



SAW Components

Data Sheet B9004





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B9004

Low-Loss Filter for Mobile Communication

881,5 MHz

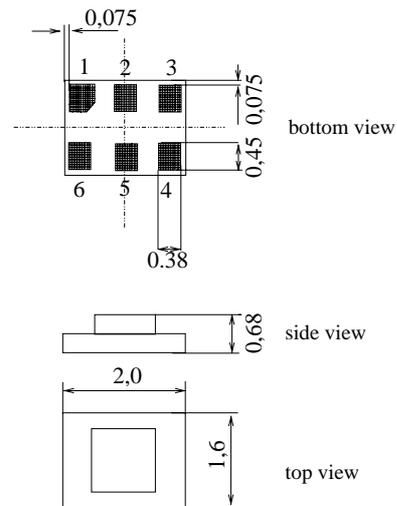
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Chip sized SAW package DCS6Q

Features

- Low-loss RF filter for mobile telephone GSM850/AMPS system, receive path
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Suitable for GPRS class 1 to12
- Ceramic package for **Surface Mounted Technology (SMT)**



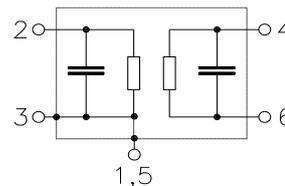
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,006g

Pin configuration

- 2 Unbalanced input
- 4, 6 Balanced output
- 1, 3, 5 To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B9004	B39881-B9004-E710	C61157-Z7-C208	F61074-V8152-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 30 / + 85	°C	
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	5	V	
ESD	V_{ESD}	100	V	(machine model)
		250	V	(human body model)
Input power at GSM850, GSM900, GSM1800 and GSM1900 Tx bands	P_{IN}	15	dBm	peak power of GSM signal, duty cycle 4:8



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Characteristics

Operating temperature range: $T = +25\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 150\ \Omega$ (balanced)

			min.	typ.	max.	
Center frequency	f_C		—	881,5	—	MHz
Maximum insertion attenuation	α_{max}	869,0 ... 894,0 MHz	—	1,9	2,1	dB
Amplitude ripple (p-p)	$\Delta\alpha$	869,0 ... 894,0 MHz	—	0,6	0,8	dB
Input VSWR	$v_{SWR_{IN}}$	869,0 ... 894,0 MHz	—	1,7	1,9	
Output VSWR	$v_{SWR_{OUT}}$	869,0 ... 894,0 MHz	—	1,7	1,9	
Common mode Suppression	S_{sc12}	869,0 ... 894,0 MHz	20	25	—	dB
		824,0 ... 995,0 MHz	20	25	—	dB
		1648,0 ... 1990,0 MHz	20	38	—	dB
		3296,0 ... 3980,0 MHz	20	24	—	dB
Attenuation	α	0,0 ... 820,0 MHz	45	65	—	dB
		820,0 ... 849,0 MHz	35	45	—	dB
		914,0 ... 954,0 MHz	25	29	—	dB
		954,0 ... 6000,0 MHz	45	57	—	dB
		6000,0 ... 12750,0 MHz	—	25	—	dB



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Characteristics

Operating temperature range: $T = -10$ to $+80$ °C
 Terminating source impedance: $Z_S = 50 \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 150 \Omega$ (balanced)

			min.	typ.	max.	
Center frequency	f_C		—	881,5	—	MHz
Maximum insertion attenuation	α_{max}	869,0 ... 894,0 MHz	—	1,9	2,3 ¹⁾	dB
Amplitude ripple (p-p)	$\Delta\alpha$	869,0 ... 894,0 MHz	—	0,6	1,0	dB
Input VSWR	$v_{SWR_{IN}}$	869,0 ... 894,0 MHz	—	1,7	2,0	
Output VSWR	$v_{SWR_{OUT}}$	869,0 ... 894,0 MHz	—	1,7	2,0	
Common mode Suppression	S_{sc12}					
		869,0 ... 894,0 MHz	20	25	—	dB
		824,0 ... 995,0 MHz	20	25	—	dB
		1648,0 ... 1990,0 MHz	20	38	—	dB
		3296,0 ... 3980,0 MHz	20	24	—	dB
Attenuation	α					
		0,0 ... 820,0 MHz	45	65	—	dB
		820,0 ... 849,0 MHz	35	45	—	dB
		914,0 ... 954,0 MHz	25	29	—	dB
		954,0 ... 6000,0 MHz	45	57	—	dB
		6000,0 ... 12750,0 MHz	—	25	—	dB

