



# SAW Components

Data Sheet B7704, Pb-Free



Data Sheet

EPCOS



SAW Components

B7704

Low-Loss Filter for Mobile Communication

881,5 MHz

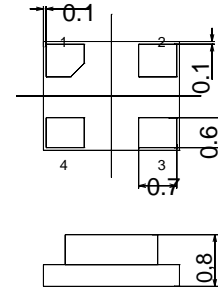
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Chip Sized SAW Package DCS4H

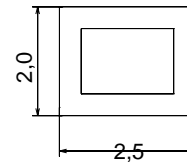
**Features**

- Low-loss RF filter for mobile telephone Cell systems, receive path
- Low amplitude ripple
- Usable passband 25 MHz
- Suitable for GPRS class 1 to 12
- Pb-Free
- Package for **Surface Mounted Technology (SMT)**



**Terminals**

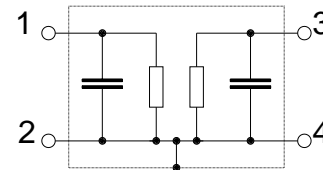
- Gold-plated Ni



Dimensions in mm, approx. weight 0,015 g

**Pin configuration**

- 1 Input
- 3 Output
- 2, 4 Ground



Type	Ordering code	Marking and Package according to	Packing according to
B7704	B39881-B7704-K710	C61157-A7-A136	F61074-V8189-Z000

Electrostatic Sensitive Device (ESD)

**Maximum ratings**

Operating temperature range	$T$	- 30/+ 85	°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	$V^*_{ESD}$	100	V	
Input Power at GSM850, GSM900, GSM1800 and GSM1900 Tx bands	$P_{IN}$	15	dBm	

\*- acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses



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**Characteristics**

Operating temperature range:  $T = -20 \text{ to } +80 \text{ }^\circ\text{C}$   
 Terminating source impedance:  $Z_S = 50 \text{ } \Omega$   
 Terminating load impedance:  $Z_L = 50 \text{ } \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_C$		—	881,5	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$	869,0 ... 894,0 MHz	—	2,4	2,6	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$	869,0 ... 894,0 MHz	—	0,8	1,0	dB
<b>Return loss</b>		869,0 ... 894,0 MHz	—	12,0	10,0	dB
<b>Attenuation</b>	$\alpha$					
		0,0 ... 780,0 MHz	45,0	62,0	—	dB
		780,0 ... 840,0 MHz	45,0	55,0	—	dB
		840,0 ... 851,0 MHz	38,0	40,0	—	dB
		914,0 ... 924,0 MHz	24,0	26,0	—	dB
		924,0 ... 950,0 MHz	35,0	40,0	—	dB
		950,0 ... 1000,0 MHz	35,0	50,0	—	dB
		1000,0 ... 2200,0 MHz	40,0	50,0	—	dB
		2200,0 ... 3000,0 MHz	35,0	42,0	—	dB
		3000,0 ... 4000,0 MHz	20,0	28,0	—	dB
		4000,0 ... 6000,0 MHz	10,0	18,0	—	dB
<b>Tx band suppression</b>	$\alpha$	824,0 ... 849,0 MHz	38,0	40,0	—	dB



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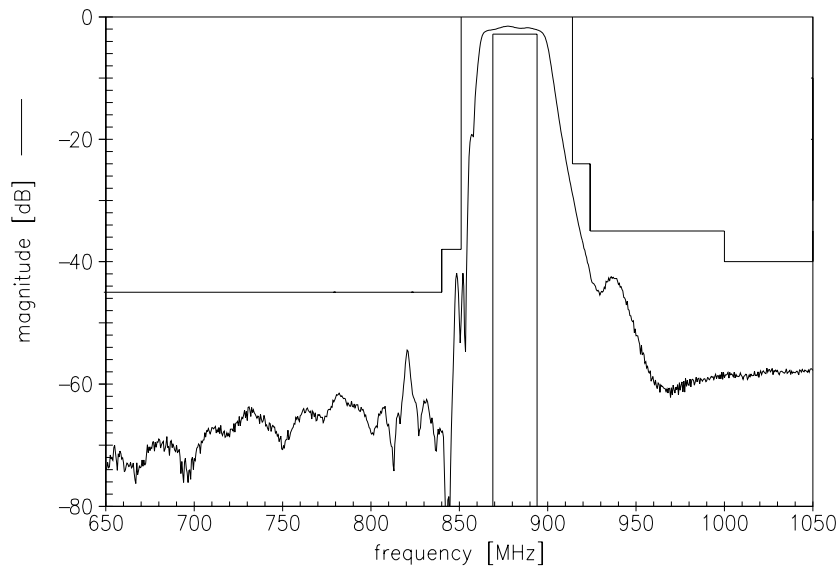
**Characteristics**

Operating temperature range:  $T = -30$  to  $+85$  °C  
 Terminating source impedance:  $Z_S = 50 \Omega$   
 Terminating load impedance:  $Z_L = 50 \Omega$

