



SAW Components

Data Sheet B7711, Pb-Free

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a bright, circular highlight in the center of each, giving them a three-dimensional appearance. They are set against a dark, textured background that includes a faint, glowing globe and circuitry patterns, suggesting a high-tech or electronic theme.



SAW Components

B7711

Low-Loss Filter for Mobile Communication

1950,0 MHz

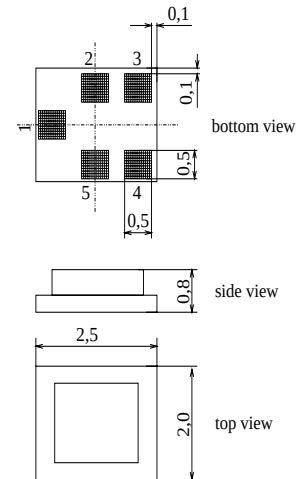
Data Sheet



Chip Sized SAW Package QCS5H

Features

- Low-loss RF filter for W-CDMA mobile telephone system, transmit path
- Low amplitude ripple
- Usable passband 60 MHz
- Balanced to unbalanced operation
- Impedance transformation from 200Ω to 50Ω
- Pb-Free
- Package for Surface Mounted Technology (SMT)



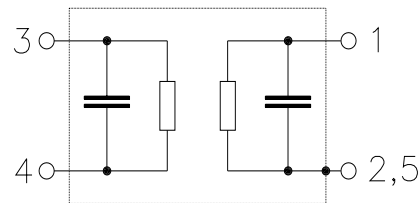
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,015 g

Pin configuration

- | | |
|------|--------------------|
| 1 | Output, unbalanced |
| 2, 5 | Output ground |
| 3, 4 | Input, balanced |
| 2, 5 | To be grounded |



Type	Ordering code	Marking and Package according to	Packing according to
B7711	B39202-B7711-K910	C61157-A7-A139	F61074-V8189-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 20 /+ 85	°C	
Storage temperature range	T_{stg}	- 40 /+ 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V^*_{ESD}	50*	V	
Source power	P_S	10	dBm	

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



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Characteristics

Operating temperature range: $T = +25\text{ °C}$
Terminating source impedance: $Z_S = 200\ \Omega$ (balanced) $\parallel$ 22 nH
Terminating load impedance: $Z_L = 50\ \Omega \parallel 6,8\text{ nH}$

		min.	typ.	max.	
Center frequency	f_C	—	1950,0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	2,3	2,7	dB
1920,0 ... 1980,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,4	0,7	dB
1920,0 ... 1980,0 MHz					
Amplitude ripple per 5MHz channel (p-p)	$\Delta\alpha_{5\text{MHz}}$	—	0,2	0,3	dB
1920,0 ... 1980,0 MHz					
Input VSWR		—	1,8	2,0	
1920,0 ... 1980,0 MHz					
Output VSWR		—	1,8	2,0	
1920,0 ... 1980,0 MHz					
Input amplitude balance (S_{31} / S_{21})		-1,0	0	1,4	dB
1920,0 ... 1980,0 MHz					
Input phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	0	10	°
1920,0 ... 1980,0 MHz					
Attenuation	α				
50,0 ... 1350,0 MHz		40	45	—	dB
1350,0 ... 1800,0 MHz		29	31	—	dB
1800,0 ... 1880,0 MHz		20	22	—	dB
2110,0 ... 2170,0 MHz		23	25	—	dB
2170,0 ... 2300,0 MHz		30	34	—	dB
2300,0 ... 3200,0 MHz		35	40	—	dB
3200,0 ... 5000,0 MHz		45	55	—	dB
5000,0 ... 6000,0 MHz		40	45	—	dB



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Characteristics

Operating temperature range: $T = -20$ to $+85$ °C
Terminating source impedance: $Z_S = 200 \Omega$ (balanced) $\parallel 22$ nH
Terminating load impedance: $Z_L = 50 \Omega \parallel 6,8$ nH

