



# SAW Components

Data Sheet B7735





**SAW Components**

**B7735**

**Low-Loss Filter for Mobile Communication**

**942,5 MHz**

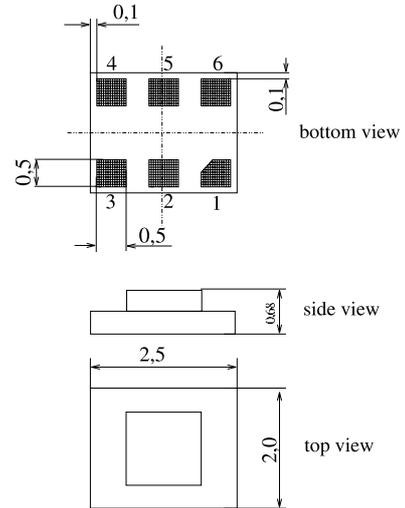
**Data Sheet**



**Features**

- Low-loss RF filter for mobile telephone EGSM system, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced operation
- Excellent symmetry
- Impedance transformation from 50 Ω to 150 Ω
- Suitable for GPRS class 1 to 12
- Ceramic package for **Surface Mounted Technology (SMT)**
- Pb-free

**Chip sized SAW package DCS6K**



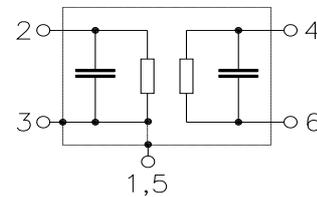
**Terminals**

- Ni, gold-plated

**Pin configuration**

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

Dimensions in mm



Type	Ordering code	Marking and Package according to	Packing according to
B7735	B39941-B7735-C910	C61157-A7-A97	F61074-V8153-Z000

**Electrostatic Sensitive Device (ESD)**

**Maximum ratings**

Operable temperature range	$T$	- 30 / + 85	°C	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	$V_{ESD}$	100	V	
Input power at GSM850, GSM900	$P_{IN}$	15	dBm	
GSM1800 and GSM1900				
Tx bands				



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**Characteristics**

Operating temperature range:  $T = 25 \pm 2 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 150 \text{ } \Omega \parallel 100 \text{ nH}$

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	—	2,3	2,7	dB
925,0 ... 960,0 MHz					
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	0,9	1,4	dB
925,0 ... 960,0 MHz					
<b>Input VSWR</b>		—	1,8	2,2	
925,0 ... 960,0 MHz					
<b>Output VSWR</b>		—	1,8	2,2	
925,0 ... 960,0 MHz					
<b>Output phase balance</b> $\phi(S_{31}) - \phi(S_{21})$		-10	—	10	degree
925,0 ... 960,0 MHz					
<b>Output amplitude balance</b> $( S_{31}/S_{21} )$		-2	—	2	dB
925,0 ... 960,0 MHz					
<b>Diff. to common mode suppression</b>	$S_{sc12}$	20	26	—	dB
925,0 ... 960,0 MHz					
824,0 ... 995,0 MHz		20	26	—	
1648,0 ... 1990,0 MHz		20	50	—	
3296,0 ... 3980,0 MHz		20	29	—	
<b>Attenuation</b>	$\alpha$	50	68	—	dB
0,0 ... 880,0 MHz					
880,0 ... 905,0 MHz		30	52	—	
905,0 ... 915,0 MHz		20	29	—	
980,0 ... 1050,0 MHz		23	34	—	
1050,0 ... 1850,0 MHz		50	55	—	
1850,0 ... 1920,0 MHz		50	71	—	
1920,0 ... 2880,0 MHz		50	60	—	
2880,0 ... 4000,0 MHz		40	59	—	
4000,0 ... 6000,0 MHz		40	60	—	



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Characteristics

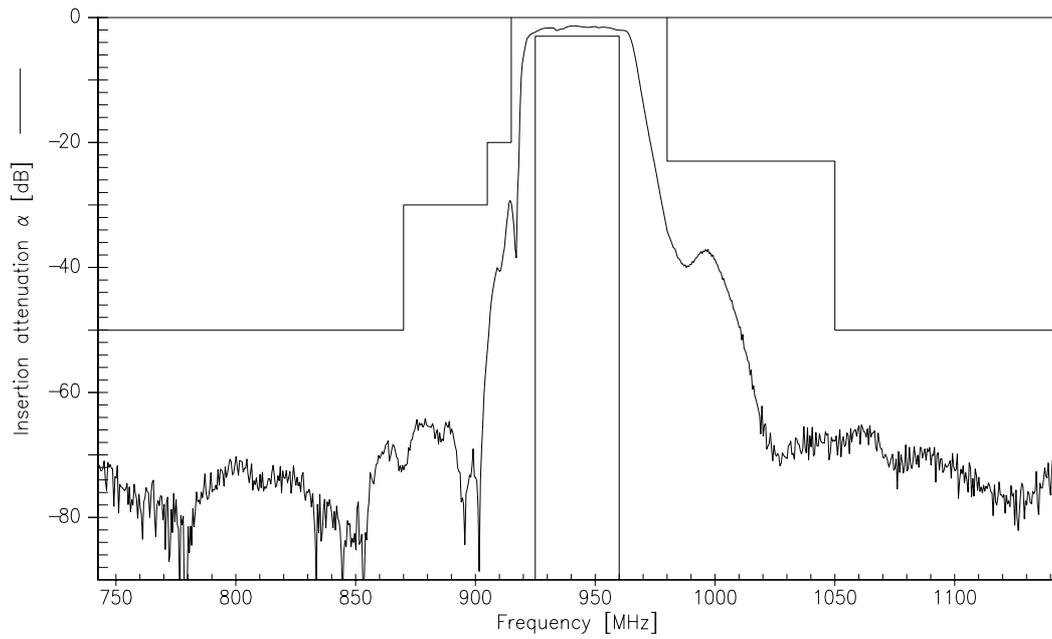
Operating temperature range:  $T = -10$  to  $+75$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 150 \Omega \parallel 100$  nH