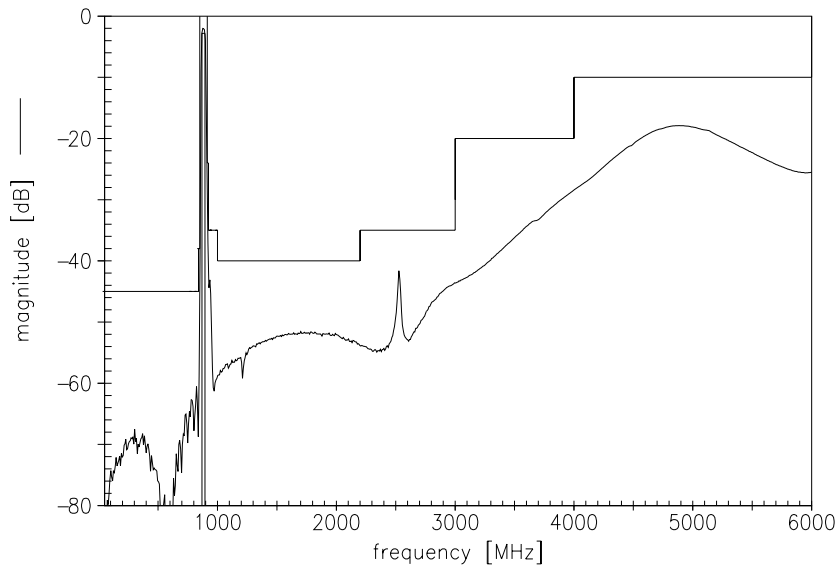
				min.	typ.	max.	
<b>Center frequency</b>		$f_C$		—	881,5	—	MHz
<b>Maximum insertion attenuation</b>	869,0 ... 894,0	MHz	$\alpha_{max}$	—	2,5	2,7	dB
<b>Amplitude ripple (p-p)</b>	869,0 ... 894,0	MHz	$\Delta\alpha$	—	0,9	1,1	dB
<b>Return loss</b>	869,0 ... 894,0	MHz		—	12,0	10,0	dB
<b>Attenuation</b>			$\alpha$				
	0,0 ... 780,0	MHz		45,0	62,0	—	dB
	780,0 ... 840,0	MHz		45,0	55,0	—	dB
	840,0 ... 851,0	MHz		38,0	40,0	—	dB
	914,0 ... 924,0	MHz		24,0	26,0	—	dB
	924,0 ... 950,0	MHz		35,0	40,0	—	dB
	950,0 ... 1000,0	MHz		35,0	50,0	—	dB
	1000,0 ... 2200,0	MHz		40,0	50,0	—	dB
	2200,0 ... 3000,0	MHz		35,0	42,0	—	dB
	3000,0 ... 4000,0	MHz		20,0	28,0	—	dB
	4000,0 ... 6000,0	MHz		10,0	18,0	—	dB
<b>Tx band suppression</b>	824,0 ... 849,0	MHz	$\alpha$	38,0	40,0	—	dB



Transfer function

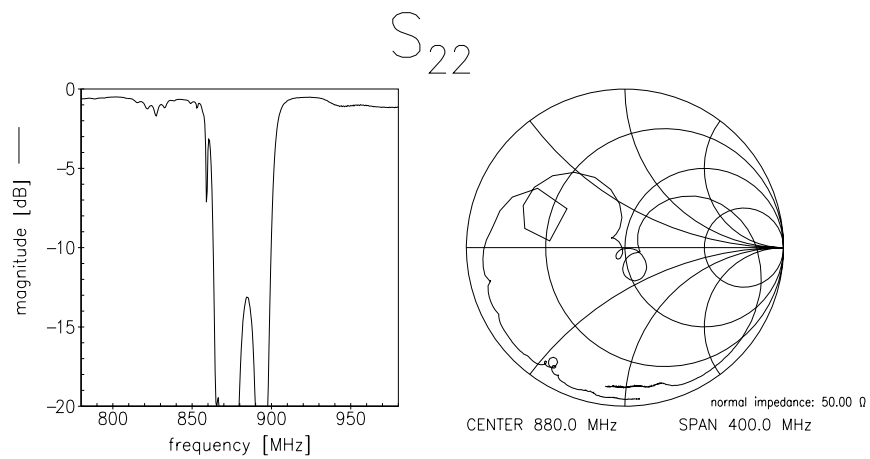
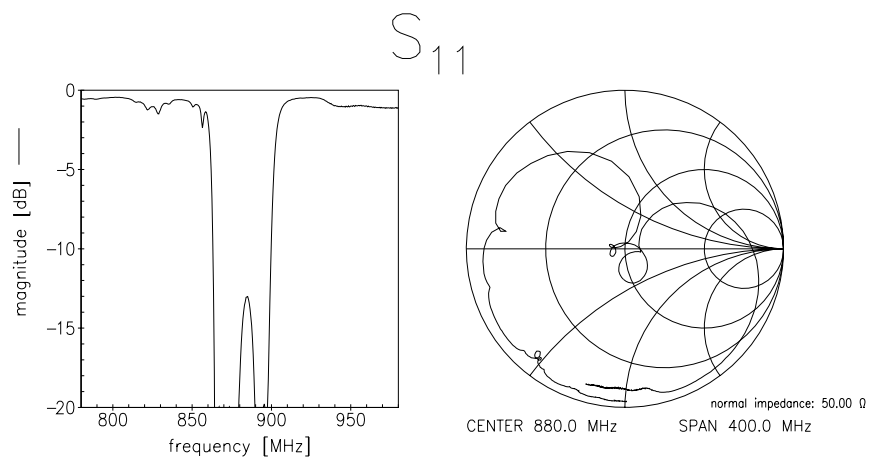


Transfer function (wideband)





Reflection functions





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