		min.	typ.	max.	
Center frequency	f_C	—	1950,0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	2,6	3,0	dB
1920,0 ... 1980,0 MHz		—	2,6	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,4	1,0	dB
1920,0 ... 1980,0 MHz		—	0,4	1,0	dB
Amplitude ripple per 5MHz channel (p-p)	$\Delta\alpha_{5\text{MHz}}$	—	0,3	0,5	dB
1920,0 ... 1980,0 MHz		—	0,3	0,5	dB
Input VSWR		—	1,8	2,1	
1920,0 ... 1980,0 MHz		—	1,8	2,1	
Output VSWR		—	1,8	2,1	
1920,0 ... 1980,0 MHz		—	1,8	2,1	
Input amplitude balance (S_{31} / S_{21})		-1,0	0	1,4	dB
1920,0 ... 1980,0 MHz		-1,0	0	1,4	dB
Input phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	0	10	°
1920,0 ... 1980,0 MHz		-10	0	10	°
Attenuation	α				
50,0 ... 1350,0 MHz		40	45	—	dB
1350,0 ... 1800,0 MHz		29	31	—	dB
1800,0 ... 1880,0 MHz		20	22	—	dB
2110,0 ... 2170,0 MHz		23	25	—	dB
2170,0 ... 2300,0 MHz		30	33	—	dB
2300,0 ... 3200,0 MHz		35	40	—	dB
3200,0 ... 5000,0 MHz		45	55	—	dB
5000,0 ... 6000,0 MHz		40	45	—	dB



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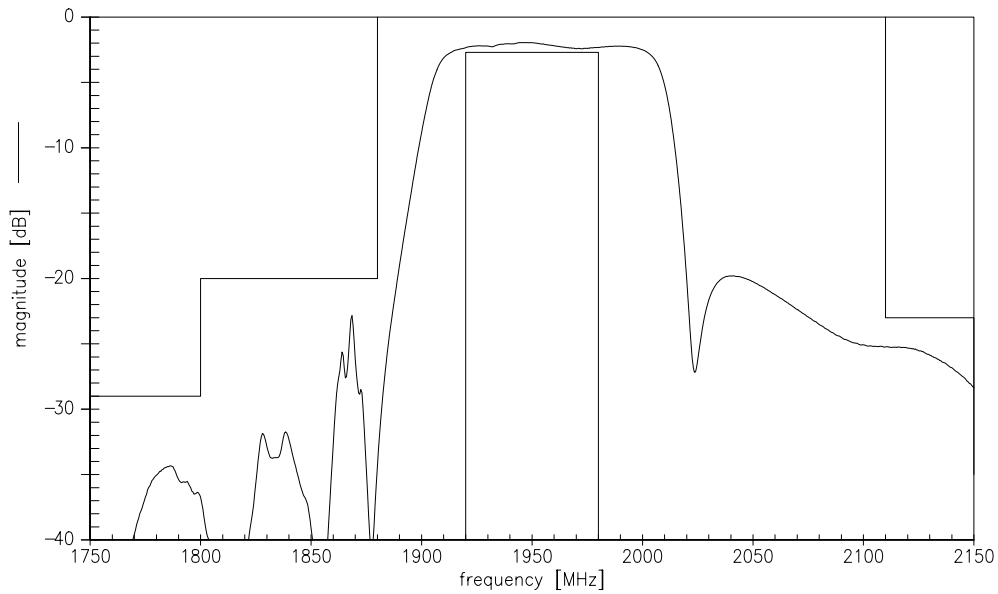
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1950,0 MHz

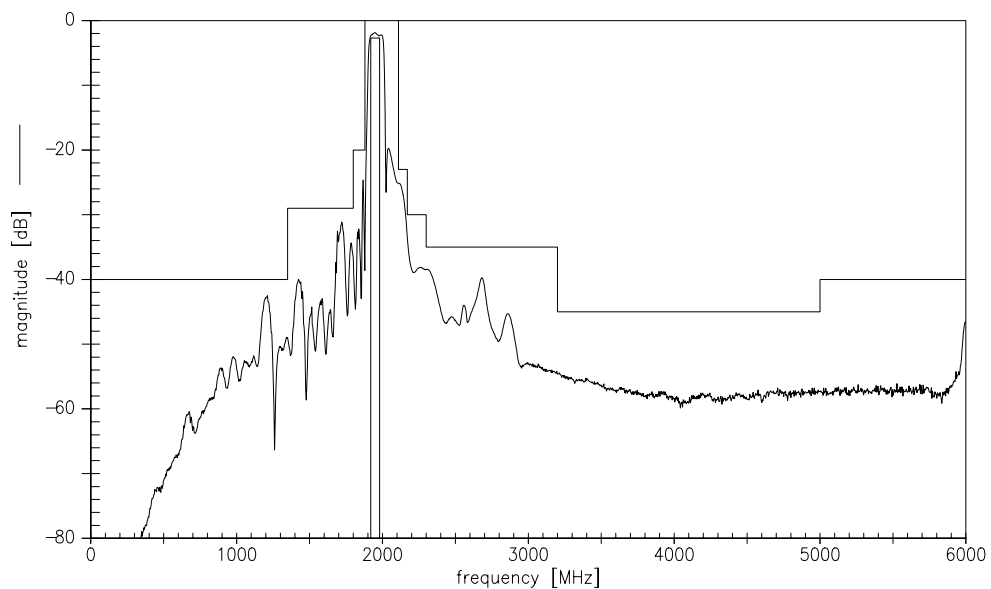
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Transfer function:



