EPCOS

SAW Components

Data Sheet B7714

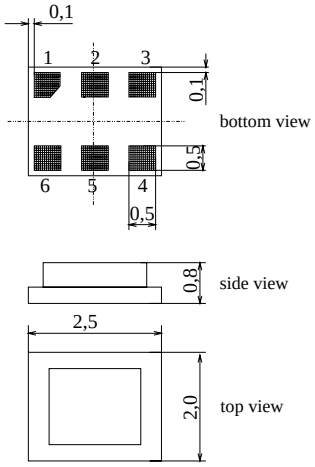
Chip **S**ized **S**AW **P**ackage **DCS6I**

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 **S**urface **M**ounted **T**echnology (**SMT**)

Terminals

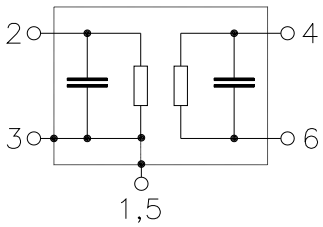
- Gold-plated Ni



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 **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 10 / + 80	˚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 max 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

Characteristics

Operating Temperature Range: T = +25 +- 2˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}				
1805,0 ... 1880,0 MHz		—	2,9	3,5*	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	0,8	1,4	dB
Input VSWR					
1805,0 ... 1880,0 MHz		—	2,0	2,2	
Output VSWR					
1805,0 ... 1880,0 MHz		—	1,7	1,9	
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)					
1805,0 ... 1880,0 MHz		-15	—	+15	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
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		12	14	—	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	28	—	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

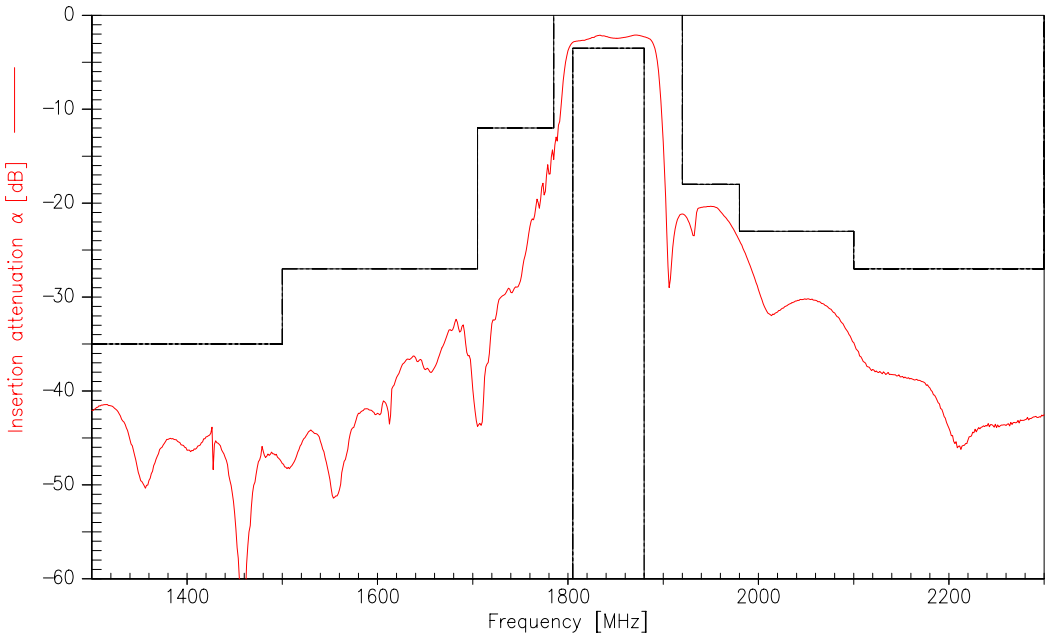
Characteristics

Operating Temperature Range: T = -10 to +80˚C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 50 Ω (balanced)

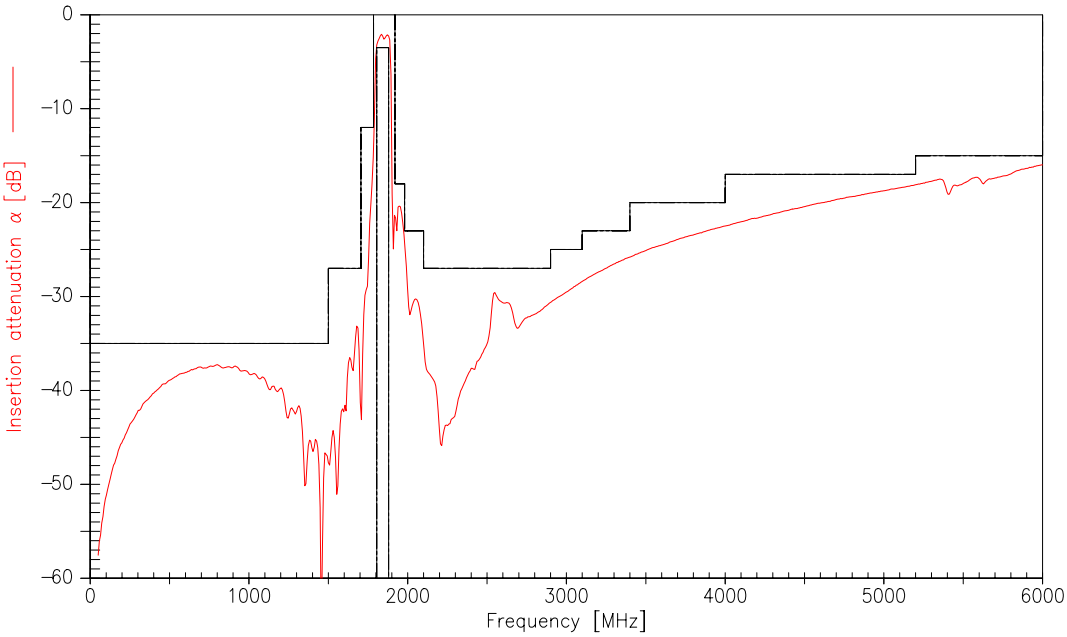
		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}				
1805,0 ... 1880,0 MHz		—	3,2	4,0*	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	1,1	1,9	dB
Input VSWR					
1805,0 ... 1880,0 MHz		—	2,2	2,4	
Output VSWR					
1805,0 ... 1880,0 MHz		—	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 ($\lvert S_{31}/S_{21}\rvert$)					
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)



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC PD
P.O. Box 80 17 09, D-81617 München

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.