		min.	typ.	max.	
<b>Center frequency</b>	$f_C$	—	942,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$	—	2,5	3,0 <sup>1)</sup>	dB
	925,0 ... 960,0 MHz				
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	—	1,2	1,7	dB
	925,0 ... 960,0 MHz				
<b>Input VSWR</b>		—	1,8	2,2	
	925,0 ... 960,0 MHz				
<b>Output VSWR</b>		—	1,8	2,2	
	925,0 ... 960,0 MHz				
<b>Output phase balance</b> $\phi(S_{31}) - \phi(S_{21})$		-10	—	10	degree
	925,0 ... 960,0 MHz				
<b>Output amplitude balance</b> $( S_{31}/S_{21} )$		-2	—	2	dB
	925,0 ... 960,0 MHz				
<b>Diff. to common mode suppression</b>	$S_{sc12}$				
	925,0 ... 960,0 MHz	20	38	—	dB
	824,0 ... 995,0 MHz	20	29	—	dB
	1648,0 ... 1990,0 MHz	20	50	—	dB
	3296,0 ... 3980,0 MHz	20	31	—	dB
<b>Attenuation</b>	$\alpha$				
	0,0 ... 880,0 MHz	50	68	—	dB
	880,0 ... 905,0 MHz	30	52	—	dB
	905,0 ... 915,0 MHz	20	29	—	dB
	980,0 ... 1050,0 MHz	23	30	—	dB
	1050,0 ... 1850,0 MHz	50	55	—	dB
	1850,0 ... 1920,0 MHz	50	71	—	dB
	1920,0 ... 2880,0 MHz	50	60	—	dB
	2880,0 ... 4000,0 MHz	40	59	—	dB
	4000,0 ... 6000,0 MHz	40	60	—	dB

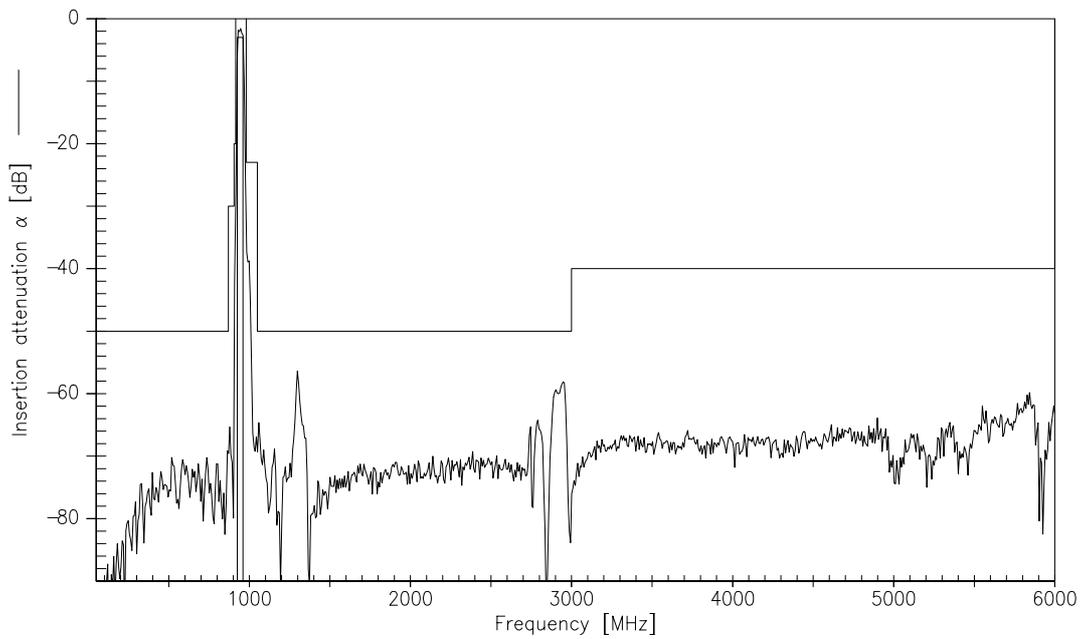
<sup>1)</sup> 5,0 dB for  $T = -30$  °C to  $+85$  °C



Transfer function (measurement)



Transfer function (wideband measurement)





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