



SAW Components

Data Sheet B9011





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Low-Loss Filter for Mobile Communication

836,5 MHz

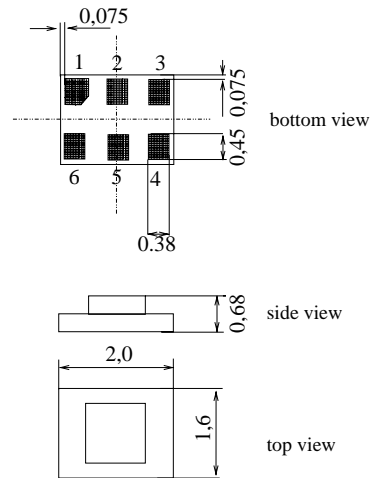
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Features

- Low-loss RF filter for mobile telephone GSM850 system, transmit path
- Low amplitude ripple
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 100 Ω to 50 Ω
- Suitable for GPRS class 1 to 12
- Ceramic package for **Surface Mounted Technology (SMT)**
- Pb-free

Chip sized SAW package DCS6Q



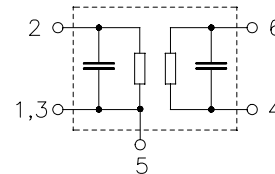
Dimensions in mm, approx. weight 0,010 g

Terminals

- Ni, gold-plated

Pin configuration

- 4, 6 Balanced inputs
- 2 Unbalanced output
- 1, 3 Output ground
- 1, 3, 5 To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B9011	B39841-B9011-E710	C61157-A7-A80	F61074-V8189-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 voltage	V_{MM}	100	V	machine model
	V_{HBM}	250	V	human body model
Input power at GSM850, GSM900, GSM1800 and GSM1900 Tx bands	P_{IN}	13	dBm	peak power of GSM signal, duty cycle 4:8



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Characteristics

Operating temperature range: $T = 25 \pm 2 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 100 \text{ } \Omega \parallel 82\text{nH}$ (balanced)
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	836,5	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,1	2,6	dB
824,0 ... 849,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,7	1,3	dB
824,0 ... 849,0 MHz					
Input VSWR		—	1,7	2,0	
824,0 ... 849,0 MHz					
Output VSWR		—	1,7	2,0	
824,0 ... 849,0 MHz					
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	—	10	degree
824,0 ... 849,0 MHz					
Output amplitude balance ($ S_{31}/S_{21} $)		-1,0	—	1,0	dB
824,0 ... 849,0 MHz					
Diff. to common mode suppression	S_{sc12}				
824,0 ... 849,0 MHz		18	36	—	dB
1648,0 ... 1698,0 MHz		18	50	—	
2472,0 ... 2547,0 MHz		18	34	—	
Attenuation	α				
0,0 ... 779,0 MHz		50	68	—	dB
779,0 ... 804,0 MHz		25	50	—	
804,0 ... 814,0 MHz		14	23	—	
859,0 ... 869,0 MHz		9	20	—	
869,0 ... 925,0 MHz		25	29	—	
925,0 ... 3576,0 MHz		30	50	—	
3576,0 ... 6000,0 MHz		15	50	—	



