



SAW Components

Data Sheet B7723

Data Sheet

An abstract, grayscale background graphic featuring a globe with a grid of latitude and longitude lines. Overlaid on the globe is a large, stylized, 3D-effect word "EPCOS" in a light gray color. The word is tilted and appears to be floating or emerging from the globe. The overall image has a soft, ethereal quality with some light flares and a dark, textured background.

EPCOS



SAW Components

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Low-Loss Filter for Mobile Communication

836,5 MHz

Data Sheet



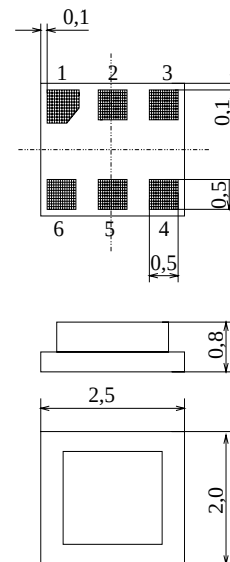
Chip sized SAW package DCS6I

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 200 Ω to 50 Ω
- Ceramic package for **Surface Mounted Technology (SMT)**

Terminals

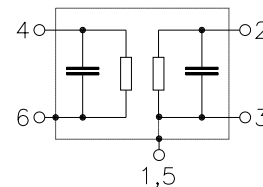
- Ni, gold-plated



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	$^{\circ}\text{C}$	Source impedance 200 Ω peak power of GSM 850 signal, duty cycle 1:4
Storage temperature range	T_{stg}	- 40 / + 85	$^{\circ}\text{C}$	
DC voltage	V_{DC}	5	V	
ESD	V_{ESD}	50	V	
Input power max.	P_{IN}	15	dBm	



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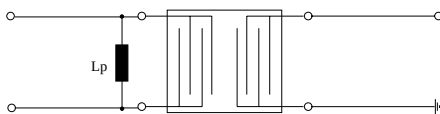


Characteristics

Operating temperature range:	$T = 25 \pm 2^\circ\text{C}$
Terminating source impedance:	$Z_S = 200\ \Omega \parallel 56\ \text{nH}$ (balanced)
Terminating load impedance:	$Z_L = 50\ \Omega$ (unbalanced)

		min.	typ.	max.	
Center frequency	f_C	—	836,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
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	$S_{\text{sc}12}$				
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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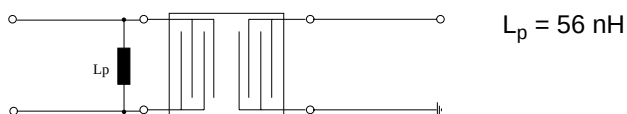
Data Sheet Characteristics



Operating temperature range: $T = -30$ 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	$\alpha_{\max}$				
824,0 ... 849,0 MHz		—	2,3	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
824,0 ... 849,0 MHz		—	0,8	1,0	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		40	54	—	dB
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				
869,0 ... 894,0 MHz		25	30	—	dB

Test matching network





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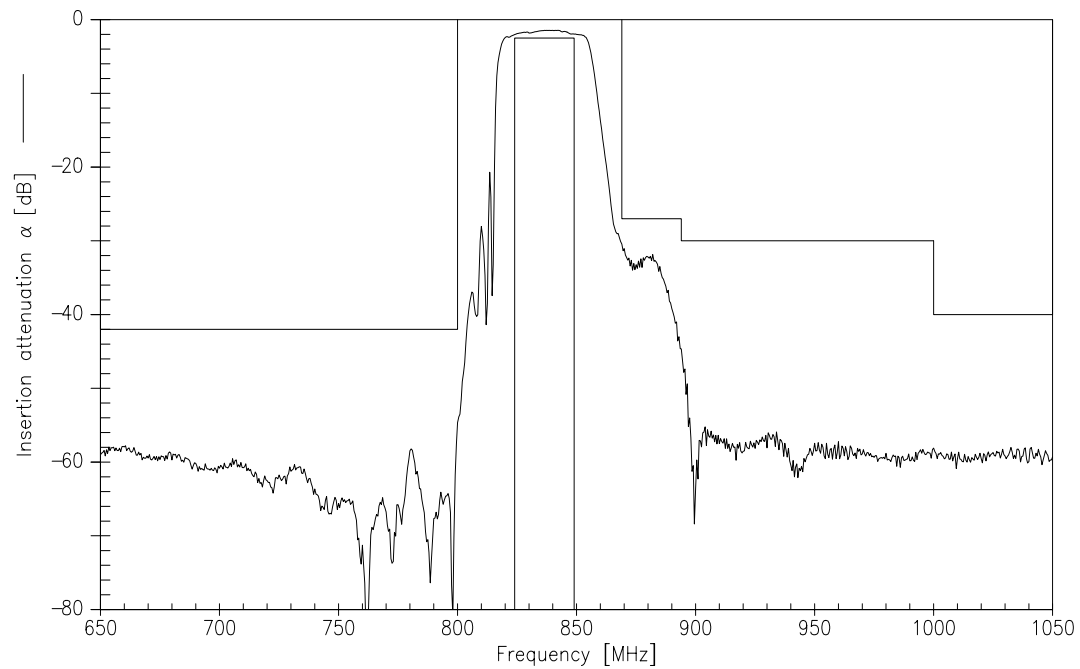
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836,5 MHz

