



SAW Components

Preliminary Data Sheet B7727





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Low-Loss Filter for Mobile Communication

1960,0 MHz

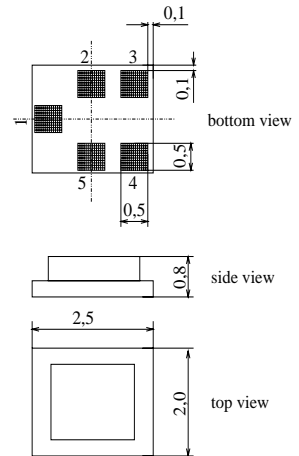
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Chip sized SAW package **QCS5A**

Features

- Low-loss RF filter for mobile telephone PCS systems, receive path
- Very high far out selectivity
- Symmetrical phase and amplitude balance
- Usable passband 60 MHz
- Suitable for GPRS class 1 to 12
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 200Ω
- Package for **Surface Mounted Technology (SMT)**



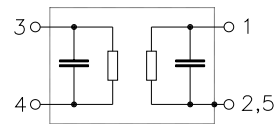
Terminals

- Gold-plated Ni

Dimensions in mm, approx. weight 0,015 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
B7727	B39202-B7727-B610	C61157-A7-A71	F61074-V8104-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operating temperature range	T	- 30/+ 85	°C	
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	50	V	
Input power at				
GSM850, GSM900	P_{IN}	15	dBm	peak power of GSM signal, duty cycle 4:8
GSM1800, GSM1900	P_{IN}	12	dBm	
Tx band				



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Characteristics

Operating temperature range: $T = +15$ to $+60$ °C
 Terminating source impedance: $Z_S = 50$ Ω
 Terminating load impedance: $Z_L = 200$ Ω (balanced) || 27 nH

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}	—	3,7	4,5	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,2	2,2	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	2,6	2,8	
1930,0 ... 1990,0 MHz					
Output VSWR		—	2,2	2,5	
1930,0 ... 1990,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	0	10	degree
1930,0 ... 1990,0 MHz					
Output amplitude balance (S_{31}/S_{21})		-1,0	0,3	1,0	dB
1930,0 ... 1990,0 MHz					
Attenuation	α				
0,0 ... 1000,0 MHz		45	75	—	dB
1000,0 ... 1830,0 MHz		40	63	—	dB
1830,0 ... 1900,0 MHz		12	20	—	dB
1900,0 ... 1910,0 MHz		9	15	—	dB
2010,0 ... 2020,0 MHz		7	13	—	dB
2020,0 ... 2070,0 MHz		12	20	—	dB
2070,0 ... 6000,0 MHz		25	40	—	dB



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Characteristics

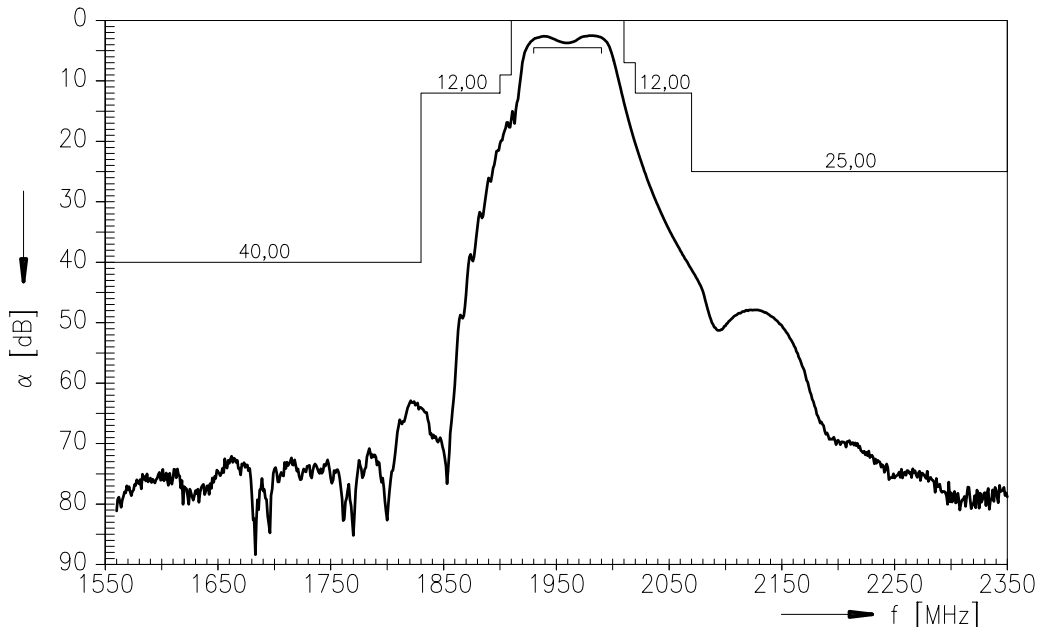
Operating temperature range: $T = -10$ to $+80$ °C
 Terminating source impedance: $Z_S = 50$ Ω
 Terminating load impedance: $Z_L = 200$ Ω (balanced) || 27 nH

