



**THE DATASHEET OF
B39941B7710C610**





SAW Components

Data Sheet B7710





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B7710

Low-Loss Filter for Mobile Communication

942,5 MHz

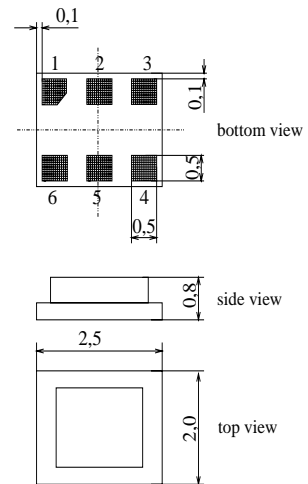
Data Sheet



Chip sized SAW package DCS6I

Features

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced operation
- No external matching required
- Ceramic package for **Surface Mounted Technology (SMT)**



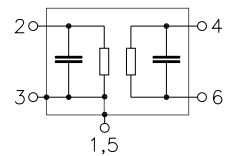
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,014g

Pin configuration

- 2 Input, unbalanced
- 4, 6 Balanced outputs
- 1, 3, 5 To be grounded
- 1, 5 Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B7710	B39941-B7710-C610	C61157-A7-A76	F61074-V8112-Z000

Electrostatic Sensitive Device (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}	200	V	
Input power max.				>2000 hrs at 85°C
@ 880 ... 915 MHz	P_{IN}	13	dBm	source and load impedance 50 Ω peak power of GSM signal, duty cycle 2 : 8,
@ 1710...1785 MHz		13		
@ 1850...1910 MHz		13		
elsewhere		0	dBm	continuous wave



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Characteristics

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

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{\max}				
925,0 ... 960,0	MHz	—	3,0	3,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0	MHz	—	1,1	1,4	dB
VSWR					
925,0 ... 960,0	MHz	—	1,7	2,0	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)					
925,0 ... 960,0	MHz	-10	—	10	°
Output amplitude balance ($ S_{31}/S_{21} $)					
925,0 ... 960,0	MHz	-1,0	—	1,0	dB
Diff. to common mode suppression	S_{sc12}				
925,0 ... 960,0	MHz	20	25	—	dB
855,0 ... 995,0	MHz	20	25	—	dB
1710,0 ... 1990,0	MHz	20	54	—	dB
3420,0 ... 3980,0	MHz	20	40	—	dB
Attenuation	α				
0,0 ... 850,0	MHz	50	59	—	dB
850,0 ... 905,0	MHz	35	47	—	dB
905,0 ... 915,0	MHz	18	30	—	dB
980,0 ... 1000,0	MHz	23	30	—	dB
1000,0 ... 1050,0	MHz	30	40	—	dB
1050,0 ... 2000,0	MHz	40	45	—	dB
2000,0 ... 3000,0	MHz	30	35	—	dB
3000,0 ... 4000,0	MHz	20	28	—	dB
4000,0 ... 6000,0	MHz	15	22	—	dB



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Characteristics

Operating temperature range: $T = +10^{\circ}\text{C}$ to $+60^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{\max}				
925,0 ... 960,0 MHz		—	3,1	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,2	1,6	dB
VSWR					
925,0 ... 960,0 MHz		—	1,7	2,0	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)					
925,0 ... 960,0 MHz		-10	—	10	$^{\circ}$
Output amplitude balance (S_{31}/S_{21})					
925,0 ... 960,0 MHz		-1,0	—	1,0	dB
Diff. to common mode suppression	S_{sc12}				
925,0 ... 960,0 MHz		20	25	—	dB
855,0 ... 995,0 MHz		20	25	—	dB
1710,0 ... 1990,0 MHz		20	54	—	dB
3420,0 ... 3980,0 MHz		20	40	—	dB
Attenuation	α				
0,0 ... 850,0 MHz		50	59	—	dB
850,0 ... 905,0 MHz		35	47	—	dB
905,0 ... 915,0 MHz		18	26	—	dB
980,0 ... 1000,0 MHz		20	31	—	dB
1000,0 ... 1050,0 MHz		30	40	—	dB
1050,0 ... 2000,0 MHz		40	45	—	dB
2000,0 ... 3000,0 MHz		30	35	—	dB
3000,0 ... 4000,0 MHz		20	28	—	dB
4000,0 ... 6000,0 MHz		15	22	—	dB