1) Maximum insertion attenuation from -30 to -10 & from +80 to +85 °C is 2.5 dB



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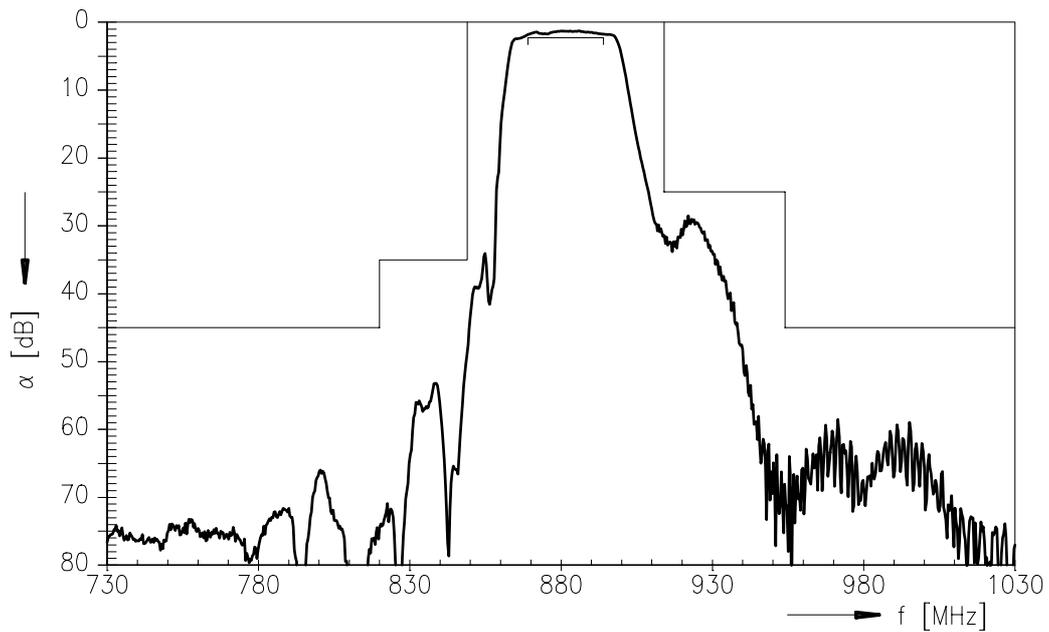
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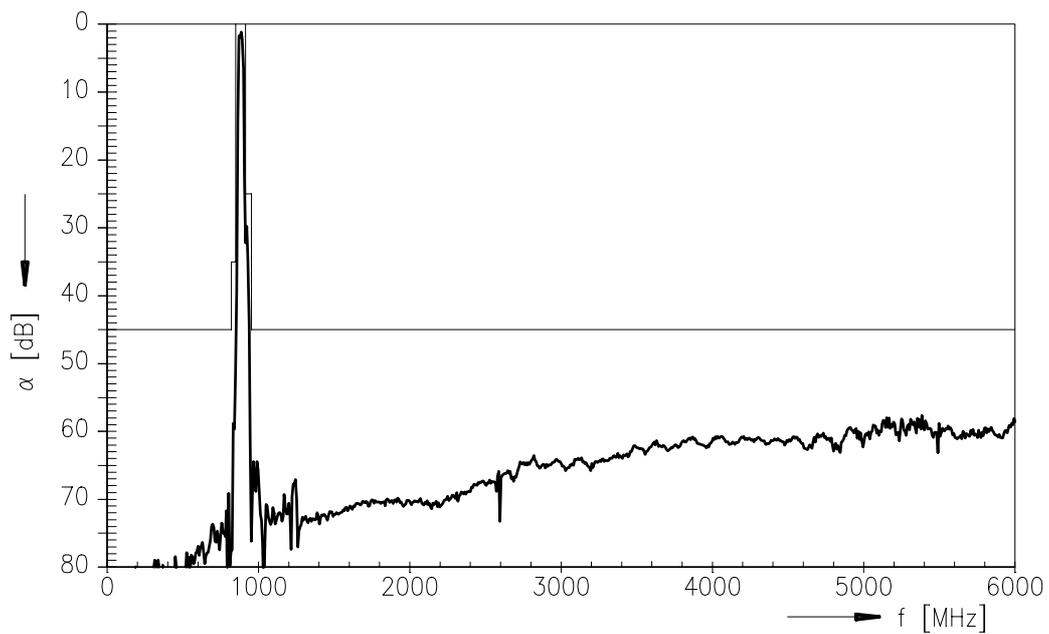
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Transfer function (narrowband; 50 Ω to 150 Ω operation)



Transfer function (wideband; 50 Ω to 150 Ω operation)





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