Transfer function (wide band):





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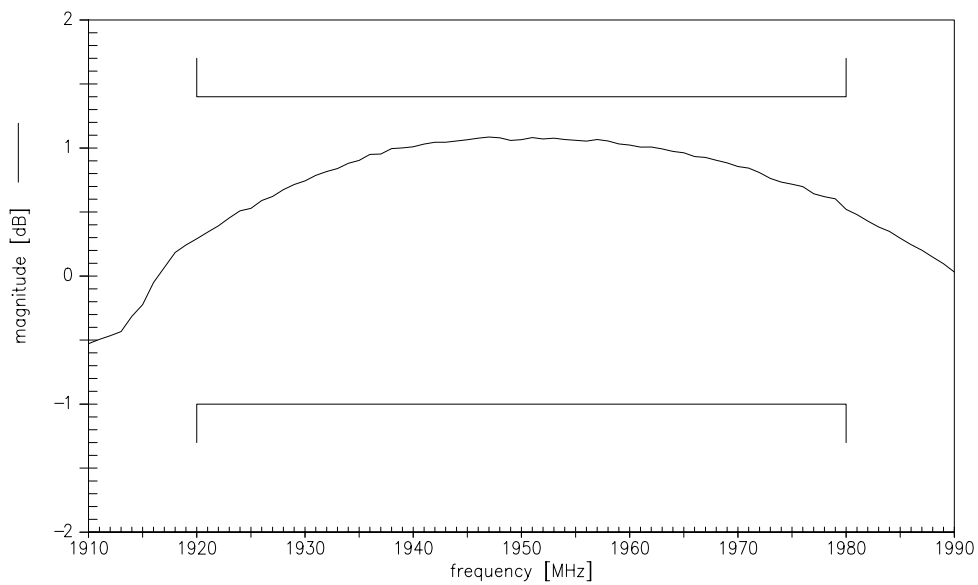
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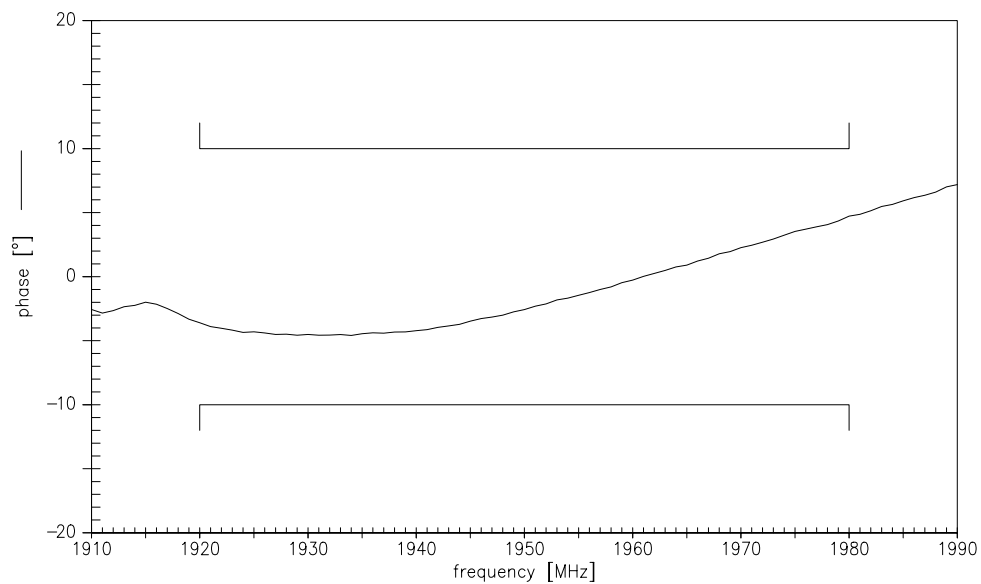
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Input amplitude balance ($|S_{31}/S_{21}|$):



Input phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$):





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