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{max}				
	1930,0 ... 1990,0 MHz	—	3,7	4,5	dB
	1930,0 ... 1990,0 MHz	—	3,7*)	5,0*)	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	1930,0 ... 1990,0 MHz	—	1,2	2,2	dB
Input VSWR					
	1930,0 ... 1990,0 MHz	—	2,6	2,8	
Output VSWR					
	1930,0 ... 1990,0 MHz	—	2,2	2,5	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)					
	1930,0 ... 1990,0 MHz	-10	0	10	degree
Output amplitude balance (S_{31}/S_{21})					
	1930,0 ... 1990,0 MHz	-1,0	0,3	1,0	dB
Attenuation	α				
	0,0 ... 1000,0 MHz	45	75	—	dB
	1000,0 ... 1830,0 MHz	40	63	—	dB
	1830,0 ... 1900,0 MHz	12	19	—	dB
	1900,0 ... 1910,0 MHz	7	15	—	dB
	2010,0 ... 2020,0 MHz	6	12	—	dB
	2020,0 ... 2070,0 MHz	12	19	—	dB
	2070,0 ... 6000,0 MHz	25	40	—	dB

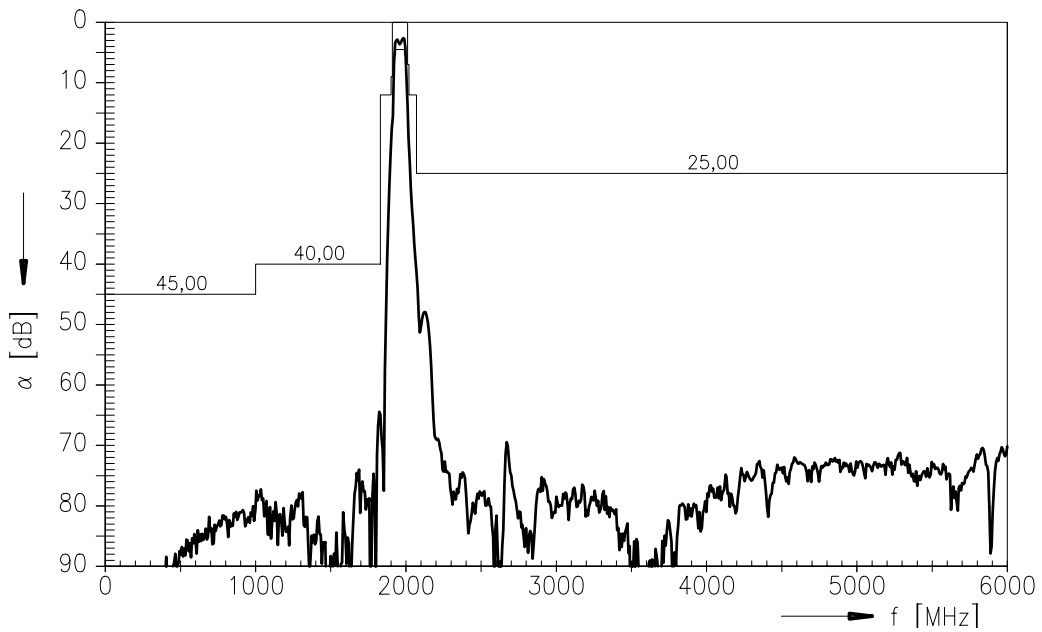
*)Valid in the temperature range -25 to +85° C.



Transfer function:



Transfer function (wide band):





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