



SAW Components

Data Sheet B7714





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Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



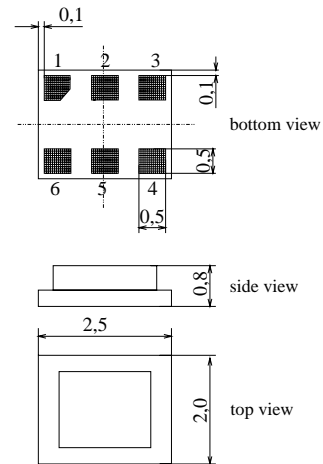
Chip Sized SAW Package DCS6I

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

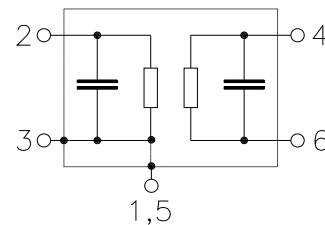
- Gold-plated Ni



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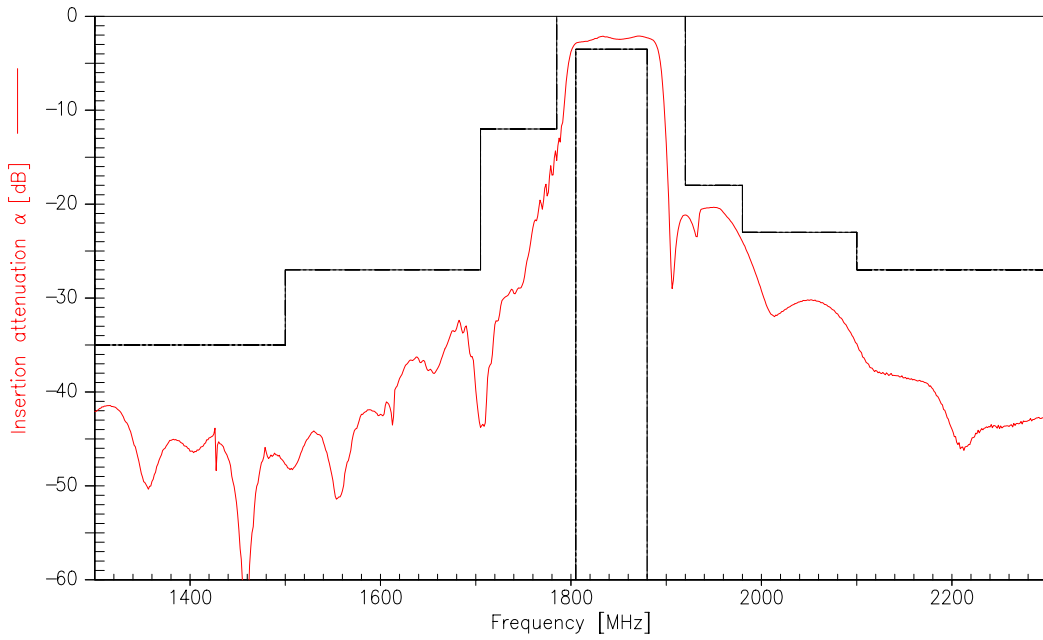
Operating Temperature Range: $T = -10$ to $+80^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 50 \Omega$ (balanced)

			min.	typ.	max.	
Center frequency	f_C		—	1842,5	—	MHz
Maximum insertion attenuation	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

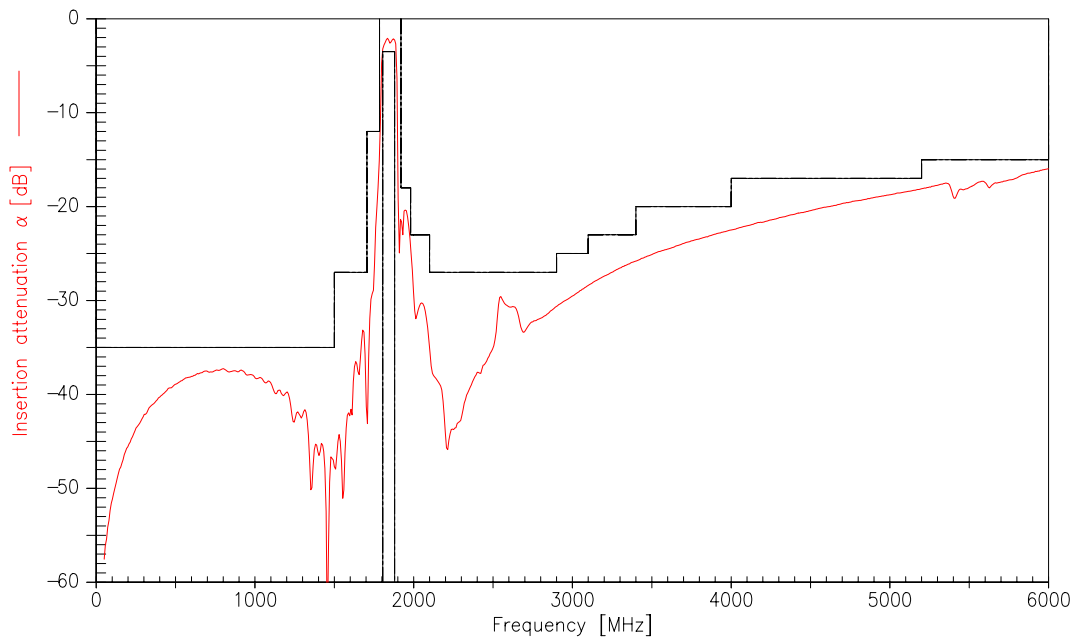
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Transfer function



Transfer function (wide band)





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