



SAW Components

Data Sheet B7714





SAW Components

B7714

Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



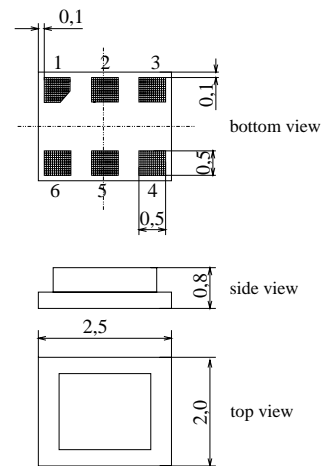
Chip Sized SAW Package DCS6I

Features

- Low-loss RF filter for mobile telephone PCN systems, receive path
- High selectivity
- Low amplitude ripple
- Usable passband 75 MHz
- Unbalanced to balanced operation
- No external matching required
- Suitable for GPRS class 1 to 12
- Package for **Surface Mounted Technology (SMT)**

Terminals

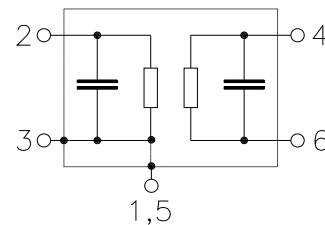
- Gold-plated Ni



Dimensions in mm, approx. weight 0,014 g

Pin configuration

- 2 Input
- 4, 6 Balanced output
- 1, 3, 5 To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B7714	B39182-B7714-C610	C61157-A7-A76	F61074-V8123-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 10 / + 80	°C	Machine Model, 10 pulses peak power of GSM signal, duty cycle 4:8
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V^*_{ESD}	50*	V	
Input power max at				
GSM850, GSM900	P_{IN}	15	dBm	
GSM1800, GSM1900	P_{IN}	12	dBm	
Tx bands				

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



Data Sheet



Characteristics

Operating Temperature Range: $T = +25 \pm 2^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 50 \Omega$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,9	3,5*	dB
1805,0 ... 1880,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,4	dB
1805,0 ... 1880,0 MHz					
Input VSWR		—	2,0	2,2	
1805,0 ... 1880,0 MHz					
Output VSWR		—	1,7	1,9	
1805,0 ... 1880,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-15	—	+15	degree
1805,0 ... 1880,0 MHz					
Output amplitude balance ($ S_{31}/S_{21} $)		-2,0	—	2,0	dB
1805,0 ... 1880,0 MHz					
Diff. to common mode suppression	S_{sc12}	18	20,5	—	dB
1805,0 ... 1880,0 MHz					
855,0 ... 995,0 MHz		18	28	—	
1710,0 ... 1990,0 MHz		18	19,5	—	
3420,0 ... 3980,0 MHz		18	28	—	
Attenuation	α	35	37	—	dB
0,0 ... 1500,0 MHz					
1500,0 ... 1705,0 MHz		27	33	—	
1705,0 ... 1785,0 MHz		12	14	—	
1920,0 ... 1980,0 MHz		18	20	—	
1980,0 ... 2100,0 MHz		23	25	—	
2100,0 ... 2900,0 MHz		27	29	—	
2900,0 ... 3100,0 MHz		25	28	—	
3100,0 ... 3400,0 MHz		23	26	—	
3400,0 ... 4000,0 MHz		20	23	—	
4000,0 ... 5200,0 MHz		17	19	—	
5200,0 ... 6000,0 MHz		15	17	—	

* the insertion attenuation includes also pcb losses of typ. 0,2dB



SAW Components

B7714

Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



Characteristics

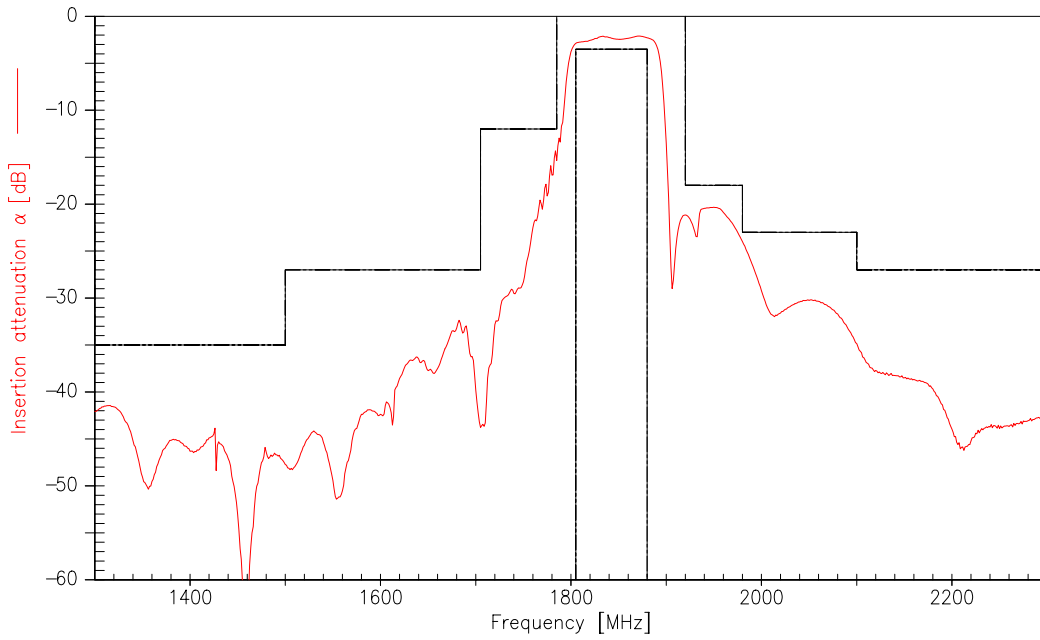
Operating Temperature Range: $T = -10$ to $+80^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 50 \Omega$ (balanced)

