



SAW Components

Data Sheet B7852





SAW Components

B7852

Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



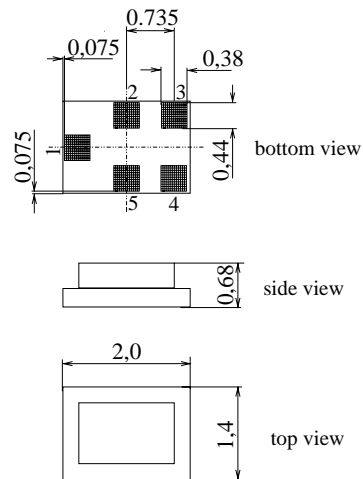
Chip sized SAW package QCS5E

Features

- Low-loss RF filter for mobile telephone PCN systems, receive path
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 75 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Suitable for GPRS class 1 to 12
- Package for **Surface Mount Technology (SMT)**
- Pb-free

Terminals

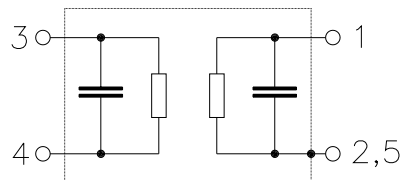
- Ni, gold-plated



Dimensions in mm, approx. weight 0,007 g

Pin configuration

- | | |
|-----|-------------------|
| 1 | Input, unbalanced |
| 3,4 | Output, balanced |
| 2,5 | Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B7852	B39182-B7852-K410	C61157-A7-A131	F61074-V8151-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}	5	V	
ESD voltage	V_{ESD}	50*	V	Machine Model, 10 pulses
Input Power at				
GSM850, GSM900	P_{IN}	15	dBm	peak power of GSM signal,
GSM1800, GSM1900	P_{IN}	12	dBm	duty cycle 4:8
Tx bands				

* - acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses



SAW Components

B7852

Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



Characteristics

Operating temperature range: $T = 25^{\circ}\text{C} \pm 2^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 150\ \Omega \parallel 15\ \text{nH}$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}	—	1,5	2,1	dB
1805,0 ... 1880,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,5	1,0	dB
1805,0 ... 1880,0 MHz					
Input VSWR		—	1,9	2,2	
1805,0 ... 1880,0 MHz					
Output VSWR		—	1,9	2,2	
1805,0 ... 1880,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,0	-0,4 / +0,6	1,0	dB
1805,0 ... 1880,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-10	-3 / +2	10	°
1805,0 ... 1880,0 MHz					
Attenuation	α				
0,0 ... 902,0 MHz		30	53	—	dB
902,0 ... 940,0 MHz		45	52	—	dB
940,0 ... 1705,0 MHz		28	42	—	dB
1705,0 ... 1785,0 MHz		13	18	—	dB
1920,0 ... 1980,0 MHz		17	23	—	dB
1980,0 ... 2030,0 MHz		24	29	—	dB
2030,0 ... 2400,0 MHz		28	34	—	dB
2400,0 ... 2500,0 MHz		32	42	—	dB
2500,0 ... 2775,0 MHz		28	33	—	dB
2775,0 ... 2880,0 MHz		40	54	—	dB
2880,0 ... 3610,0 MHz		28	50	—	dB
3610,0 ... 3760,0 MHz		40	50	—	dB
3760,0 ... 5415,0 MHz		28	42	—	dB
5415,0 ... 5640,0 MHz		35	42	—	dB
5640,0 ... 6000,0 MHz		28	42	—	dB



