



SAW Components

Data Sheet B7662

Data Sheet

An abstract, grayscale graphic featuring a stylized, glowing globe with a grid pattern. The word "EPCOS" is written in large, white, sans-serif capital letters across the globe, appearing to be part of the design.



SAW Components

B7662

Low-Loss Filter for Mobile Communication

1765,0 / 1855,0 MHz

Data Sheet



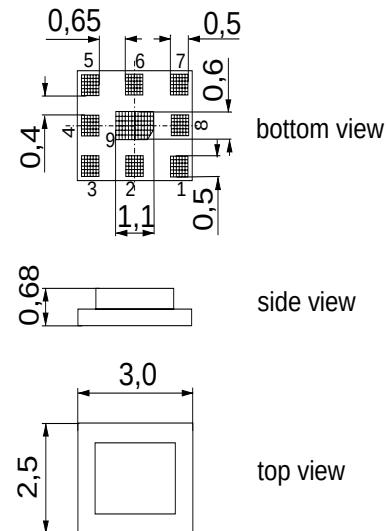
Features

- Low-loss duplexer for Korean PCS mobile telephone systems
- Very small size and low height
- Package for Surface Mounted Technology (SMT)

Terminals

Ni, gold-plated

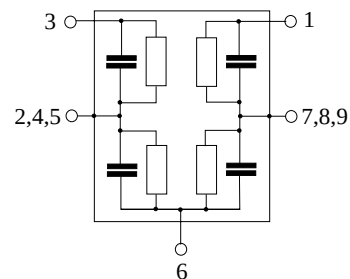
Chip Sized SAW Package QCS9K



Dimensions in mm, approx. weight 0,028 g

Pin configuration

- | | |
|---------|-----------|
| 1 | TX Input |
| 3 | RX Output |
| 6 | Antenna |
| 2, 4, 5 | Ground |
| 7, 8, 9 | Ground |



Type	Ordering code	Marking and Package according to	Packing according to
B7662	B39192-B7662-P610	C61157-A3-A15	F61074-V8156-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operating temperature range	T	- 30/+ 85	°C	machine model, 10 pulses source and load impedance 50 Ω } continuous wave
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50 ¹⁾	V	
Input power max.	P_{IN}	29 10	dBm dBm	
1750,0 ... 1780,0 MHz elsewhere				

1) -acc. to JESD22-115A (Machine Model), 10 negative & 10 positive pulses



SAW Components

B7662

Low-Loss Filter for Mobile Communication

1765,0 / 1855,0 MHz

Data Sheet



Characteristics

Operating temperature range $T = 25 \pm 2^\circ \text{C}$

ANT terminating impedance $Z_{\text{ANT}} = 50 \Omega$

RX terminating impedance $Z_{\text{RX}} = 50 \Omega$

TX terminating impedance $Z_{\text{TX}} = 50 \Omega$

Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	1765,0	—	MHz
Maximum insertion attenuation	α_{max}	—	1,6	1,8	dB
	1750,00 ... 1780,00 MHz	—	1,6	1,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,4	0,7	dB
	1750,00 ... 1780,00 MHz	—	0,4	0,7	dB
Return loss		9,0	11	—	dB
	1750,00 ... 1780,00 MHz	9,0	11	—	dB
Attenuation	α	40	49	—	dB
	1840,00 ... 1870,00 MHz	40	49	—	dB
	2000,00 ... 3000,00 MHz	25	30	—	dB

Characteristics ANT - RX		min.	typ.	max.	
Center frequency	f_c	—	1855,0	—	MHz
Maximum insertion attenuation	α_{max}	—	1,9	2,3	dB
	1840,00 ... 1870,00 MHz	—	1,9	2,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,2	0,7	dB
	1840,00 ... 1870,00 MHz	—	0,2	0,7	dB
Return loss		9,0	12	—	dB
	1840,00 ... 1870,00 MHz	9,0	12	—	dB
Attenuation	α	52	62	—	dB
	1750,00 ... 1780,00 MHz	52	62	—	dB
	2000,00 ... 3000,00 MHz	35	55	—	dB

Characteristics TX - RX		min.	typ.	max.	
Isolation between TX and RX path	α	60	64	—	dB
	1750,00 ... 1780,00 MHz	60	64	—	dB
	1840,00 ... 1870,00 MHz	45	50	—	dB



