



SAW Components

Data Sheet B7723

Data Sheet

A large, semi-transparent watermark graphic is centered on the page. It features a grayscale image of a globe with latitude and longitude lines. Overlaid on the globe is the "EPCOS" logo, with the letters "EPCOS" written in a large, white, serif font that follows the curve of the globe's horizon. The background of the entire page is a light gray color.



SAW Components

B7723

Low-Loss Filter for Mobile Communication

836,5 MHz

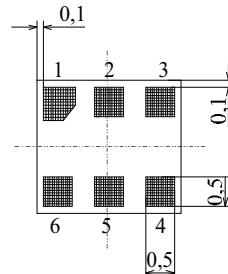
Data Sheet



Chip sized SAW package DCS6I

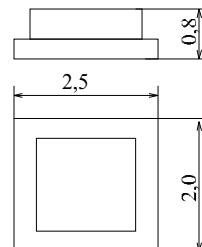
Features

- Low-loss RF filter for mobile telephone
GSM 850 systems, transmit path
- Low amplitude ripple
- Usable passband 25 MHz
- Balanced to unbalanced operation
- Impedance transformation from 200Ω
to 50Ω
- Ceramic package for **Surface Mounted
Technology (SMT)**



Terminals

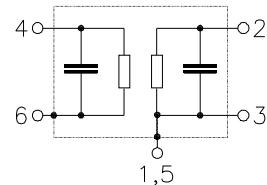
- Ni, gold-plated



Dimensions in mm, approx. weight 0,014g

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B7723	B39841-B7723-C610	C61157-A7-A76	F61074-V8112-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}	50	V	
Input power max.	P_{IN}	15	dBm	Source impedance 200 Ω peak power of GSM 850 signal, duty cycle 1:4



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Characteristics



Operating temperature range:

$$T = 25 \pm 2^\circ\text{C}$$

Terminating source impedance:

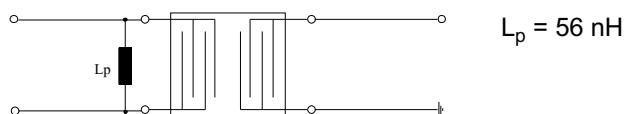
$$Z_S = 200 \Omega // 56 \text{ nH} \text{ (balanced)}$$

Terminating load impedance:

$$Z_L = 50 \Omega \text{ (unbalanced)}$$

			min.	typ.	max.	
Center frequency	f_C		—	836,5	—	MHz
Maximum insertion attenuation	α_{\max}					
824,0 ... 849,0 MHz			—	2,1	2,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
824,0 ... 849,0 MHz			—	0,6	0,8	dB
Balanced input VSWR						
824,0 ... 849,0 MHz			—	1,7	2,0	
Unbalanced output VSWR						
824,0 ... 849,0 MHz			—	1,7	2,0	
Differential to Common mode Suppression	S_{sc12}					
0,1 ... 804,0 MHz			20	50	—	dB
824,0 ... 849,0 MHz			20	25	—	dB
869,0 ... 6000,0 MHz			20	35	—	dB
Attenuation	α					
0,0 ... 800,0 MHz			42	54	—	dB
869,0 ... 894,0 MHz			27	30	—	dB
894,0 ... 1000,0 MHz			30	40	—	dB
1000,0 ... 3000,0 MHz			40	46	—	dB
3000,0 ... 4000,0 MHz			30	36	—	dB
4000,0 ... 6000,0 MHz			23	28	—	dB
Rx band suppression	α					
869,0 ... 894,0 MHz			27	30	—	dB

Test matching network



$$L_p = 56 \text{ nH}$$



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Data Sheet Characteristics



Operating temperature range:

$T = -30 \text{ to } 85 \text{ }^{\circ}\text{C}$

Terminating source impedance:

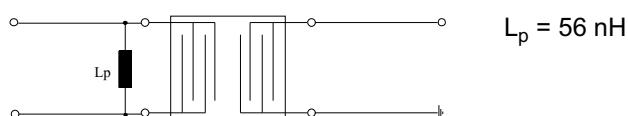
$Z_S = 200 \Omega // 56 \text{ nH}$ (balanced)

Terminating load impedance:

$Z_L = 50 \Omega$ (unbalanced)

			min.	typ.	max.	
Center frequency	f_C	—	836,5	—	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,3	2,5	—	dB
824,0 ... 849,0 MHz						
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,0	—	dB
824,0 ... 849,0 MHz						
Balanced input VSWR		—	1,7	2,0	—	
824,0 ... 849,0 MHz						
Unbalanced output VSWR		—	1,7	2,0	—	
824,0 ... 849,0 MHz						
Differential to Common mode Suppression	S_{sc12}	20	50	—	—	dB
0,1 ... 804,0 MHz						
824,0 ... 849,0 MHz		20	25	—	—	dB
869,0 ... 6000,0 MHz		20	35	—	—	dB
Attenuation	α	40	54	—	—	dB
0,0 ... 800,0 MHz						
869,0 ... 894,0 MHz		25	30	—	—	dB
894,0 ... 1000,0 MHz		30	40	—	—	dB
1000,0 ... 3000,0 MHz		40	46	—	—	dB
3000,0 ... 4000,0 MHz		30	36	—	—	dB
4000,0 ... 6000,0 MHz		23	28	—	—	dB
Rx band suppression	α	25	30	—	—	dB
869,0 ... 894,0 MHz						

