



# SAW Components

Data Sheet B7701

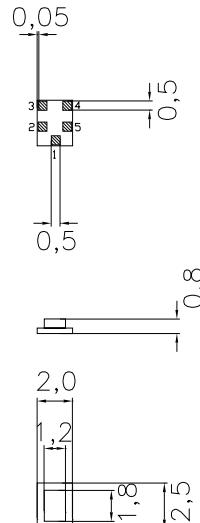
Data Sheet



**SAW Components**
**B7701**
**Low-Loss Filter for Mobile Communication**
**881,5 MHz**
**Data Sheet**

**Features**

- Low-loss RF filter for mobile telephone AMPS system, receive path
- Low amplitude ripple
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from  $50 \Omega$  to  $200 \Omega$
- Package for **Surface Mounted Technology (SMT)**

**Chip Sized SAW Package QCS5A**


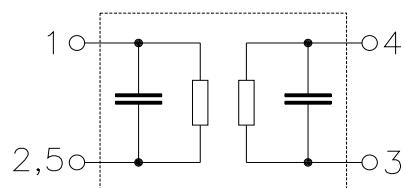
Dimensions in mm, approx. weight 0,015g

**Terminals**

- Ni, gold-plated

**Pin configuration**

1	Input
3, 4	Balanced output
2, 5	Ground, to be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B7701	B39881-B7701-B610	C61157-A7-A71	F61074-V8104-Z000

**Electrostatic Sensitive Device (ESD)**
**Maximum ratings**

Operable temperature range	$T$	$-30 / +85$	$^{\circ}\text{C}$	
Storage temperature range	$T_{\text{stg}}$	$-40 / +85$	$^{\circ}\text{C}$	
DC voltage	$V_{\text{DC}}$	5	V	
Input power max. 824...849 MHz	$P_{\text{IN}}$	18	dBm	peak power of GSM850 signal, duty cycle 1:4

**SAW Components****B7701****Low-Loss Filter for Mobile Communication****881,5 MHz****Data Sheet****Characteristics**

Operating temperature range:  $T = +25^\circ\text{C}$   
Terminating source impedance:  $Z_S = 50 \Omega$   
Terminating load impedance:  $Z_L = 200 \Omega$

			<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Center frequency</b>	$f_C$		—	881,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$		—	2,3	2,6	dB
869,0 ... 894,0 MHz						
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$		—	0,6	1,0	dB
869,0 ... 894,0 MHz						
<b>VSWR</b>			—	1,8	2,0	
869,0 ... 894,0 MHz						
<b>Output phase balance</b> ( $\phi(S_{31}) - \phi(S_{32}) + 180^\circ$ )						
869,0 ... 894,0 MHz			-10,0	0	10,0	degree
<b>Output amplitude balance</b> ( $ S_{31}/S_{32} $ )						
869,0 ... 894,0 MHz			-1,0	0	1,0	dB
<b>Attenuation</b>	$\alpha$					
0,0 ... 824,0 MHz			50,0	60,0	—	dB
824,0 ... 849,0 MHz			35,0	40,0	—	dB
914,0 ... 924,0 MHz			25,0	28,0	—	dB
924,0 ... 970,0 MHz			30,0	36,0	—	dB
970,0 ... 3000,0 MHz			50,0	70,0	—	dB
3000,0 ... 6000,0 MHz			45,0	60,0	—	dB
<b>Tx band suppression</b>	$\alpha$					
824,0 ... 849,0 MHz			35,0	40,0	—	dB

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			<b>min.</b>	<b>typ.</b>	<b>max.</b>	
<b>Center frequency</b>		$f_C$	—	881,5	—	MHz
<b>Maximum insertion attenuation</b>	869,0 ... 894,0	MHz	$\alpha_{\max}$	2,6	3,0	dB
<b>Amplitude ripple (p-p)</b>	869,0 ... 894,0	MHz	$\Delta\alpha$	1,0	1,4	dB
<b>VSWR</b>	869,0 ... 894,0	MHz	—	1,8	2,0	
<b>Output phase balance</b> ( $\phi(S_{31}) - \phi(S_{32}) + 180^\circ$ )	869,0 ... 894,0	MHz	-10,0	0	10,0	degree
<b>Output amplitude balance</b> ( $ S_{31}/S_{32} $ )	869,0 ... 894,0	MHz	-1,0	0	1,0	dB
<b>Attenuation</b>		$\alpha$				
	0,0 ... 824,0	MHz	50,0	60,0	—	dB
	824,0 ... 849,0	MHz	35,0	40,0	—	dB
	914,0 ... 924,0	MHz	22,0	26,0	—	dB
	924,0 ... 970,0	MHz	30,0	36,0	—	dB
	970,0 ... 3000,0	MHz	50,0	70,0	—	dB
	3000,0 ... 6000,0	MHz	45,0	60,0	—	dB
<b>Tx band suppression</b>	824,0 ... 849,0	MHz	$\alpha$	35,0	40,0	dB



