



SAW Components

Data Sheet B7711, Pb-Free





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B7711

Low-Loss Filter for Mobile Communication

1950,0 MHz

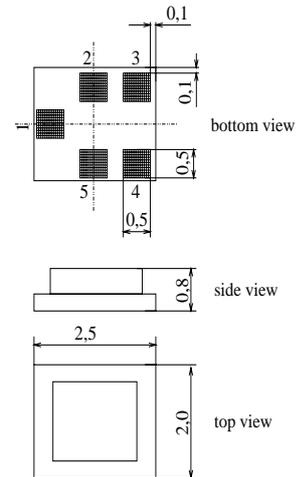
Data Sheet



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)**



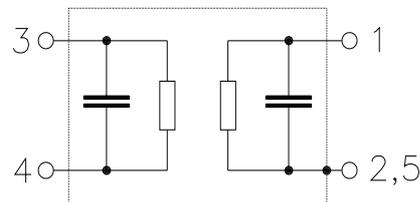
Terminals

- 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) || 22 nH
 Terminating load impedance: $Z_L = 50\ \Omega$ || 6,8 nH

		min.	typ.	max.	
Center frequency	f_C	—	1950,0	—	MHz
Maximum insertion attenuation	α_{\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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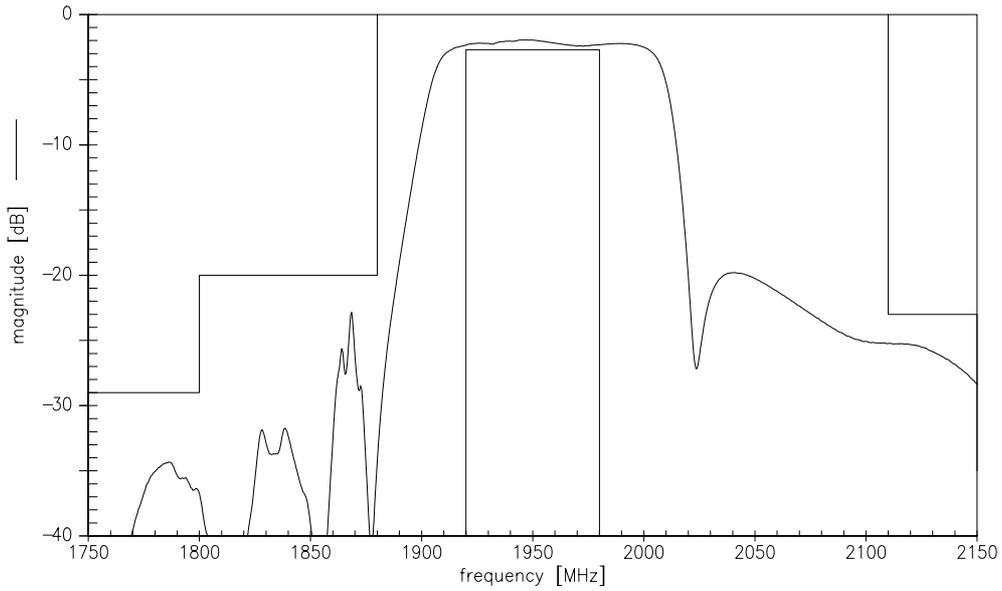
Characteristics

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

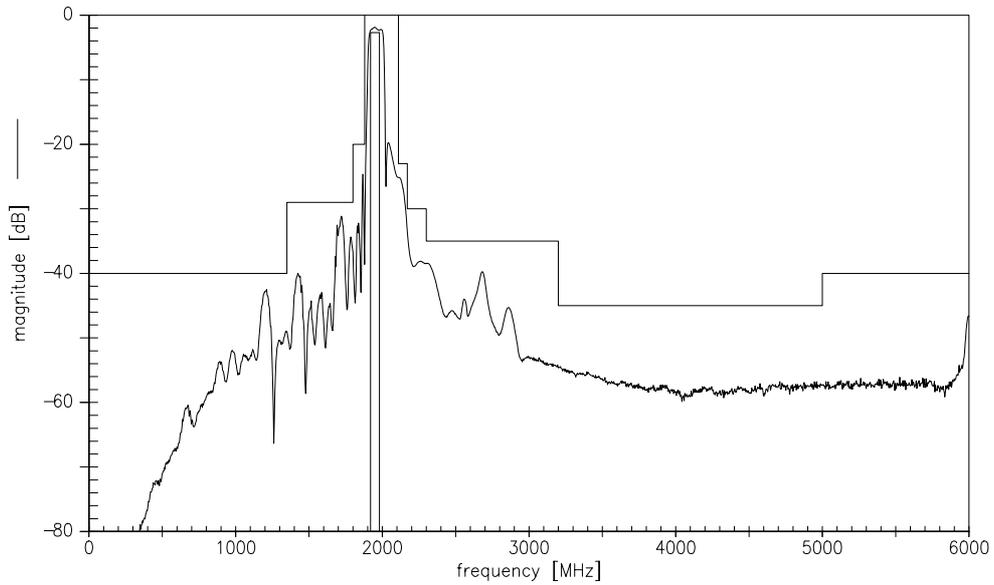
		min.	typ.	max.	
Center frequency	f_C	—	1950,0	—	MHz
Maximum insertion attenuation	α_{max}				
	1920,0 ... 1980,0 MHz	—	2,6	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	1920,0 ... 1980,0 MHz	—	0,4	1,0	dB
Amplitude ripple per 5MHz channel (p-p)	$\Delta\alpha_{5MHz}$				
	1920,0 ... 1980,0 MHz	—	0,3	0,5	dB
Input VSWR					
	1920,0 ... 1980,0 MHz	—	1,8	2,1	
Output VSWR					
	1920,0 ... 1980,0 MHz	—	1,8	2,1	
Input amplitude balance (S_{31}/S_{21})					
	1920,0 ... 1980,0 MHz	-1,0	0	1,4	dB
Input phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)					
	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