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Characteristics

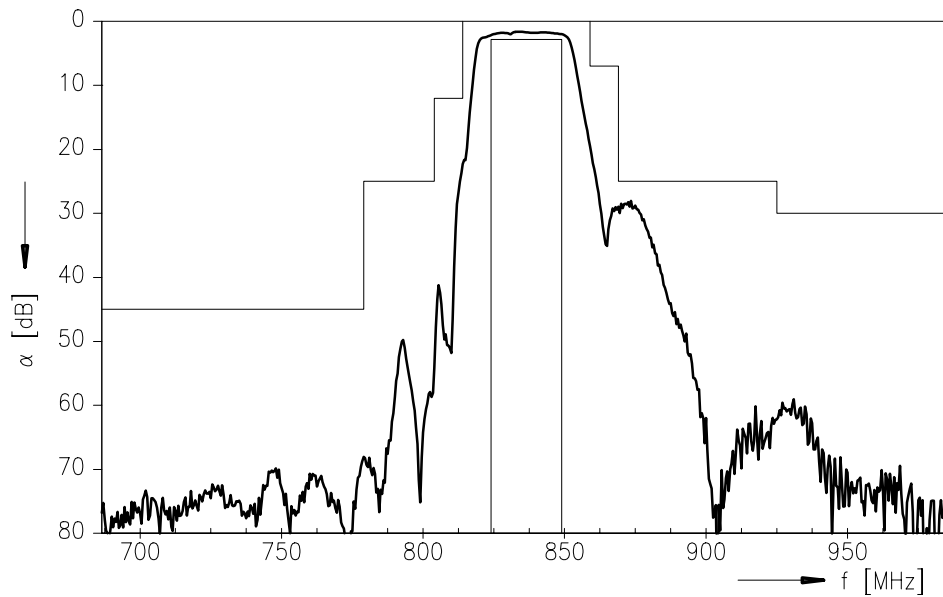
Operating temperature range: $T = -10$ to $+80$ °C
 Terminating source impedance: $Z_S = 100 \Omega \parallel 82\text{nH}$ (balanced)
 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ.	max.	
Center frequency	f_C	—	836,5	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,2	2,8 ¹⁾	dB
	824,0 ... 849,0 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,5	dB
	824,0 ... 849,0 MHz				
Input VSWR		—	1,8	2,0	
	824,0 ... 849,0 MHz				
Output VSWR		—	1,8	2,0	
	824,0 ... 849,0 MHz				
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)		-10	—	10	degree
	824,0 ... 849,0 MHz				
Output amplitude balance ($ S_{31}/S_{21} $)		-1,0	—	1,0	dB
	824,0 ... 849,0 MHz				
Diff. to common mode suppression	$S_{\text{sc}12}$				
	824,0 ... 849,0 MHz	18	36	—	dB
	1648,0 ... 1698,0 MHz	18	50	—	dB
	2472,0 ... 2547,0 MHz	18	34	—	dB
Attenuation	α				
	0,0 ... 779,0 MHz	50	68	—	dB
	779,0 ... 804,0 MHz	25	48	—	dB
	804,0 ... 814,0 MHz	12	16	—	dB
	859,0 ... 869,0 MHz	7	17	—	dB
	869,0 ... 925,0 MHz	25	29	—	dB
	925,0 ... 3576,0 MHz	30	50	—	dB
	3576,0 ... 6000,0 MHz	15	50	—	dB

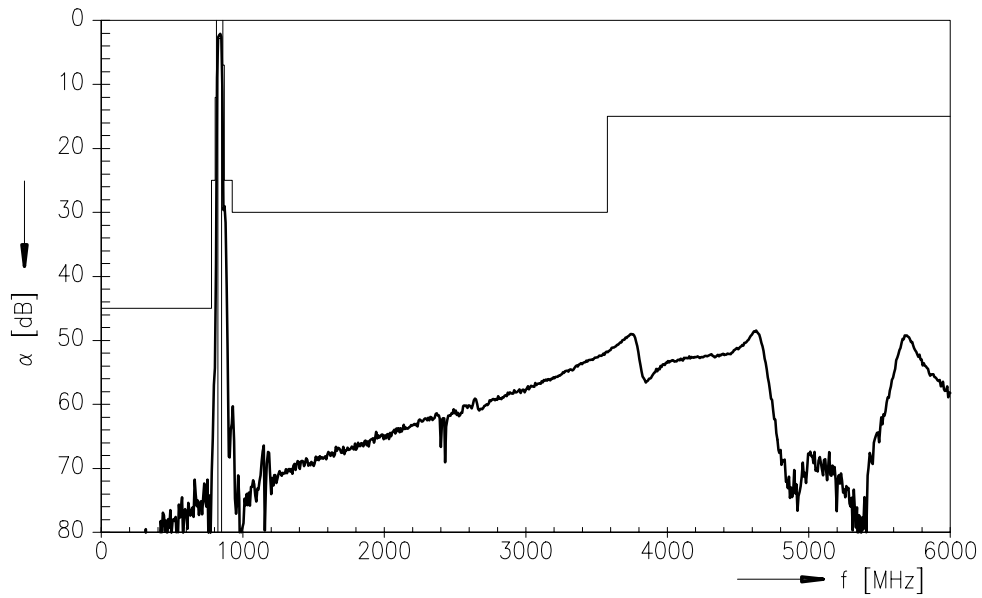
1) Maximum insertion attenuation at $-30..+85$ °C: 3,2 dB



Transfer function (measurement)



Transfer function (wideband measurement)





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