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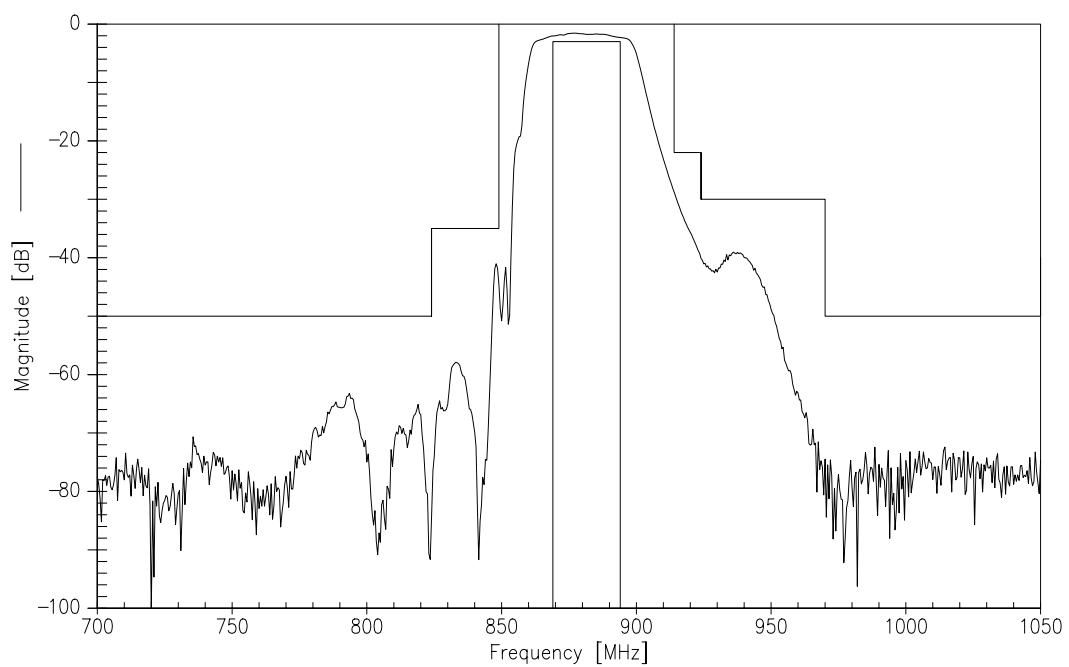
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881,5 MHz

