



SAW Components

Data Sheet B9017

Data Sheet

An abstract, grayscale graphic featuring a globe with a grid pattern, overlaid with a large, stylized, and slightly blurred "EPCOS" logo. The logo is rendered in a light gray, almost white, color, giving it a three-dimensional appearance as if it's floating or attached to the globe. The background is dark and textured, with some light streaks and a sense of motion or depth.

EPCOS



SAW Components

B9017

Low-Loss Filter for Mobile Communication

942,5 MHz

Data Sheet



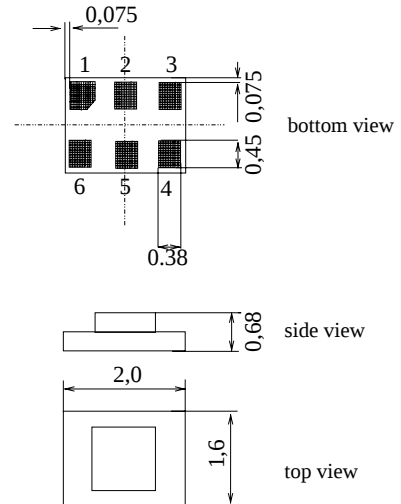
Chip Size SAW package DCS6T

Features

- Low-loss RF filter for mobile telephone EGSM system, receive path
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 35 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Package for Surface Mounted Technology (SMT)
- Pb-free

Terminals

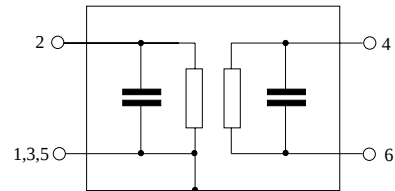
- Ni, gold-plated



Dimensions in mm, approx. weight 0,012g

Pin configuration

- | | |
|---------|------------------------|
| 2 | Input |
| 4 | Balanced output |
| 6 | Balanced output |
| 1, 3, 5 | Ground, to be grounded |



Type	Ordering code	Marking and Package according to	Packing according to
B9017	B39941-B9017-K310	C61157-A7-A128	F61074-V8152-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

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



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Characteristics

Operating temperature range: $T = +25\text{ °C}$
Terminating source impedance: $Z_S = 50\ \Omega$
Terminating load impedance: $Z_L = 150\ \Omega \parallel 82\text{ nH (balanced)}$

				min.	typ.	max.	
Center frequency	f_C			—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$						
		925,0 ... 960,0	MHz	—	1,6	2,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$						
		925,0 ... 960,0	MHz	—	0,6	1,0	dB
Input VSWR							
		925,0 ... 960,0	MHz	—	1,8	2,0	
Output VSWR							
		925,0 ... 960,0	MHz	—	1,8	2,0	
Attenuation	α						
		0,0 ... 480,0	MHz	45	55	—	dB
		480,0 ... 880,0	MHz	30	39	—	dB
		880,0 ... 905,0	MHz	23	38	—	dB
		905,0 ... 915,0	MHz	20	28	—	dB
		980,0 ... 1500,0	MHz	24	30	—	dB
		1500,0 ... 6000,0	MHz	30	44	—	dB
Diff. to common mode suppression	S_{sc12}						
		925,0 ... 960,0	MHz	20	30	—	dB
		824,0 ... 995,0	MHz	20	26	—	dB
		1648,0 ... 1990,0	MHz	20	46	—	dB
		3296,0 ... 3980,0	MHz	20	42	—	dB



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Characteristics

Operating temperature range: $T = -10$ to $+80$ °C
Terminating source impedance: $Z_S = 50 \Omega$
Terminating load impedance: $Z_L = 150 \Omega \parallel 82 \text{ nH}$ (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
925,0 ... 960,0 MHz		—	1,7	2,1 ¹⁾	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	0,7	1,2 ²⁾	dB
Input VSWR					
925,0 ... 960,0 MHz		—	1,8	2,0	
Output VSWR					
925,0 ... 960,0 MHz		—	1,8	2,0	
Attenuation	α				
0,0 ... 480,0 MHz		45	55	—	dB
480,0 ... 880,0 MHz		30	39	—	dB
880,0 ... 905,0 MHz		23	38	—	dB
905,0 ... 915,0 MHz		18	28	—	dB
980,0 ... 1500,0 MHz		23	30	—	dB
1500,0 ... 6000,0 MHz		30	44	—	dB
Diff. to common mode suppression	S_{sc12}				
925,0 ... 960,0 MHz		20	30	—	dB
824,0 ... 995,0 MHz		20	26	—	dB
1648,0 ... 1990,0 MHz		20	46	—	dB
3296,0 ... 3980,0 MHz		20	42	—	dB