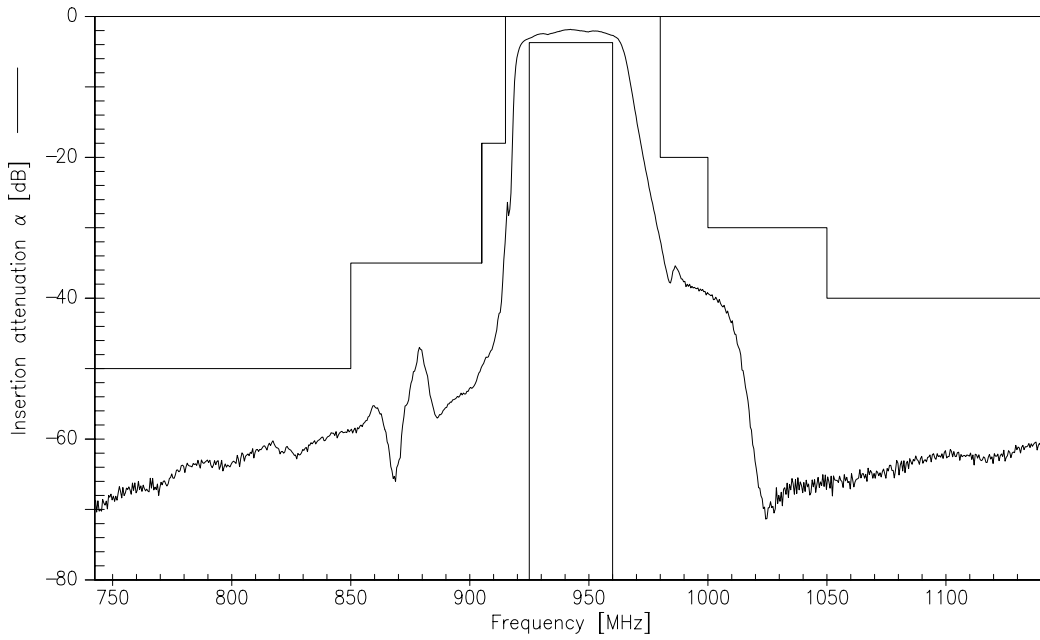
Characteristics

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

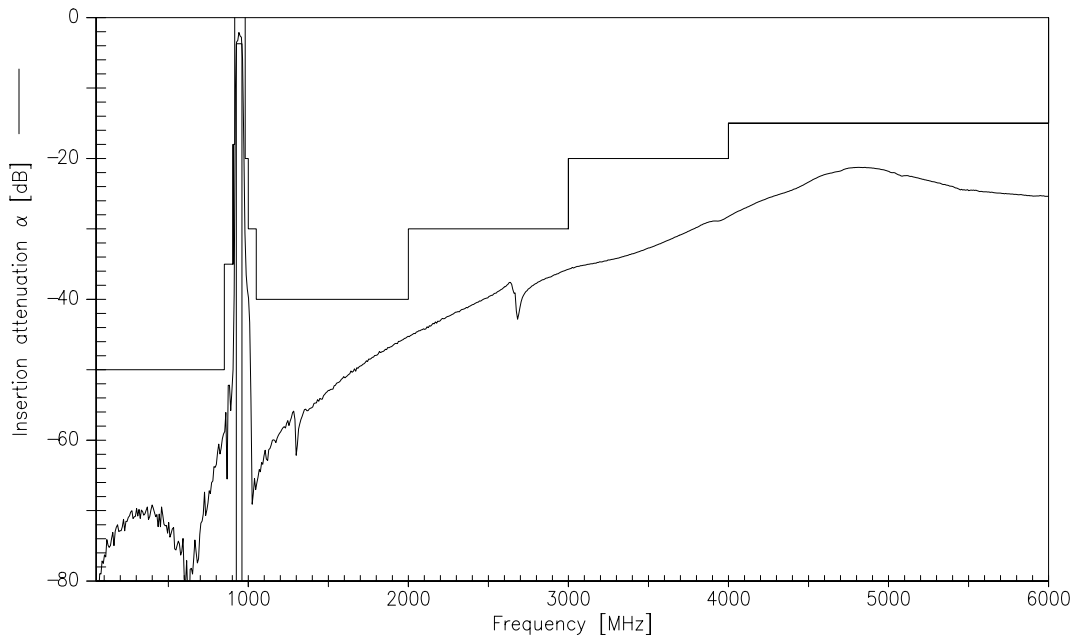
		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{\max}				
925,0 ... 960,0 MHz		—	3,2	3,7	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,2	2,0	dB
VSWR					
925,0 ... 960,0 MHz		—	1,7	2,0	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)					
925,0 ... 960,0 MHz		-10	—	10	$^{\circ}$
Output amplitude balance (S_{31}/S_{21})					
925,0 ... 960,0 MHz		-1,0	—	1,0	dB
Diff. to common mode suppression	S_{sc12}				
925,0 ... 960,0 MHz		20	25	—	dB
855,0 ... 995,0 MHz		20	25	—	dB
1710,0 ... 1990,0 MHz		20	54	—	dB
3420,0 ... 3980,0 MHz		20	40	—	dB
Attenuation	α				
0,0 ... 850,0 MHz		50	59	—	dB
850,0 ... 905,0 MHz		35	47	—	dB
905,0 ... 915,0 MHz		18	26	—	dB
980,0 ... 1000,0 MHz		20	29	—	dB
1000,0 ... 1050,0 MHz		30	40	—	dB
1050,0 ... 2000,0 MHz		40	45	—	dB
2000,0 ... 3000,0 MHz		30	35	—	dB
3000,0 ... 4000,0 MHz		20	28	—	dB
4000,0 ... 6000,0 MHz		15	22	—	dB