Test matching network





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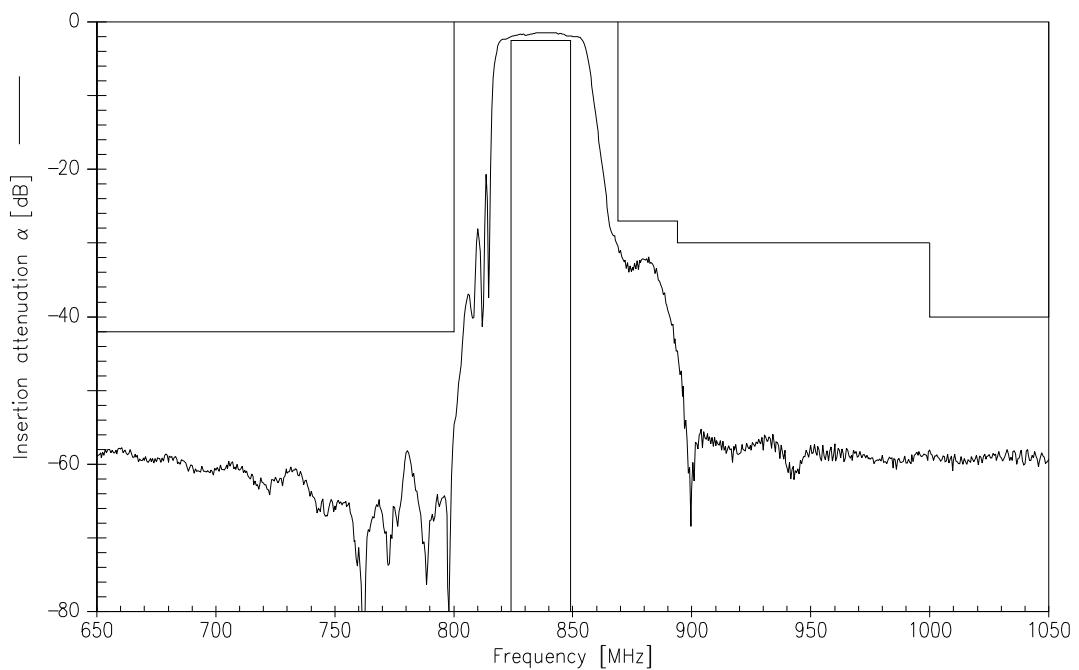
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836,5 MHz

