



SAW Components

Data Sheet B7825

Data Sheet

An abstract graphic with a dark, textured background. In the foreground, the word "EPCOS" is rendered in large, glowing, 3D letters that appear to be floating or emerging from the background. Behind the letters, there is a faint, stylized globe showing the outlines of continents. A large, stylized, glowing wave or ribbon-like shape curves across the background, partially obscuring the globe and the letters.



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Low-Loss Filter for Mobile Communication

1960,0 MHz

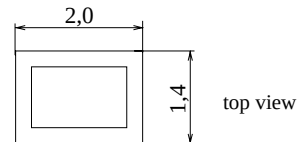
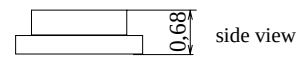
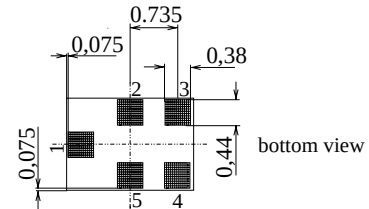
Data Sheet



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)**



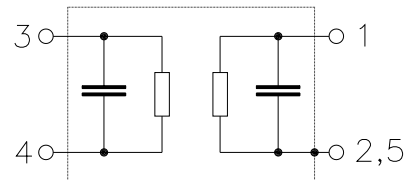
Terminals

- 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	$^{\circ}\text{C}$	human body model
Storage temperature range	T_{stg}	- 40/+ 85	$^{\circ}\text{C}$	
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				



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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) $\parallel 18\ \text{nH}$

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$	—	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



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Low-Loss Filter for Mobile Communication

1960,0 MHz

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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	$\alpha_{\max}$	—	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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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



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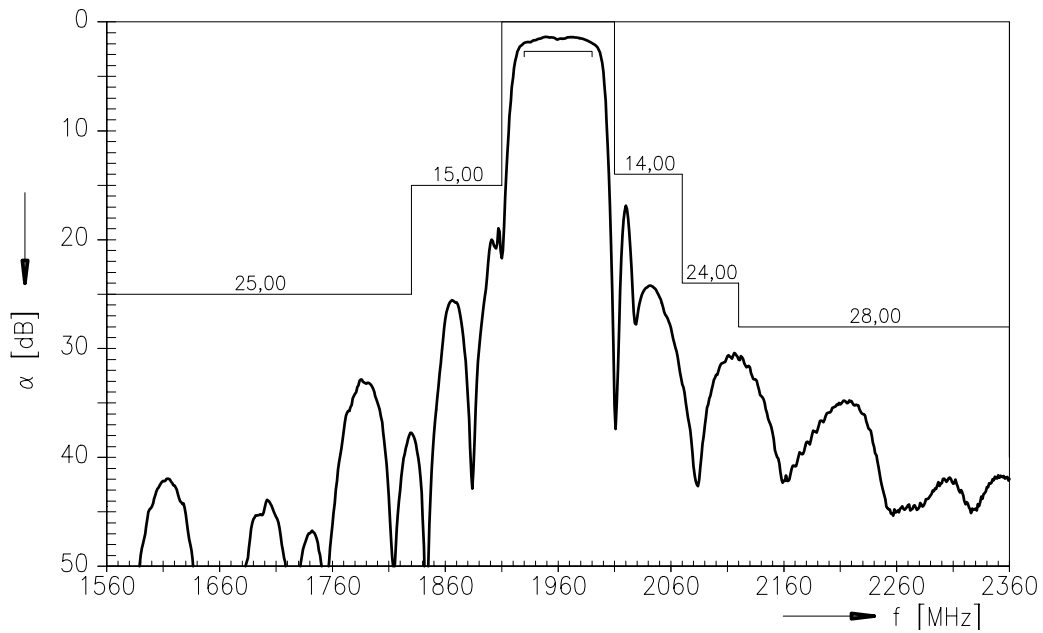
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1960,0 MHz

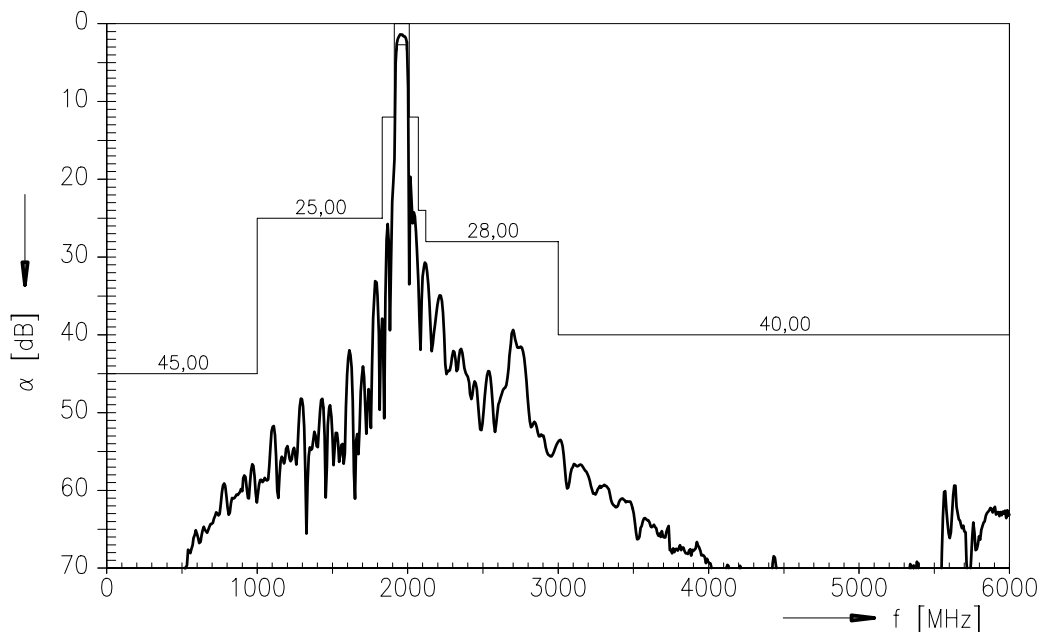
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Transfer function (specification for $T = 25^\circ\text{C}$)



Transfer function (wide band):





SAW Components	B7825
Low-Loss Filter for Mobile Communication	1960,0 MHz
Data Sheet	SMD

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