EPCOS

SAW Components

Data Sheet B7714

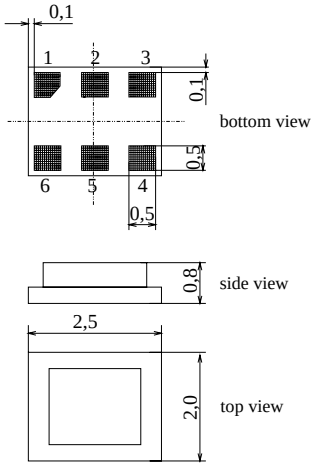
Chip **S**ized **S**AW **P**ackage **DCS6I**

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

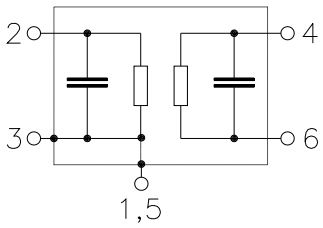
- Gold-plated Ni



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

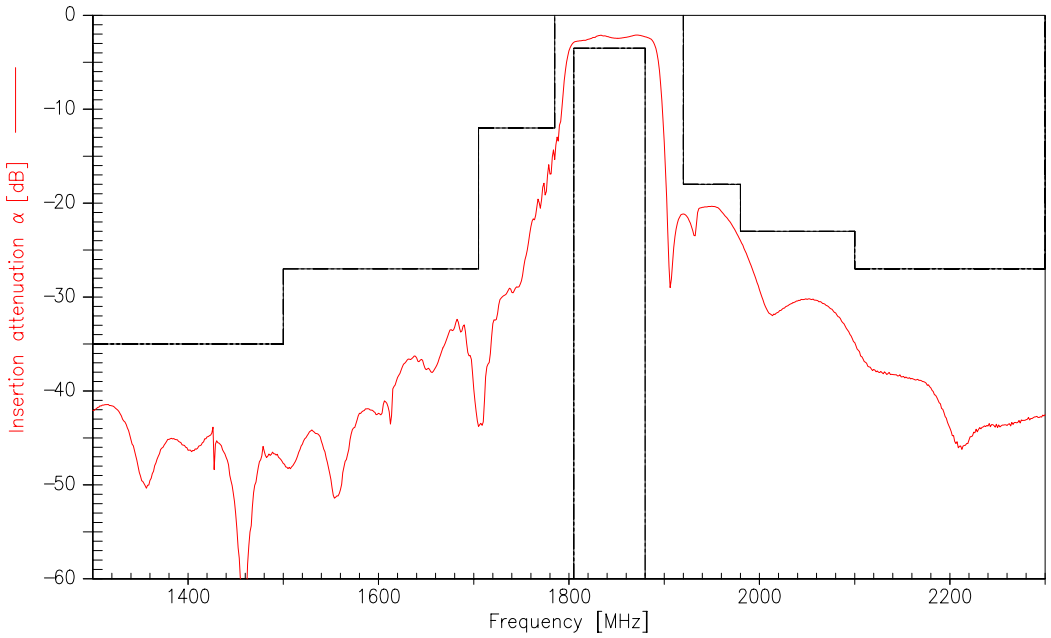
Characteristics

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

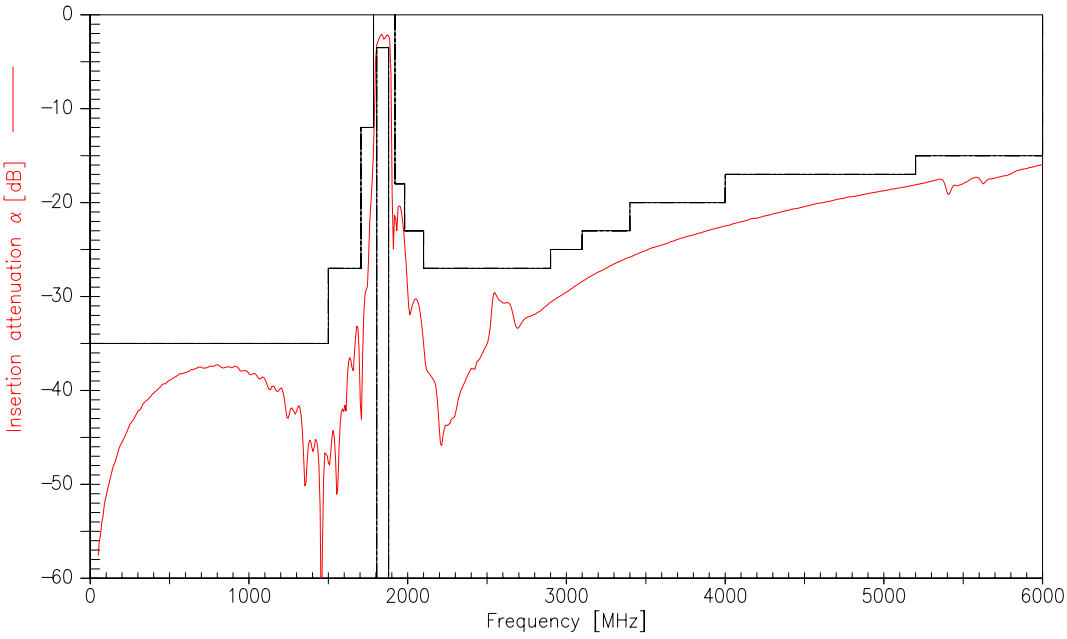
		min.	typ.	max.	
Center frequency	f_C	—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}				
1805,0 ... 1880,0 MHz		—	3,2	4,0*	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	1,1	1,9	dB
Input VSWR					
1805,0 ... 1880,0 MHz		—	2,2	2,4	
Output VSWR					
1805,0 ... 1880,0 MHz		—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



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