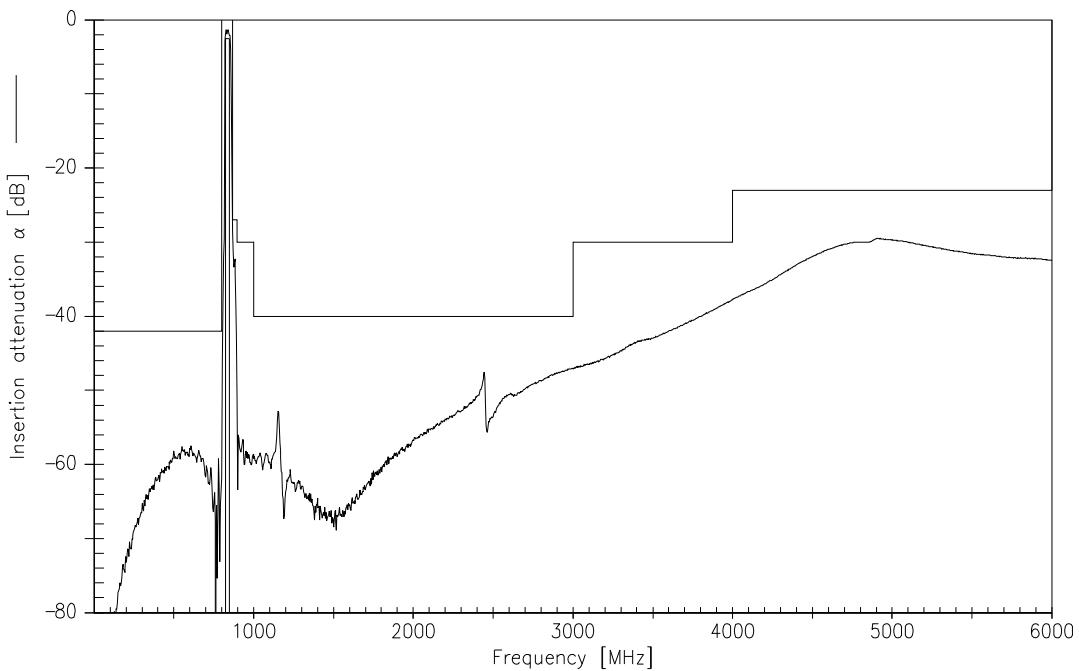
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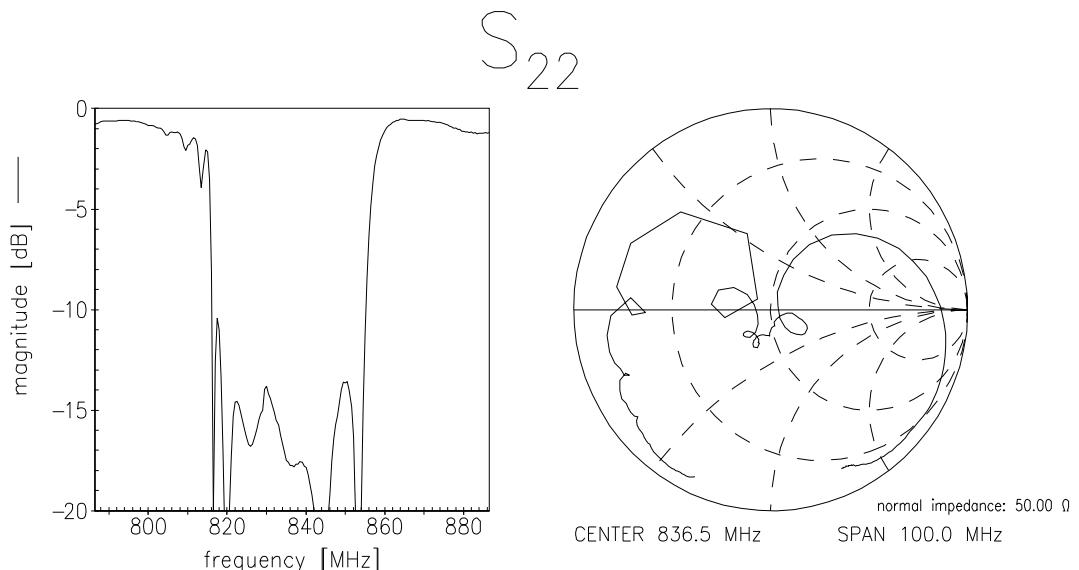
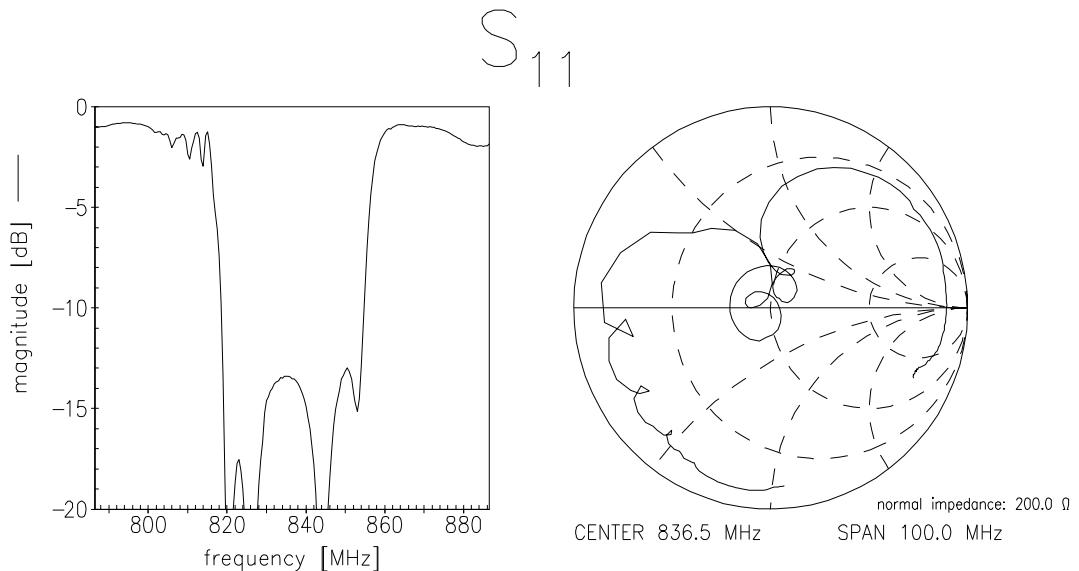
Transfer function (spec at 25°C)



Transfer function (wideband)



Matching (measurement including calculated matching network; S11 is balanced input)





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