



SAW Components

Data Sheet B7851





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Low-Loss Filter for Mobile Communication

1960,0 MHz

Data Sheet



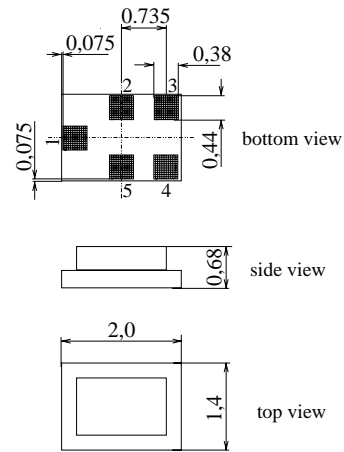
Chip sized SAW package QCS5E

Features

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

Terminals

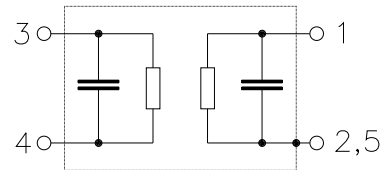
- Ni, gold-plated



Dimensions in mm, approx. weight 0,007 g

Pin configuration

- | | |
|-----|-------------------|
| 1 | Input, unbalanced |
| 3,4 | Output, balanced |
| 2,5 | Case ground |



Type	Ordering code	Marking and Package according to	Packing according to
B7851	B39202-B7851-K410	C61157-A7-A131	F61074-V8151-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40 / + 85	°C	machine model, 10 pulses
Storage temperature range	T_{stg}	- 40 / + 85	°C	
ESD voltage	V_{MM}	50	V	
DC voltage	V_{DC}	5	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				

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



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Characteristics

Operating Temperature Range: $T = 25^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\Omega$
 Terminating load impedance: $Z_L = 150\Omega \parallel 16\text{nH}$ (balanced)

			min.	typ.	max.	
Center frequency	f_C		—	1960,0	—	MHz
Maximum insertion attenuation	α_{\max}	1930,0 ... 1990,0 MHz	—	1,4	2,1	dB
Amplitude ripple (p-p)	$\Delta\alpha$	1930,0 ... 1990,0 MHz	—	0,5	1,0	dB
Input VSWR		1930,0 ... 1990,0 MHz	—	1,7	2,0	
Output VSWR		1930,0 ... 1990,0 MHz	—	1,6	2,0	
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		1930,0 ... 1990,0 MHz	-10	-2/3	10	degree
Output amplitude balance ($ S_{31}/S_{21} $)		1930,0 ... 1990,0 MHz	-1,0	-0,5/0,5	1,0	dB
Attenuation	α					
		0,0 ... 1510,0 MHz	40	43	—	dB
		1510,0 ... 1830,0 MHz	30	35	—	dB
		1830,0 ... 1850,0 MHz	26	30	—	dB
		1850,0 ... 1890,0 MHz	23	28	—	dB
		1890,0 ... 1910,0 MHz	13	18	—	dB
		2010,0 ... 2070,0 MHz	13	15	—	dB
		2070,0 ... 2400,0 MHz	23	26	—	dB
		2400,0 ... 2500,0 MHz	35	48	—	dB
		2500,0 ... 3860,0 MHz	28	35	—	dB
		3860,0 ... 3980,0 MHz	45	54	—	dB
		3980,0 ... 5790,0 MHz	28	48	—	dB
		5790,0 ... 6000,0 MHz	40	58	—	dB



Characteristics

Operating Temperature Range: $T = -20$ to $+75^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\Omega$
 Terminating load impedance: $Z_L = 150\Omega \parallel 16\text{nH}$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	1960,0	—	MHz
Maximum insertion attenuation	α_{\max}	—	1,6	2,3	dB
1930,0 ... 1990,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,6	1,3	dB
1930,0 ... 1990,0 MHz					
Input VSWR		—	1,7	2,0	
1930,0 ... 1990,0 MHz					
Output VSWR		—	1,6	2,0	
1930,0 ... 1990,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^{\circ}$)		-10	-3/5	10	degree
1930,0 ... 1990,0 MHz					
Output amplitude balance ($ S_{31}/S_{21} $)		-1,0	-0,6/0,5	1,0	dB
1930,0 ... 1990,0 MHz					
Attenuation	α				
0,0 ... 1510,0 MHz		40	43	—	dB
1510,0 ... 1830,0 MHz		30	35	—	dB
1830,0 ... 1850,0 MHz		26	30	—	dB
1850,0 ... 1890,0 MHz		23	28	—	dB
1890,0 ... 1910,0 MHz		12	18	—	dB
2010,0 ... 2070,0 MHz		13	15	—	dB
2070,0 ... 2400,0 MHz		22	25	—	dB
2400,0 ... 2500,0 MHz		35	48	—	dB
2500,0 ... 3860,0 MHz		28	35	—	dB
3860,0 ... 3980,0 MHz		45	54	—	dB
3980,0 ... 5790,0 MHz		28	48	—	dB
5790,0 ... 6000,0 MHz		40	58	—	dB



