



SAW Components

Data Sheet B7735





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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

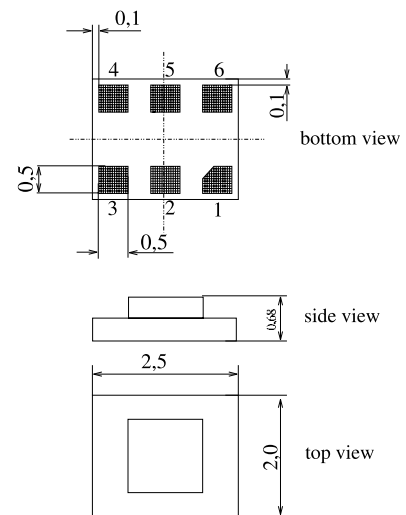
Terminals

- Ni, gold-plated

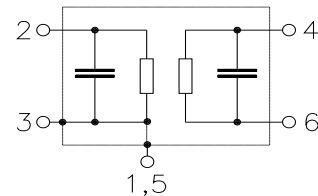
Pin configuration

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

Chip sized SAW package DCS6K



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, GSM1800 and GSM1900 Tx bands	P_{IN}	15	dBm	



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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.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{\max}				
925,0 ... 960,0 MHz		—	2,3	2,7	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	0,9	1,4	dB
Input VSWR					
925,0 ... 960,0 MHz		—	1,8	2,2	
Output VSWR					
925,0 ... 960,0 MHz		—	1,8	2,2	
Output phase balance $\phi(S_{31})-\phi(S_{21})$					
925,0 ... 960,0 MHz		-10	—	10	degree
Output amplitude balance (S_{31}/S_{21})					
925,0 ... 960,0 MHz		-2	—	2	dB
Diff. to common mode suppression	S_{sc12}				
925,0 ... 960,0 MHz		20	26	—	dB
824,0 ... 995,0 MHz		20	26	—	dB
1648,0 ... 1990,0 MHz		20	50	—	dB
3296,0 ... 3980,0 MHz		20	29	—	dB
Attenuation	α				
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	34	—	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



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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.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	2,5	3,0 ¹⁾	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,2	1,7	dB
Input VSWR					
925,0 ... 960,0 MHz		—	1,8	2,2	
Output VSWR					
925,0 ... 960,0 MHz		—	1,8	2,2	
Output phase balance $\phi(S_{31}) - \phi(S_{21})$					
925,0 ... 960,0 MHz		-10	—	10	degree
Output amplitude balance (S_{31}/S_{21})					
925,0 ... 960,0 MHz		-2	—	2	dB
Diff. to common mode suppression	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
Attenuation	α				
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

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



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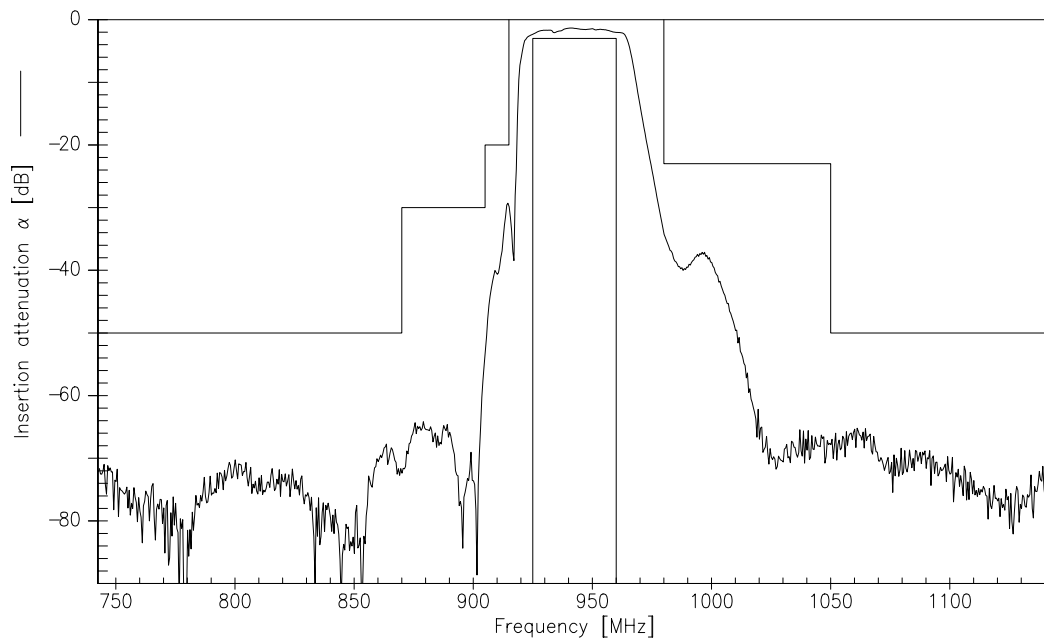
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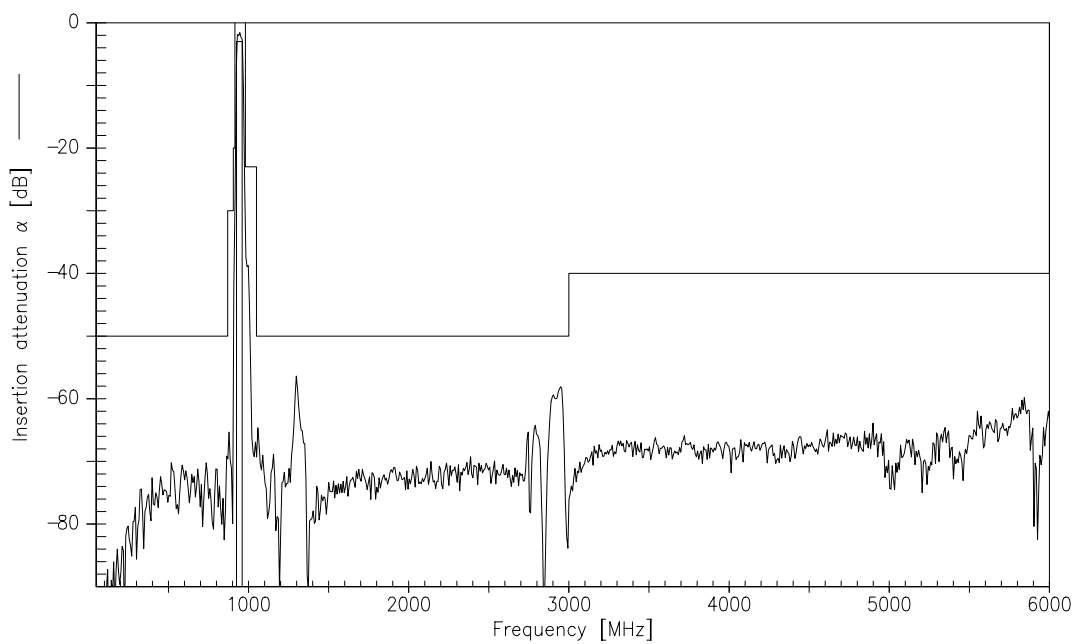
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Transfer function (measurement)



Transfer function (wideband measurement)





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