



SAW Components

Data Sheet B7825





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Low-Loss Filter for Mobile Communication

1960,0 MHz

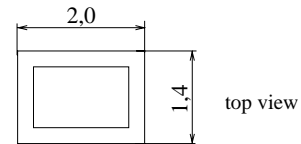
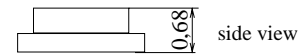
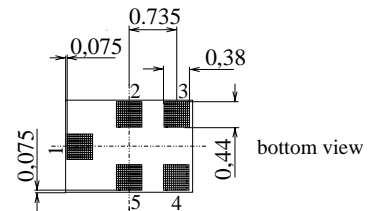
Data Sheet



Chip sized SAW package **QCS5C**

Features

- Low-loss RF filter for mobile telephone PCS systems, receive path
- Low amplitude ripple
- Usable passband 60 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Suitable for GPRS class 1 to 12
- Package for **Surface Mounted Technology (SMT)**



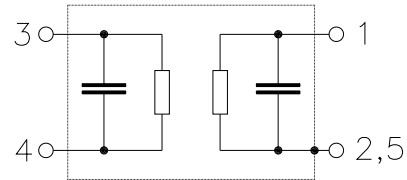
Terminals

- Gold-plated Ni

Dimensions in mm, approx. weight 0,007 g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B7825	B39202-B7825-C710	C61157-A7-A111	F61074-V8151-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operating temperature range	T	- 30/+ 85	°C	human body model
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	250	V	
Input power at				peak power of GSM signal, duty cycle 4:8
GSM850, GSM900	P_{IN}	15	dBm	
GSM1800, GSM1900	P_{IN}	12	dBm	
Tx bands				



Data Sheet



Characteristics

Operating temperature range: $T = 25^{\circ}\text{C} \pm 2^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 150 \Omega$ (balanced) || 18 nH

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{\max}	—	1,9	2,7	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,5	1,5	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	1,6	2,2	
1930,0 ... 1990,0 MHz					
Output VSWR		—	1,6	2,2	
1930,0 ... 1990,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-10	-7 / +7	10	degree
1930,0 ... 1990,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,5	-0,9 / +0,9	1,5	dB
1930,0 ... 1990,0 MHz					
Attenuation	α				
10,0 ... 1000,0 MHz		45	59	—	dB
1000,0 ... 1830,0 MHz		25	33	—	dB
1830,0 ... 1910,0 MHz		15	18	—	dB
2010,0 ... 2070,0 MHz		14	17	—	dB
2070,0 ... 2120,0 MHz		24	30	—	dB
2120,0 ... 3000,0 MHz		28	31	—	dB
3000,0 ... 6000,0 MHz		40	53	—	dB



Data Sheet



Characteristics

Operating temperature range: $T = -20$ to $+85$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 150 \Omega$ (balanced) || 18 nH

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}	—	2,2	2,9	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,8	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	1,6	2,2	
1930,0 ... 1990,0 MHz					
Output VSWR		—	1,6	2,2	
1930,0 ... 1990,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	-7 / +7	10	degree
1930,0 ... 1990,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,5	-0,9 / +1,3	1,5	dB
1930,0 ... 1990,0 MHz					
Attenuation	α				
10,0 ... 1000,0 MHz		45	59	—	dB
1000,0 ... 1830,0 MHz		25	33	—	dB
1830,0 ... 1910,0 MHz		8	14	—	dB
2010,0 ... 2070,0 MHz		8	14	—	dB
2070,0 ... 2120,0 MHz		24	30	—	dB
2120,0 ... 3000,0 MHz		28	31	—	dB
3000,0 ... 6000,0 MHz		40	53	—	dB



