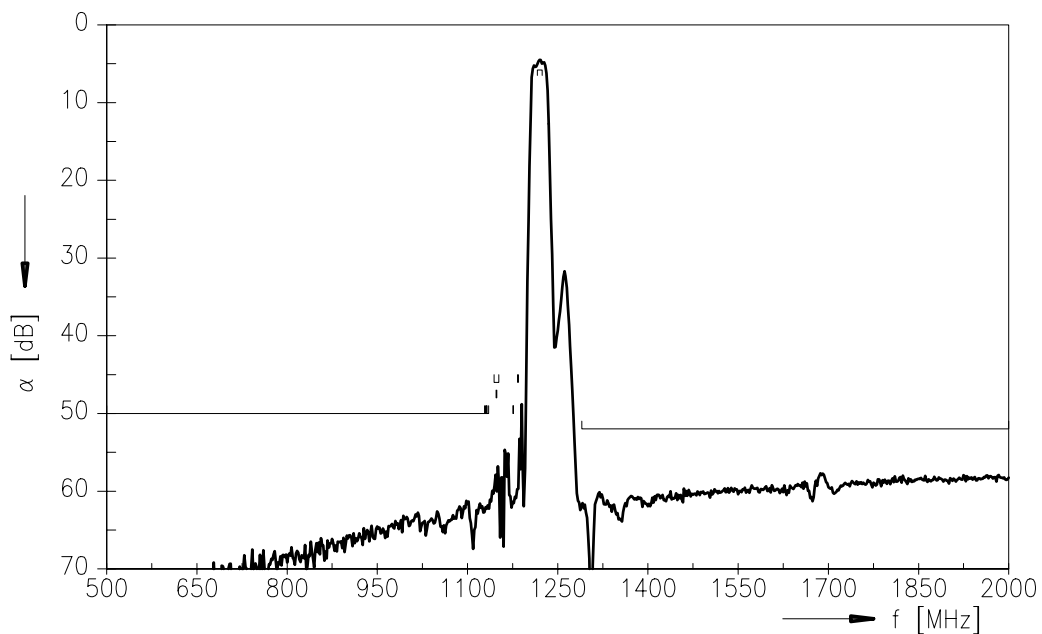
Low-Loss Filter for Digital Television

1220,0 MHz

Data Sheet



Transfer function (wideband)





SAW Components

B1603

Low-Loss Filter for Digital Television

1220,0 MHz

Data Sheet



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	$\alpha_{\min}$				
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 $\alpha_{\min}$)	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



SAW Components

B1603

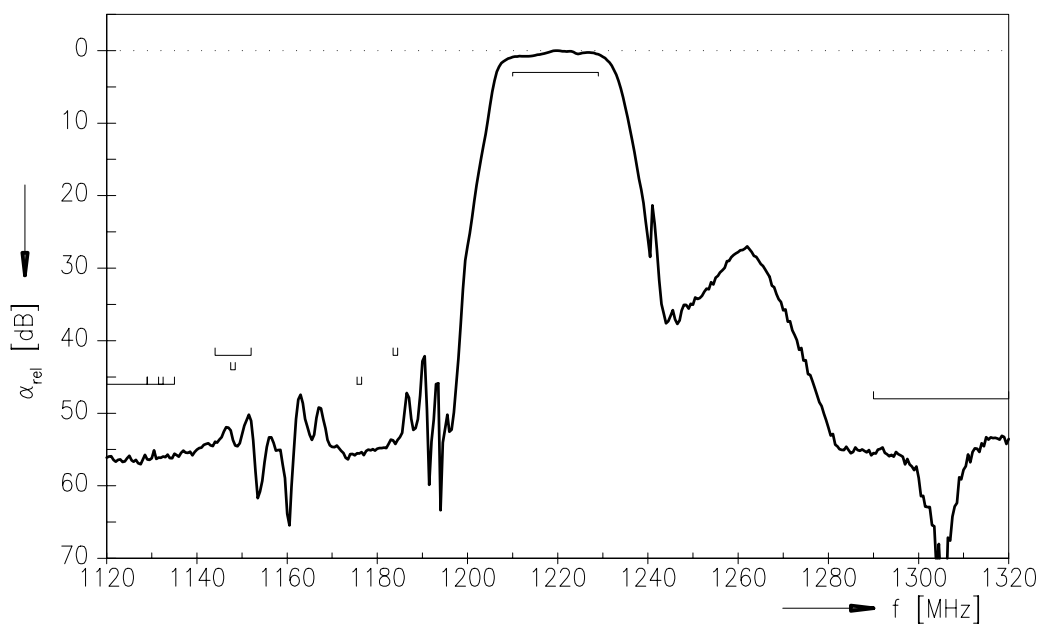
Low-Loss Filter for Digital Television

1220,0 MHz

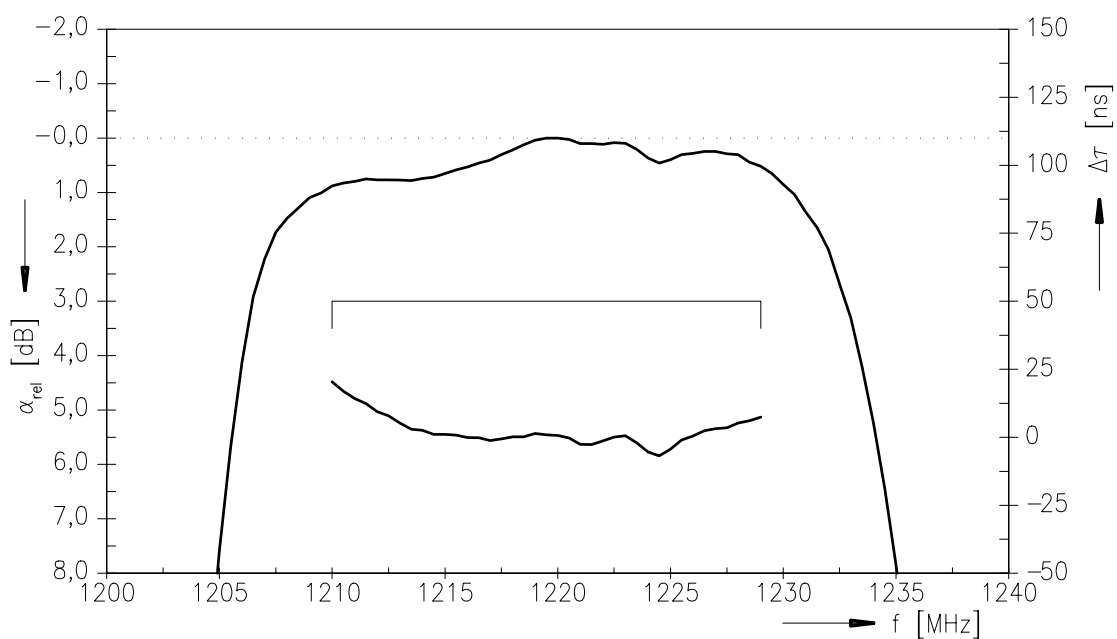
Data Sheet



Transfer function



Transfer function (passband)





SAW Components	B1603
Low-Loss Filter for Digital Television	1220,0 MHz
Data Sheet	SMD

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW CE MM PD

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

© EPCOS AG 2003. Reproduction, publication and dissemination of this data sheet, enclosures hereto and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.