			min.	typ.	max.	
Center frequency	f_C		—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}	1805,0 ... 1880,0 MHz	—	3,2	4,0*	dB
Amplitude ripple (p-p)	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	1,1	1,9	dB
Input VSWR		1805,0 ... 1880,0 MHz	—	2,2	2,4	
Output VSWR		1805,0 ... 1880,0 MHz	—	1,9	2,1	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		1805,0 ... 1880,0 MHz	-15	—	+15	degree
Output amplitude balance ($ S_{31}/S_{21} $)		1805,0 ... 1880,0 MHz	-2,0	—	2,0	dB
Diff. to common mode suppression	S_{sc12}	1805,0 ... 1880,0 MHz	18	20,5	—	dB
		855,0 ... 995,0 MHz	18	28	—	dB
		1710,0 ... 1990,0 MHz	18	19,5	—	dB
		3420,0 ... 3980,0 MHz	18	28	—	dB
Attenuation	α	0,0 ... 1500,0 MHz	35	37	—	dB
		1500,0 ... 1705,0 MHz	27	33	—	dB
		1705,0 ... 1785,0 MHz	10	12	—	dB
		1920,0 ... 1980,0 MHz	18	20	—	dB
		1980,0 ... 2100,0 MHz	23	25	—	dB
		2100,0 ... 2900,0 MHz	27	29	—	dB
		2900,0 ... 3100,0 MHz	25	27	—	dB
		3100,0 ... 3400,0 MHz	23	26	—	dB
		3400,0 ... 4000,0 MHz	20	23	—	dB
		4000,0 ... 5200,0 MHz	17	19	—	dB
		5200,0 ... 6000,0 MHz	15	17	—	dB

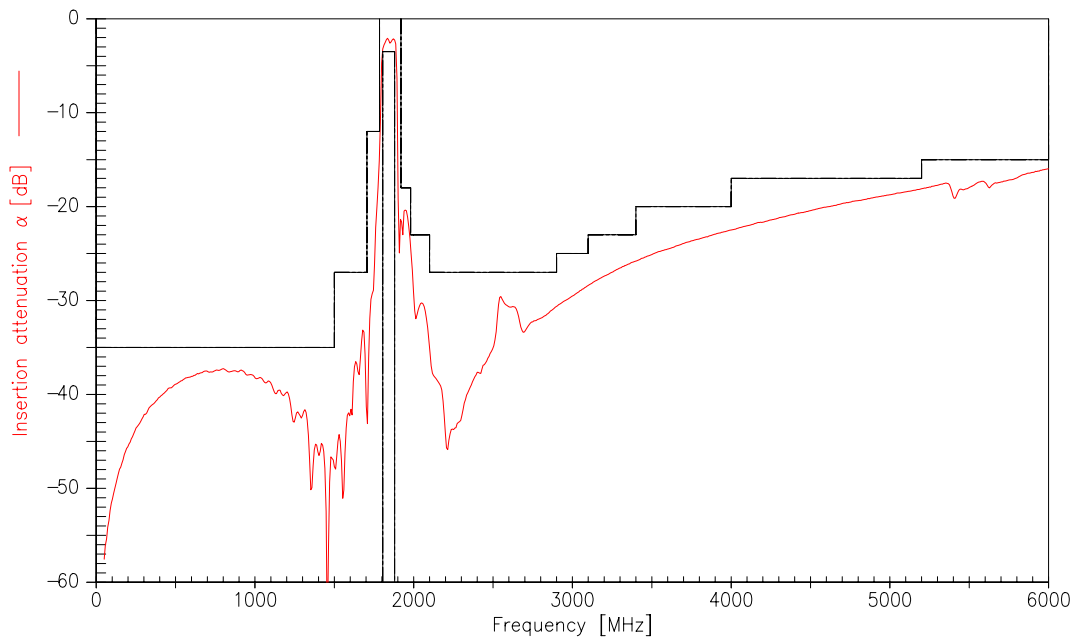
* the insertion attenuation includes also pcb losses of typ. 0,2dB



Transfer function



Transfer function (wide band)





SAW Components

B7714

Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC PD

P.O. Box 80 17 09, D-81617 München

© EPCOS AG 2004. All Rights Reserved. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. 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.