Transfer function (measurement)

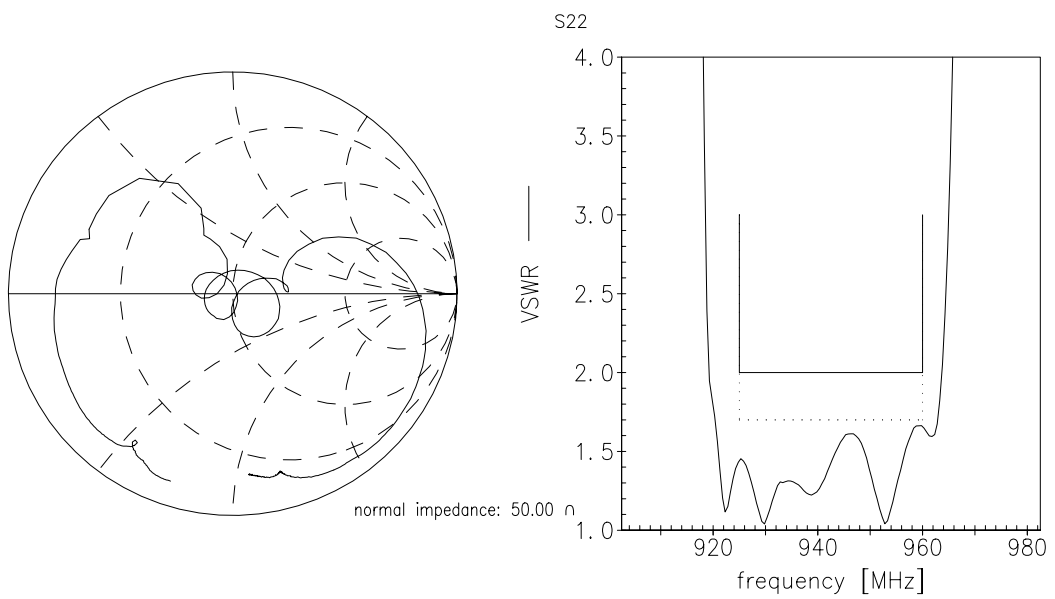
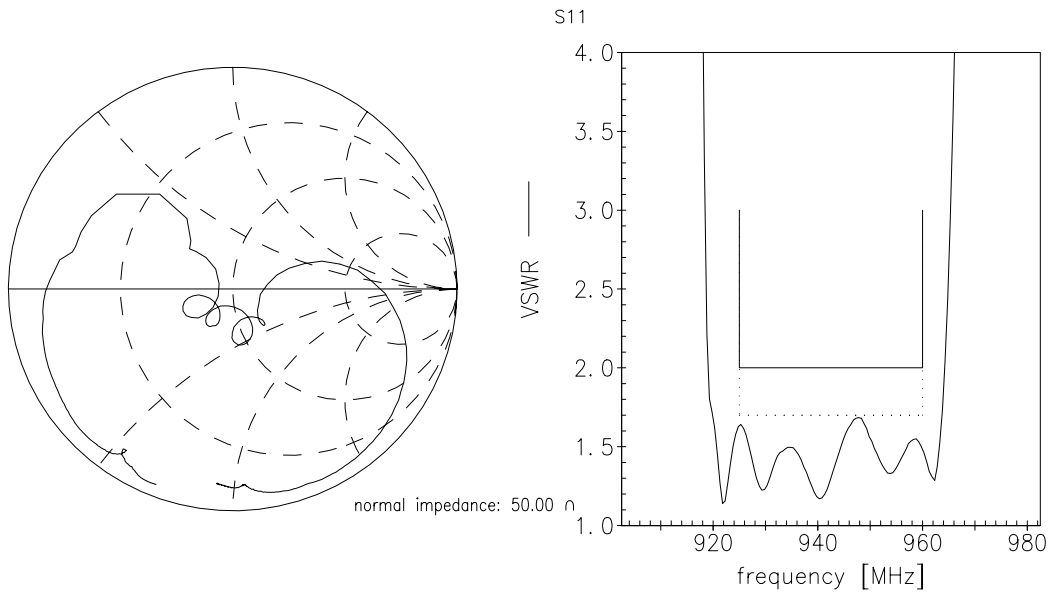


Transfer function (wideband measurement)





Matching (measurement)





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