SAW Components	B7852
Low-Loss Filter for Mobile Communication	1842,5 MHz

Data Sheet



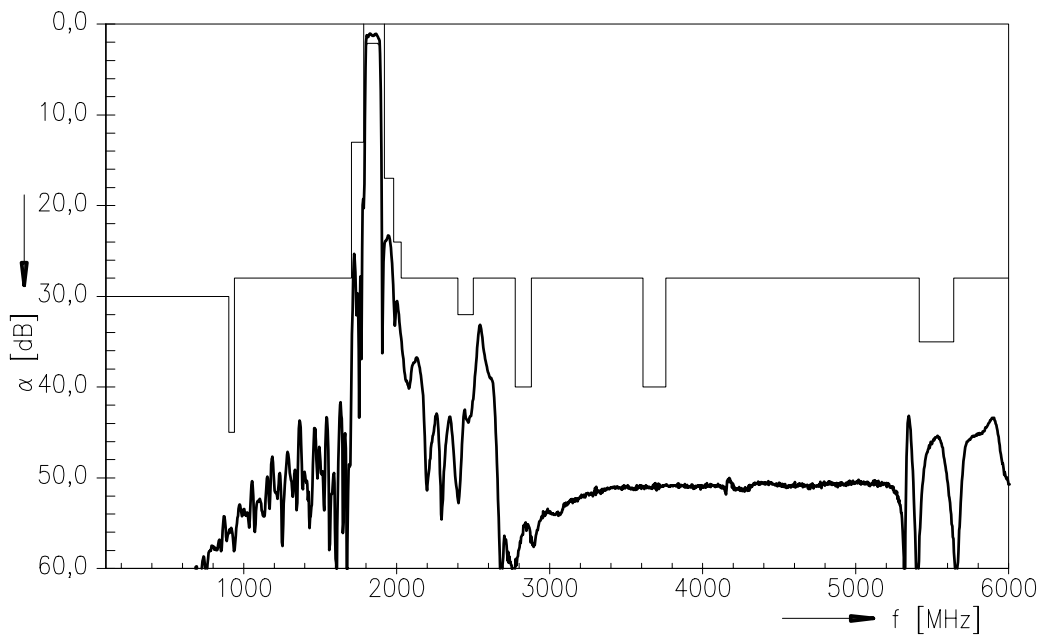
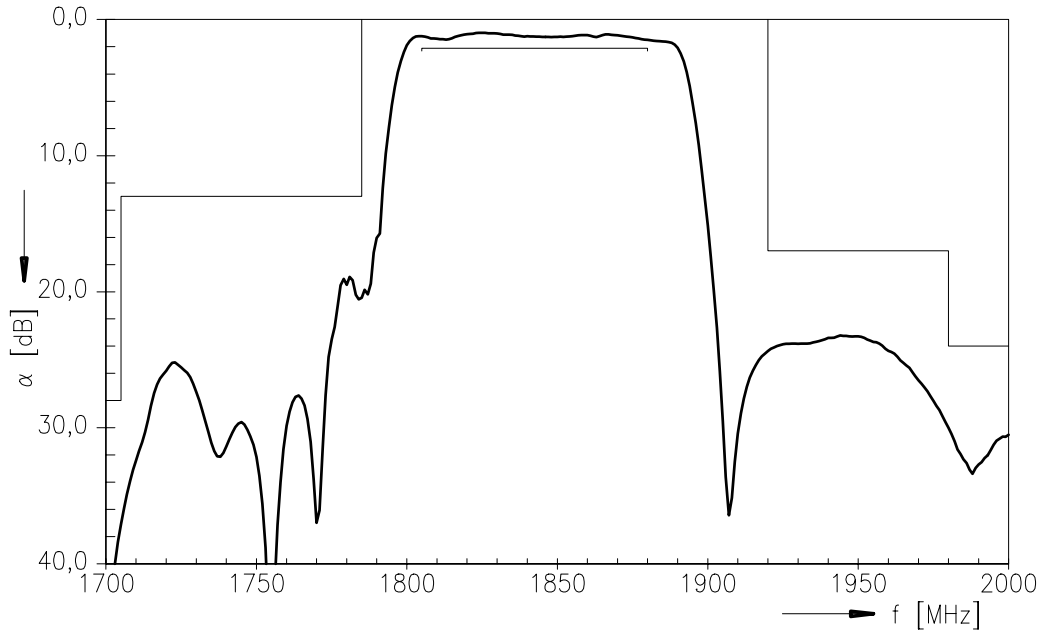
Characteristics

Operating temperature range: $T = -20$ to $+75$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 150 \Omega \parallel 15$ nH (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}	—	1,7	2,3	dB
	1805,0 ... 1880,0 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,7	1,3	dB
	1805,0 ... 1880,0 MHz				
Input VSWR		—	1,9	2,3	
	1805,0 ... 1880,0 MHz				
Output VSWR		—	1,9	2,3	
	1805,0 ... 1880,0 MHz				
Output amplitude balance (S_{31}/S_{21})		-1,0	-0,5 / +0,6	1,0	dB
	1805,0 ... 1880,0 MHz				
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	-3 / +2	10	°
	1805,0 ... 1880,0 MHz				
Attenuation	α				
	0,0 ... 902,0 MHz	30	53	—	dB
	902,0 ... 940,0 MHz	45	52	—	dB
	940,0 ... 1705,0 MHz	28	42	—	dB
	1705,0 ... 1785,0 MHz	13	18	—	dB
	1920,0 ... 1980,0 MHz	17	23	—	dB
	1980,0 ... 2030,0 MHz	24	29	—	dB
	2030,0 ... 2400,0 MHz	28	34	—	dB
	2400,0 ... 2500,0 MHz	32	42	—	dB
	2500,0 ... 2775,0 MHz	28	33	—	dB
	2775,0 ... 2880,0 MHz	40	54	—	dB
	2880,0 ... 3610,0 MHz	28	50	—	dB
	3610,0 ... 3760,0 MHz	40	50	—	dB
	3760,0 ... 5415,0 MHz	28	42	—	dB
	5415,0 ... 5640,0 MHz	35	42	—	dB
	5640,0 ... 6000,0 MHz	28	42	—	dB



Transfer function





SAW Components

B7852

Low-Loss Filter for Mobile Communication

1842,5 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.