SAW Components

B7662

Low-Loss Filter for Mobile Communication

1765,0 / 1855,0 MHz

Data Sheet



Characteristics

Operating temperature range $T = -30$ to $85\text{ }^{\circ}\text{C}$

ANT terminating impedance $Z_{\text{ANT}} = 50\text{ }\Omega$

RX terminating impedance $Z_{\text{RX}} = 50\text{ }\Omega$

TX terminating impedance $Z_{\text{TX}} = 50\text{ }\Omega$

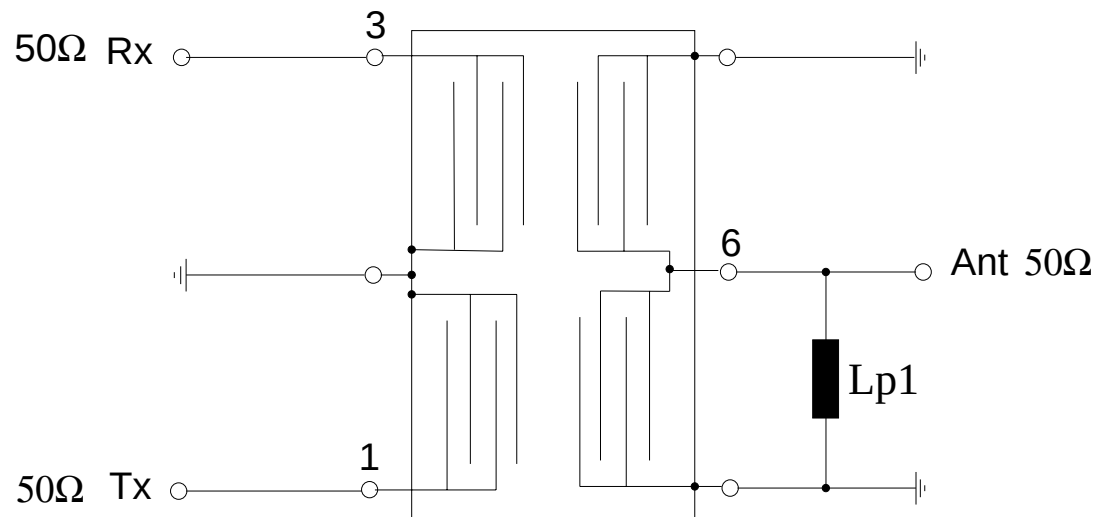
Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	1765,0	—	MHz
Maximum insertion attenuation	α_{max}	—	1,6	2,0	dB
	1750,00 ... 1780,00 MHz	—	1,6	2,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,4	0,9	dB
	1750,00 ... 1780,00 MHz	—	0,4	0,9	dB
Return loss		9,0	11	—	dB
	1750,00 ... 1780,00 MHz	9,0	11	—	dB
Attenuation	α	40	47	—	dB
	1840,00 ... 1870,00 MHz	40	47	—	dB
	2000,00 ... 3000,00 MHz	25	30	—	dB

Characteristics ANT - RX		min.	typ.	max.	
Center frequency	f_c	—	1855,0	—	MHz
Maximum insertion attenuation	α_{max}	—	2,1	2,5	dB
	1840,00 ... 1870,00 MHz	—	2,1	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,5	0,9	dB
	1840,00 ... 1870,00 MHz	—	0,5	0,9	dB
Return loss		9,0	12	—	dB
	1840,00 ... 1870,00 MHz	9,0	12	—	dB
Attenuation	α	52	60	—	dB
	1750,00 ... 1780,00 MHz	52	60	—	dB
	2000,00 ... 3000,00 MHz	35	55	—	dB

Characteristics TX - RX		min.	typ.	max.	
Isolation between TX and RX path	α	58	63	—	dB
	1750,00 ... 1780,00 MHz	58	63	—	dB
	1840,00 ... 1870,00 MHz	43	48	—	dB

**SAW Components****B7662****Low-Loss Filter for Mobile Communication****1765,0 / 1855,0 MHz****Data Sheet****Matching circuit to terminating impedances**