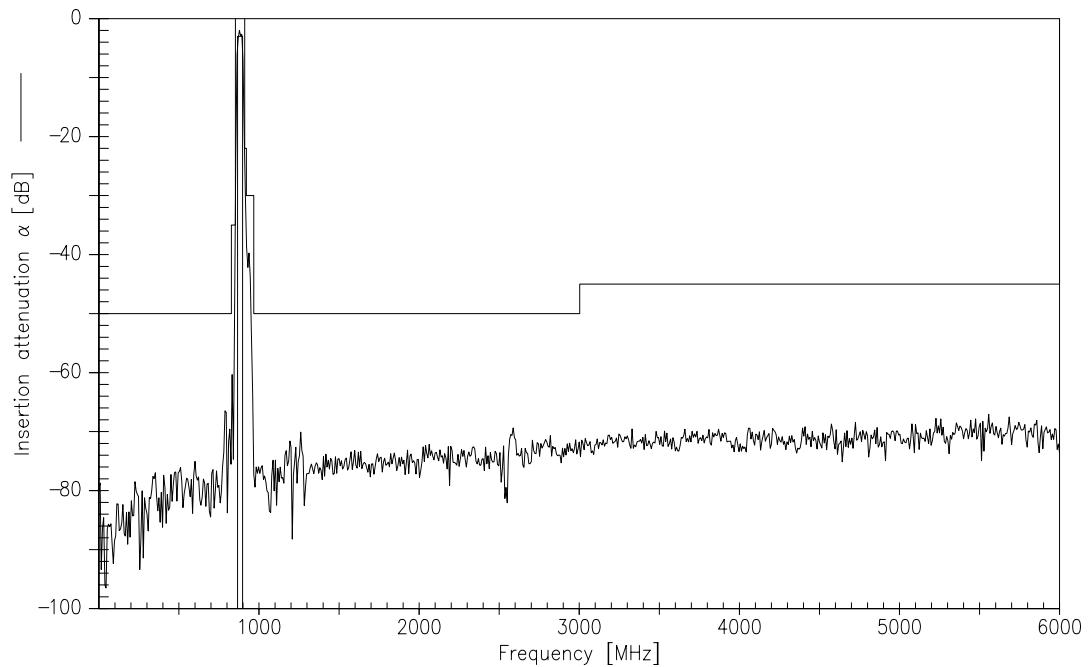
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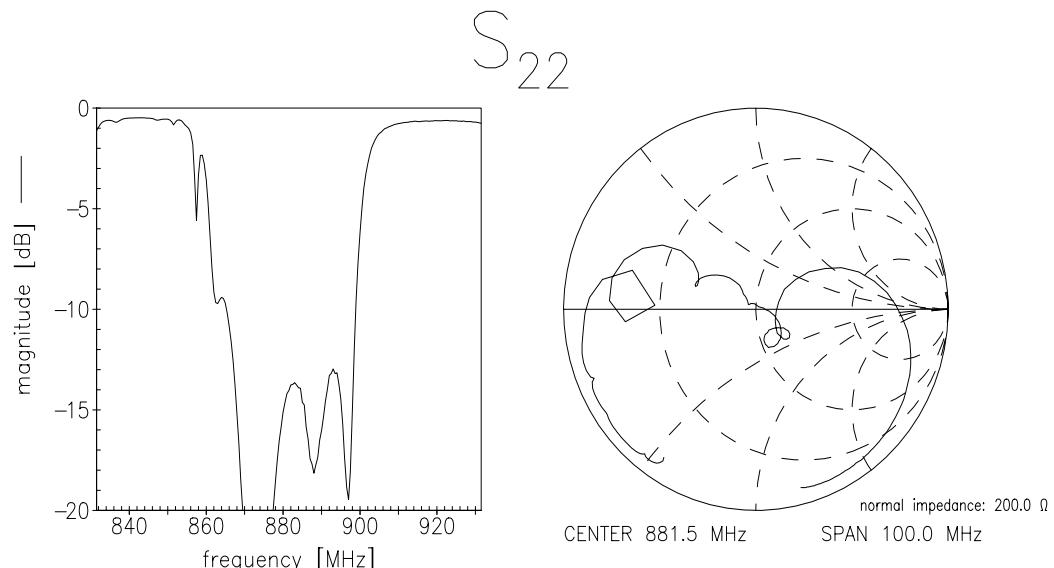
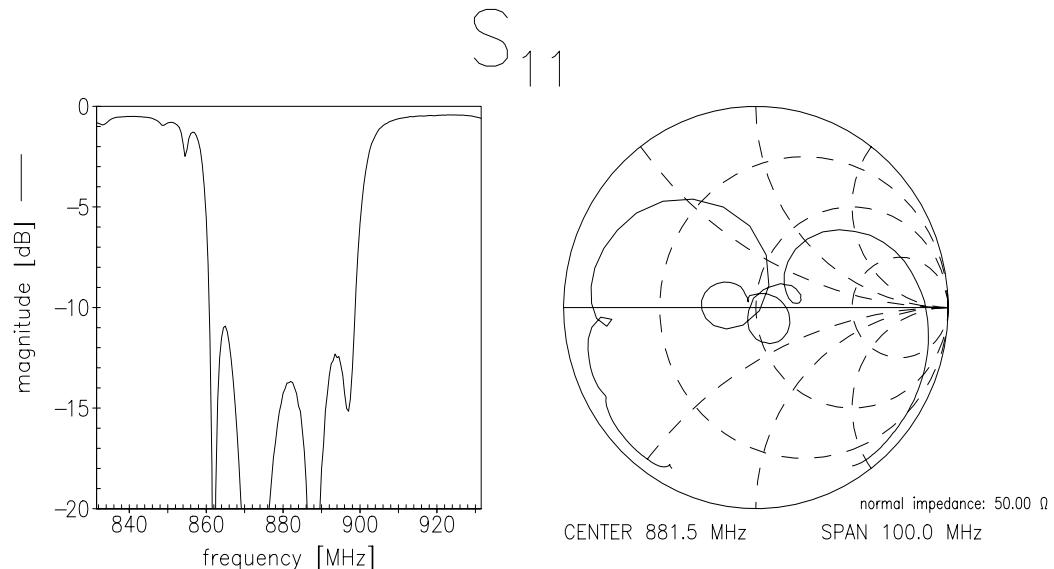