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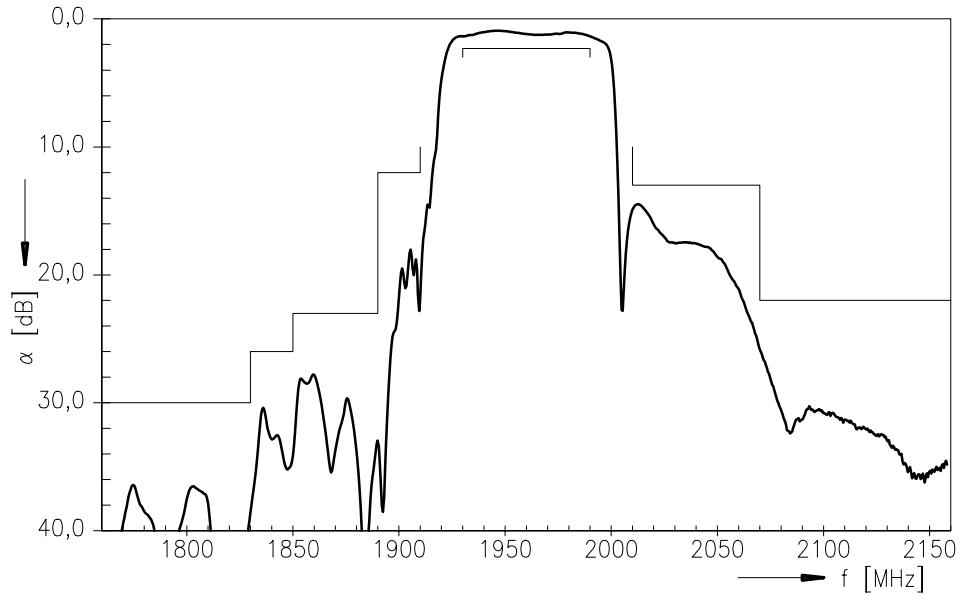
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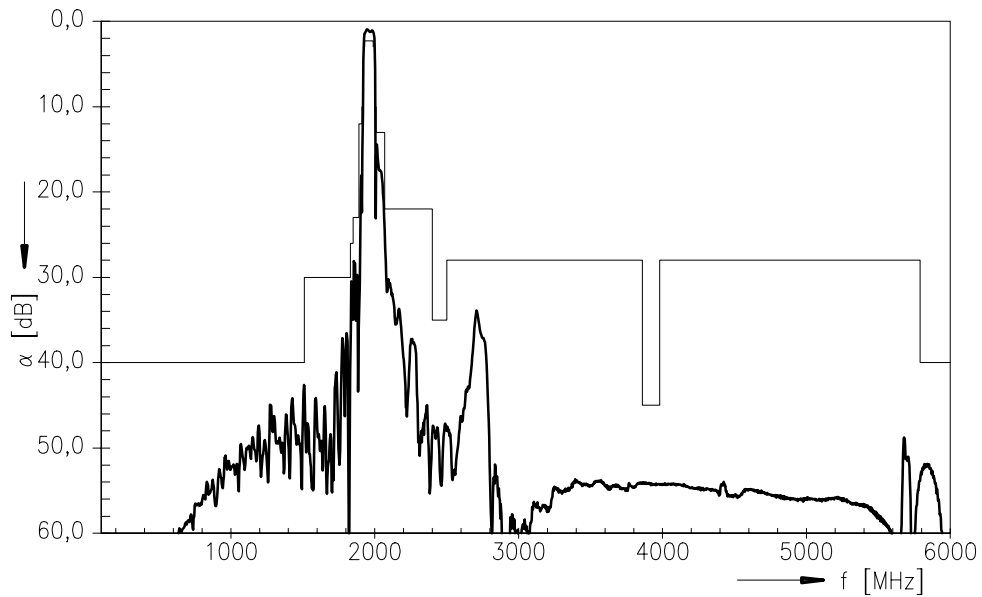
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Transfer function



Transfer function (wide band)





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