(Element values depend upon PCB layout)



$$L_{p1} = 3.3 \text{ nH}$$



SAW Components

B7662

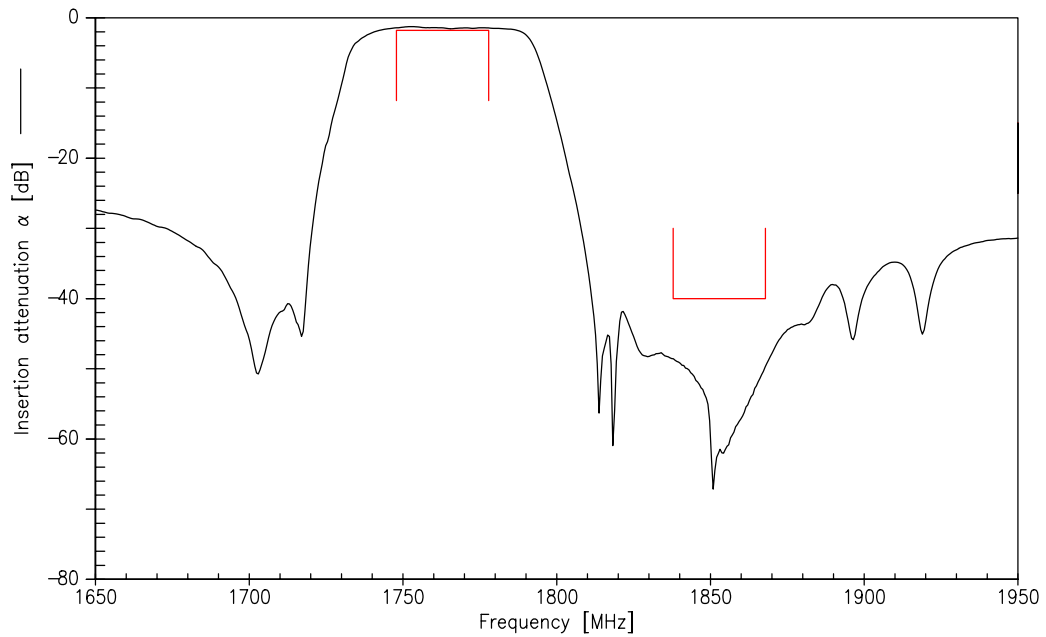
Low-Loss Filter for Mobile Communication

1765,0 / 1855,0 MHz

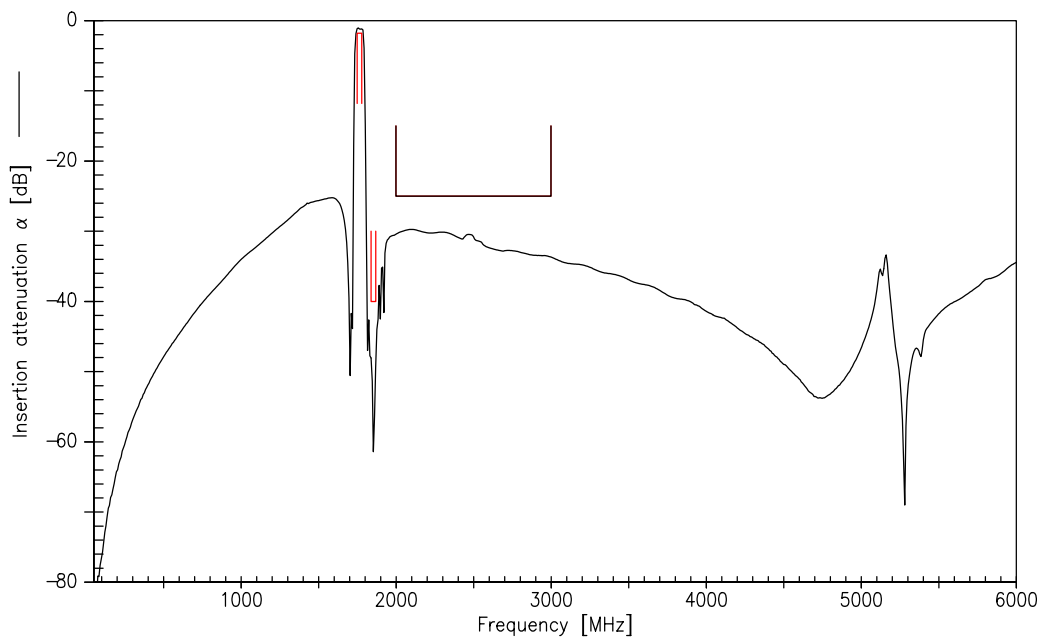
Data Sheet



Frequency Response TX-ANT



Frequency Response TX-ANT (wideband)





