



SAW Components

Data Sheet B7714

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background. In the background, there is a faint, stylized globe and a wavy, ribbon-like shape that flows across the scene, adding a sense of motion and technology.



SAW Components

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Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



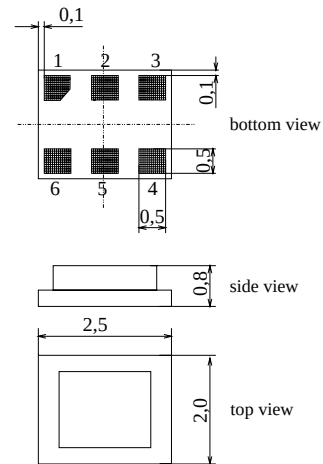
Chip Sized SAW Package DCS6I

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

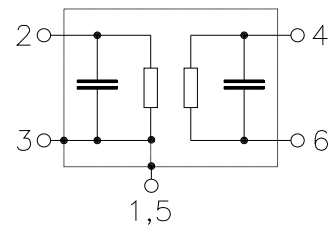
- Gold-plated Ni



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



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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	$\alpha_{\max}$				
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 ($ 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		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



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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	$\alpha_{\max}$	—	3,2	4,0*	dB
1805,0 ... 1880,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,1	1,9	dB
1805,0 ... 1880,0 MHz					
Input VSWR		—	2,2	2,4	
1805,0 ... 1880,0 MHz					
Output VSWR		—	1,9	2,1	
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	—	dB
1710,0 ... 1990,0 MHz		18	19,5	—	dB
3420,0 ... 3980,0 MHz		18	28	—	dB
Attenuation	α	35	37	—	dB
0,0 ... 1500,0 MHz					
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



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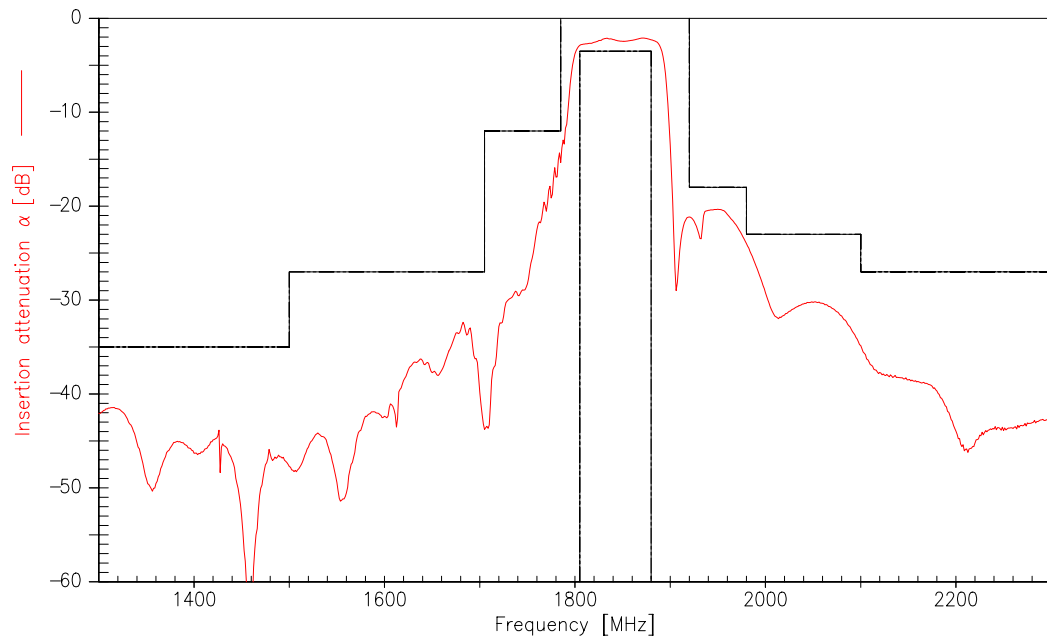
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1842,5 MHz

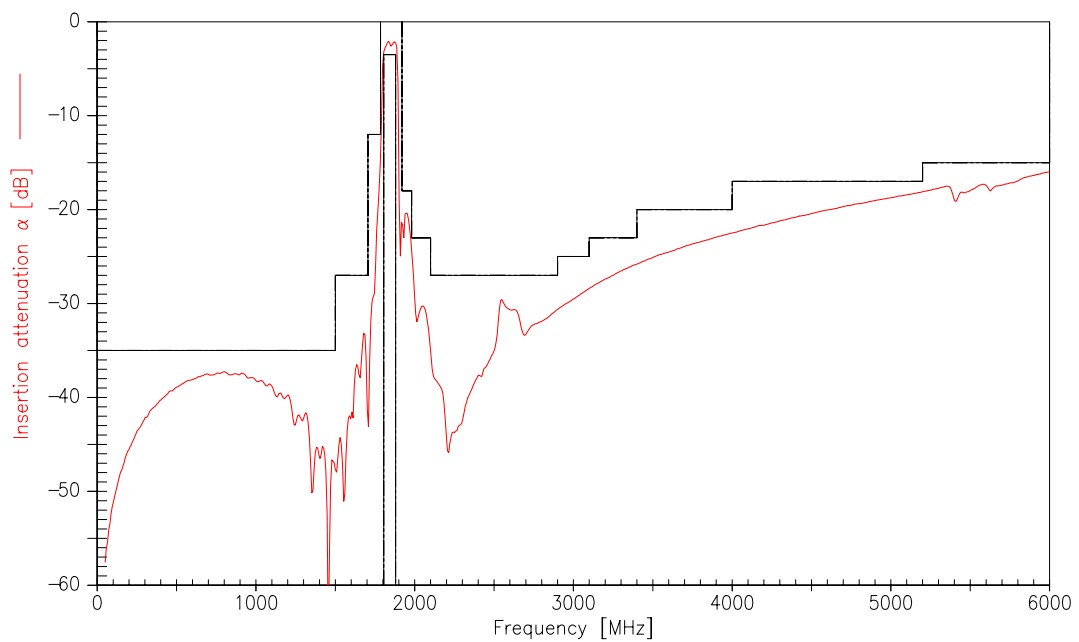
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Transfer function



Transfer function (wide band)





SAW Components	B7714
Low-Loss Filter for Mobile Communication	1842,5 MHz
Data Sheet	SMD

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