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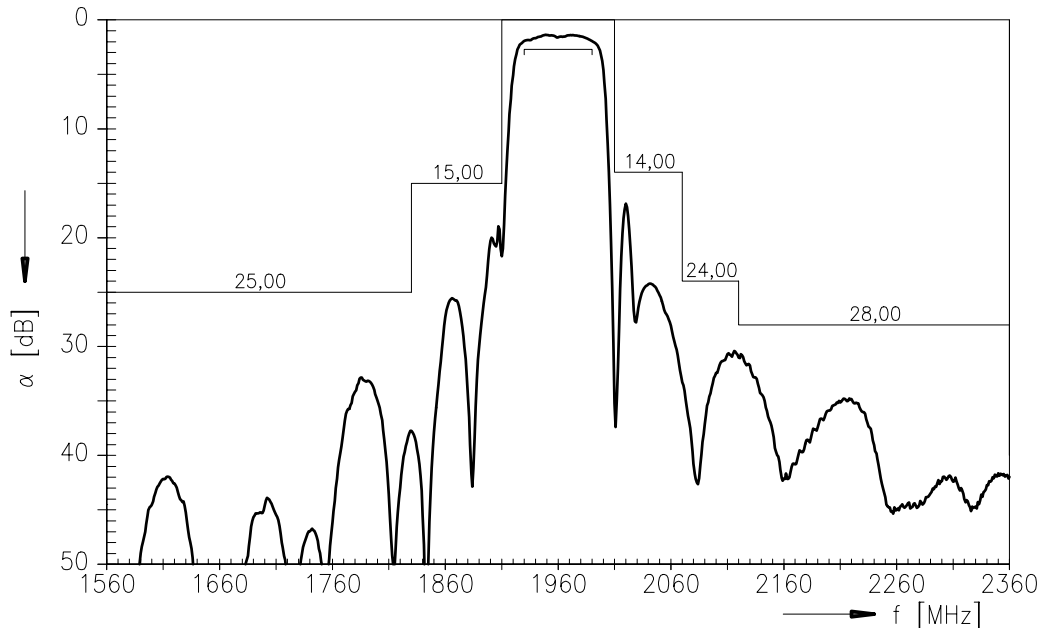
Characteristics

Operating temperature range: $T = -30$ to $+85$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 150 \Omega$ (balanced) || 18 nH

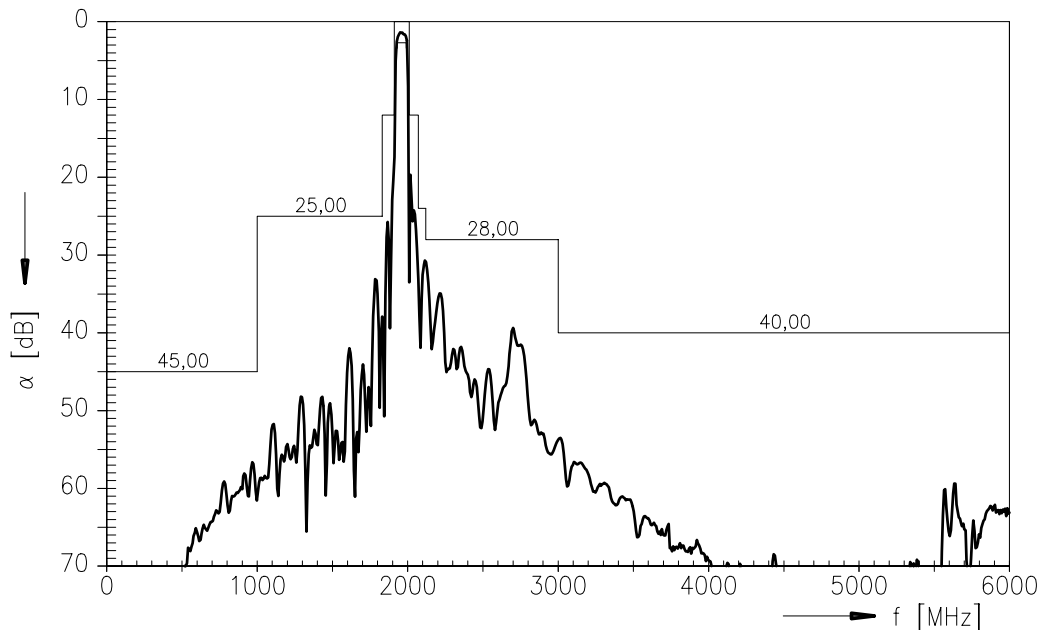
		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}	—	2,2	2,9	dB
1930,0 ... 1990,0 MHz					
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1930,0 ... 1990,0 MHz					
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1930,0 ... 1990,0 MHz					
Output VSWR		—	1,6	2,2	
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1930,0 ... 1990,0 MHz					
Attenuation	α				
10,0 ... 1000,0 MHz		45	59	—	dB
1000,0 ... 1830,0 MHz		25	33	—	dB
1830,0 ... 1910,0 MHz		8	14	—	dB
2010,0 ... 2070,0 MHz		7	13	—	dB
2070,0 ... 2120,0 MHz		24	30	—	dB
2120,0 ... 3000,0 MHz		28	31	—	dB
3000,0 ... 6000,0 MHz		40	53	—	dB



Transfer function (specification for $T=25\text{ }^\circ\text{C}$)



Transfer function (wide band):





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