SAW Components

B7662

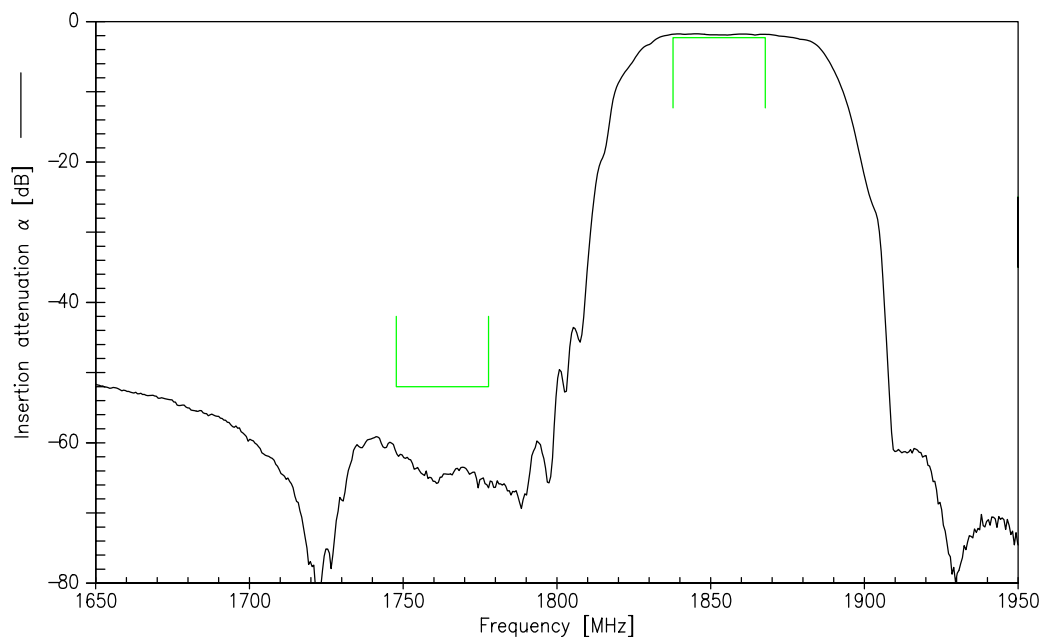
Low-Loss Filter for Mobile Communication

1765,0 / 1855,0 MHz

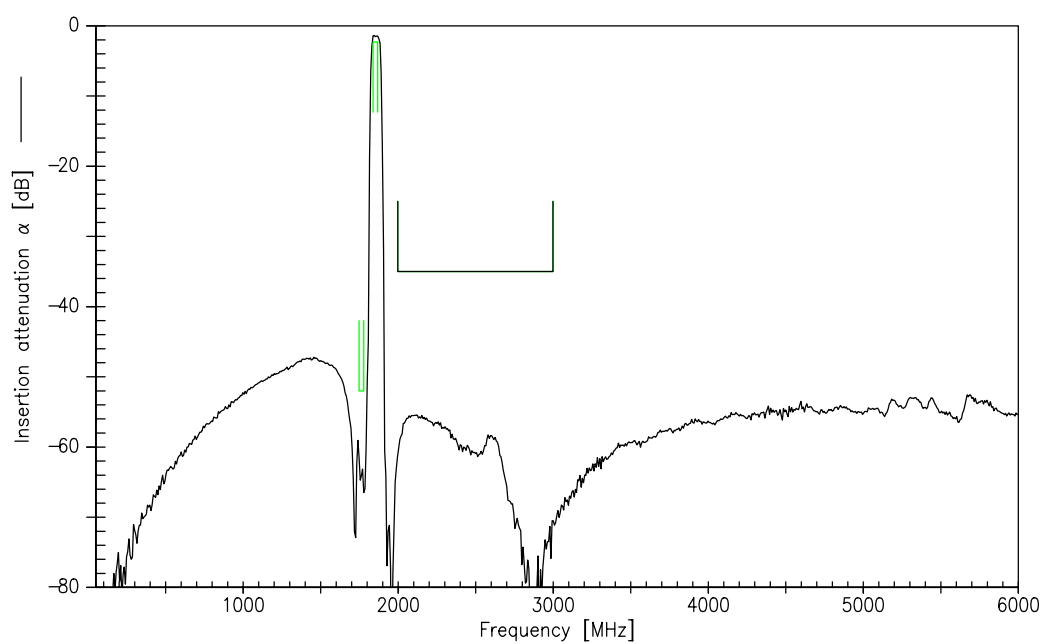
Data Sheet



Frequency Response RX-ANT



Frequency Response RX-ANT (wideband)