Transfer function:

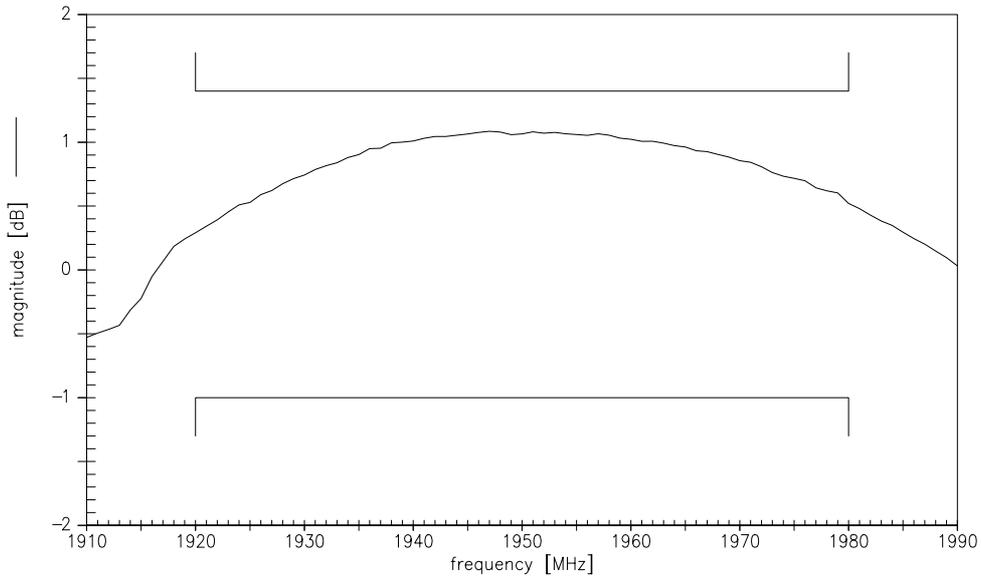


Transfer function (wide band):

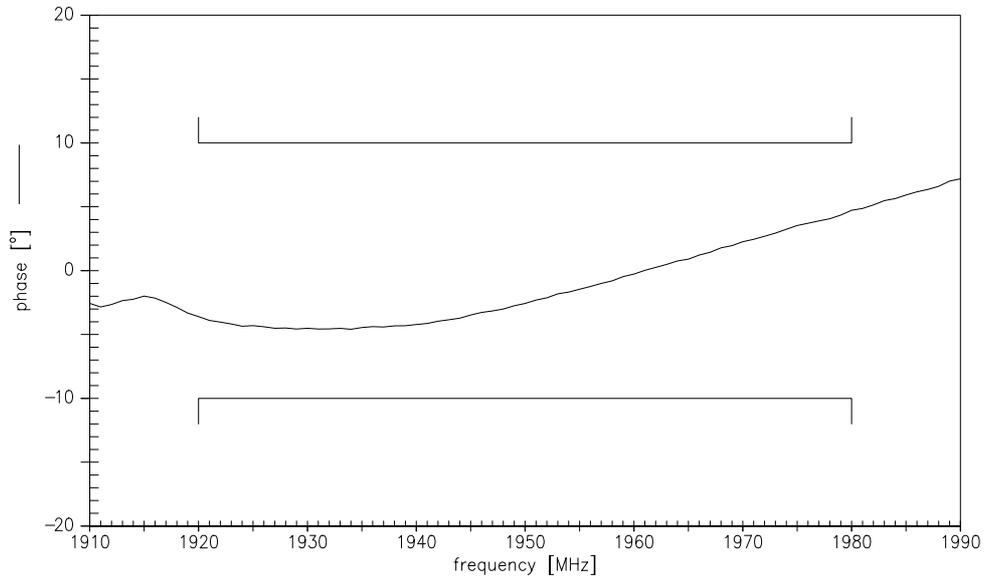




Input amplitude balance (S_{31}/S_{21}):



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





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