¹⁾ 2,6 dB for $T = -30$ to $+80$ °C ²⁾ 1,7 dB for $T = -30$ to $+80$ °C

Other guaranteed values for $T = -30$ to $+80$ °C same as for $T = -10$ to $+80$ °C



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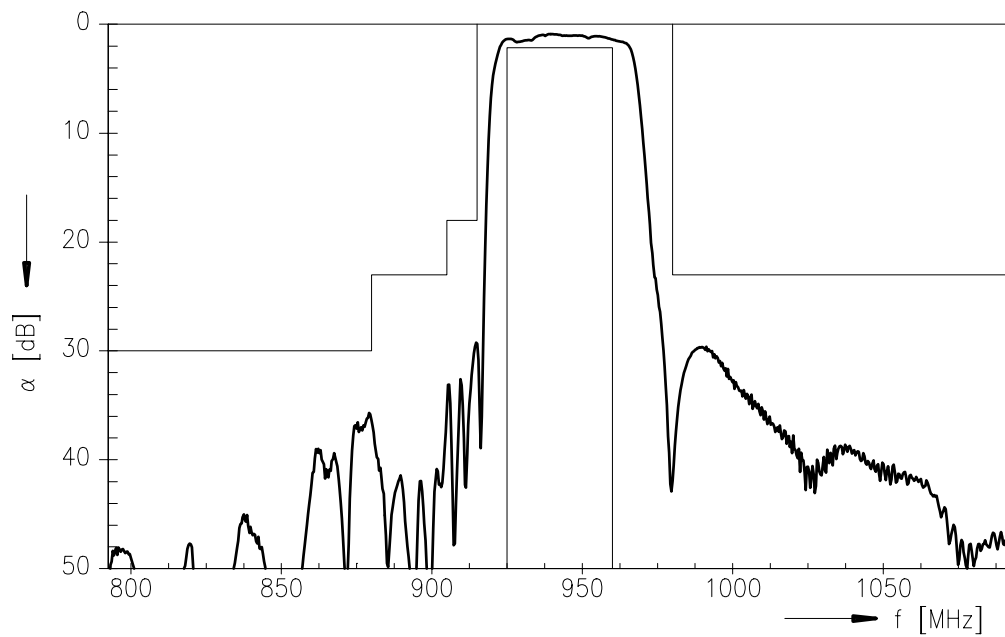
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942,5 MHz

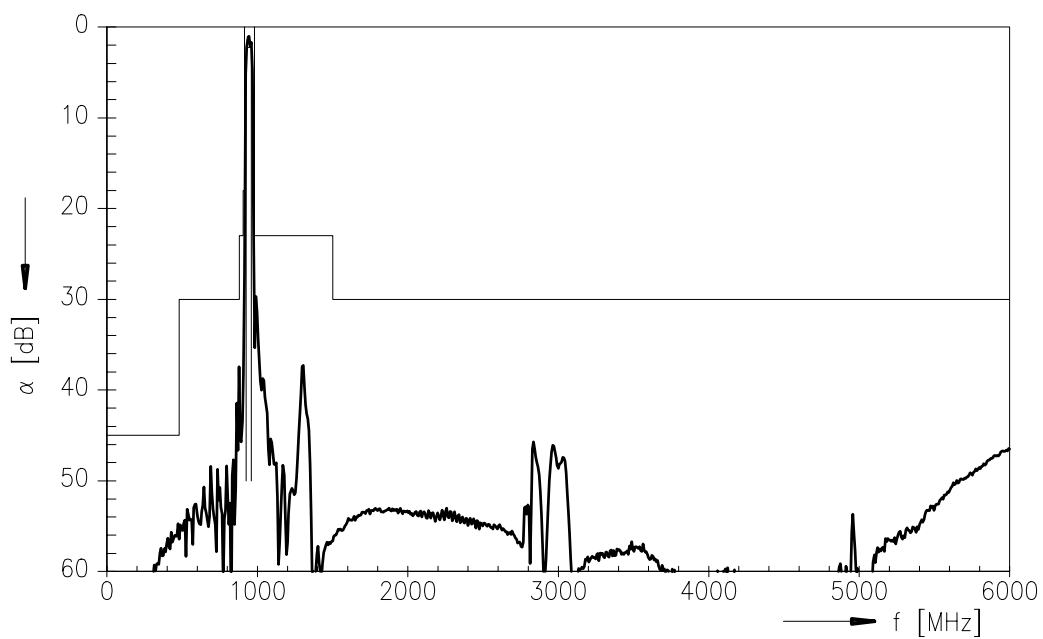
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Transfer function (passband)



Transfer function (wideband)





SAW Components	B9017
Low-Loss Filter for Mobile Communication	942,5 MHz
Data Sheet	SMD

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