SAW Components

B7662

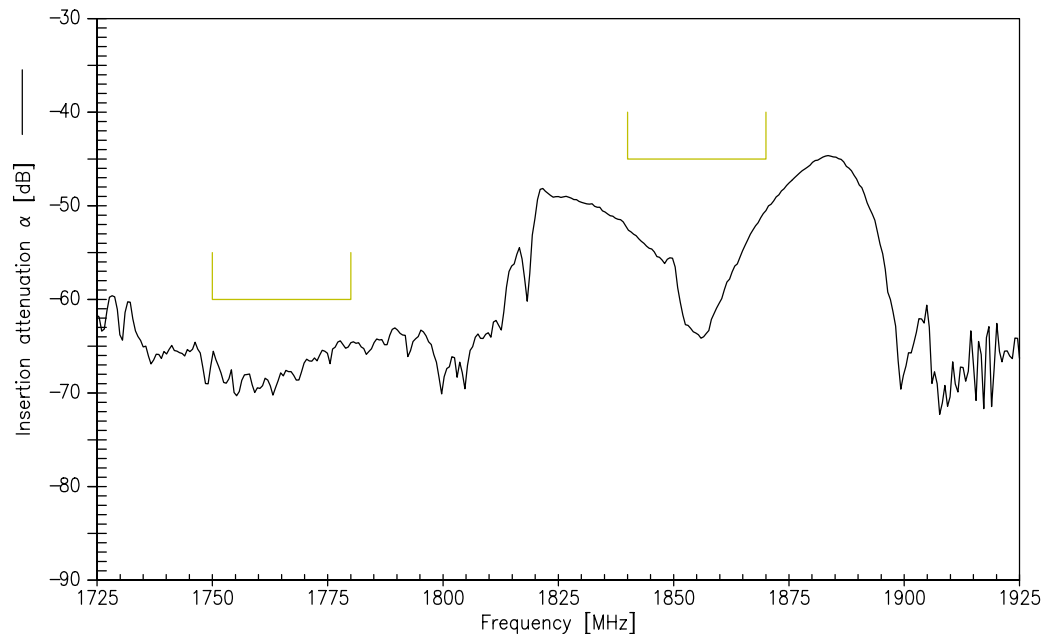
Low-Loss Filter for Mobile Communication

1765,0 / 1855,0 MHz

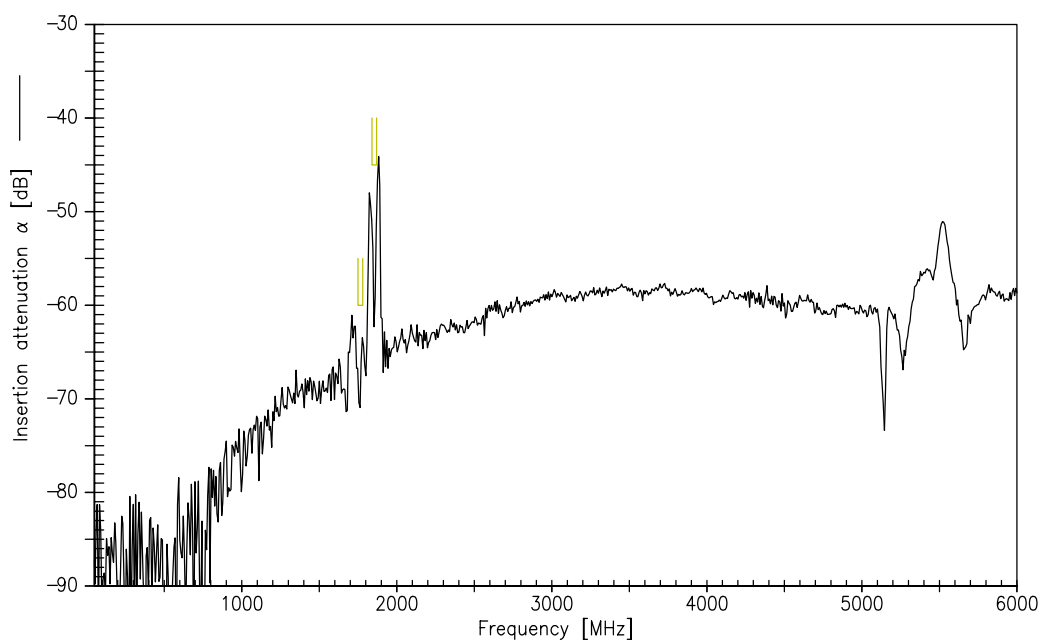
Data Sheet



Frequency Response TX-RX



Frequency Response TX-RX (wideband)





SAW Components

B7662

Low-Loss Filter for Mobile Communication

1765,0 / 1855,0 MHz

Data Sheet



Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC WT

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

© EPCOS AG 2004. Reproduction, publication and dissemination of this brochure 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.