#### Transfer function (narrowband measurement)



#### Transfer function (wideband measurement)



**Reflection functions (measurement)**




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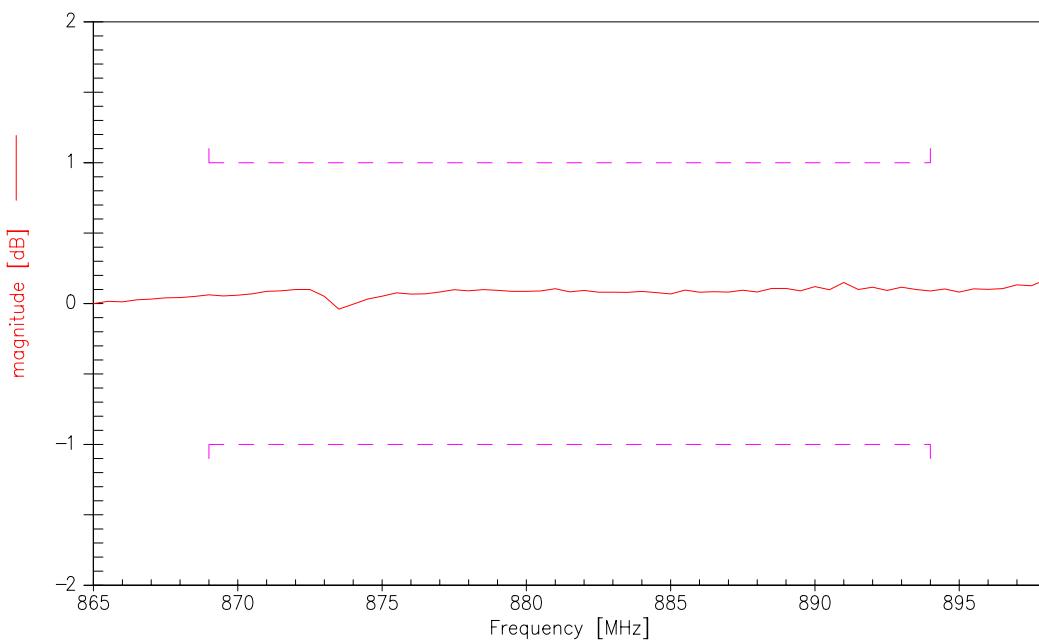
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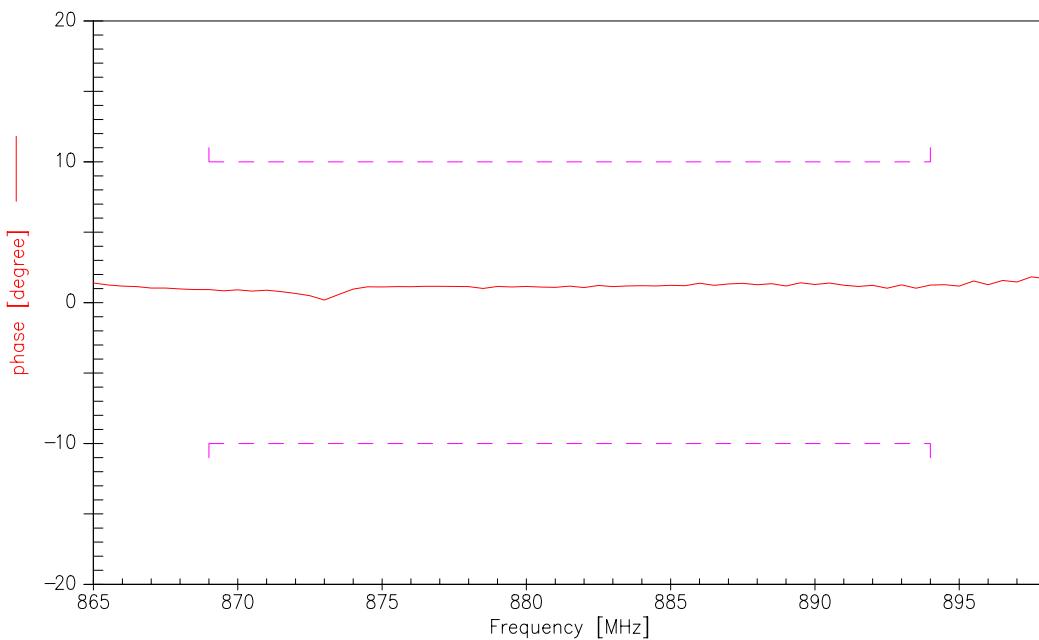
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#### Output amplitude balance ( $|S_{31}/S_{21}|$ ; measurement)



#### Output phase balance ( $\phi(S_{31}) - \phi(S_{21}) + 180^\circ$ ; measurement)





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