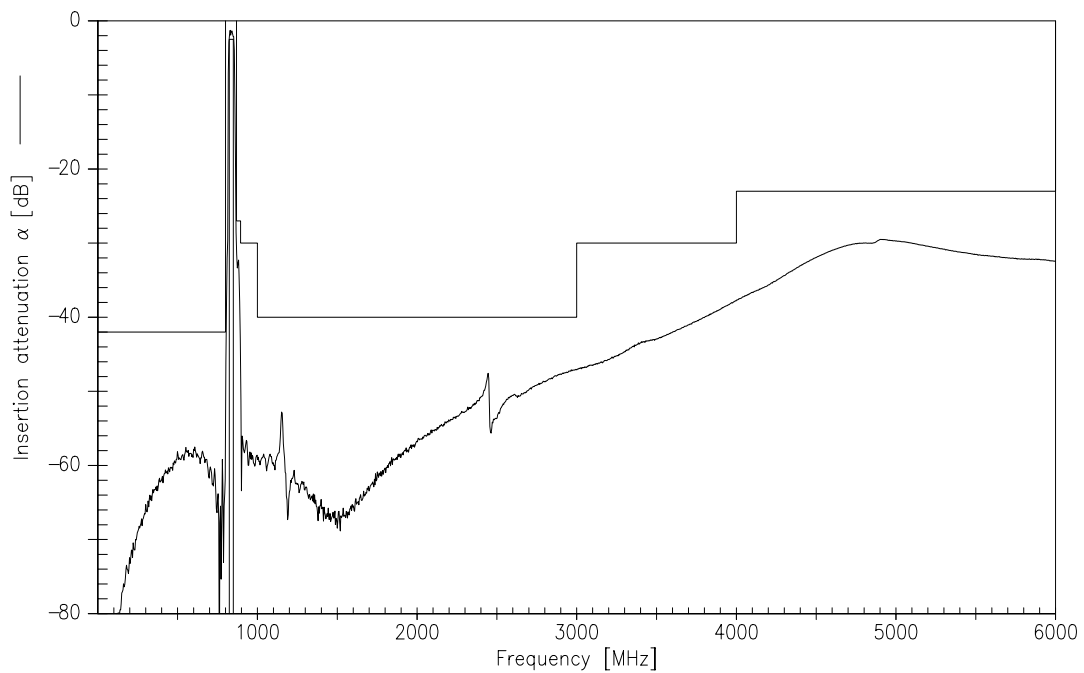
Data Sheet



Transfer function (spec at 25°C)



Transfer function (wideband)





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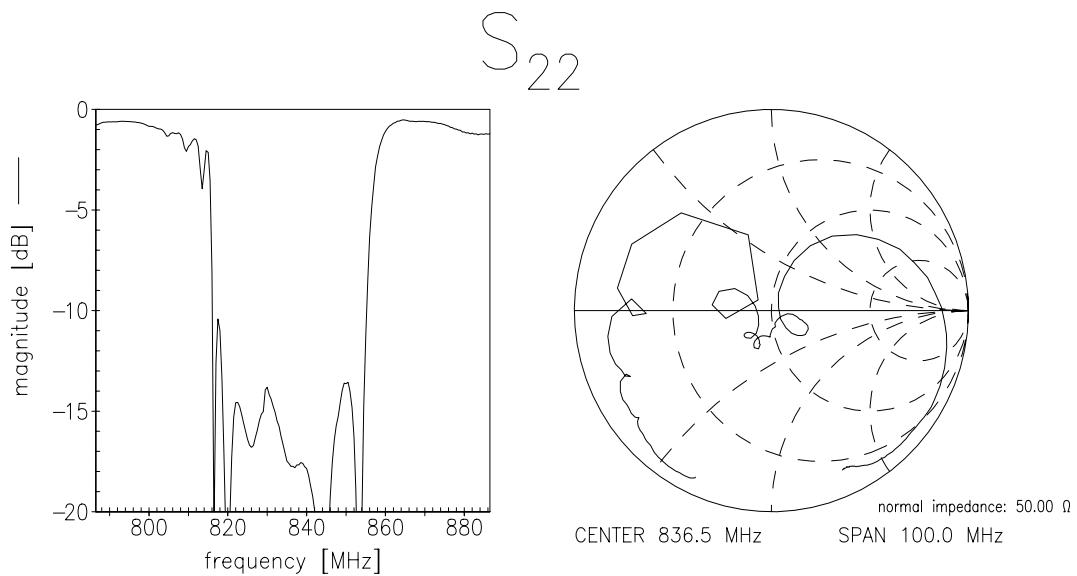
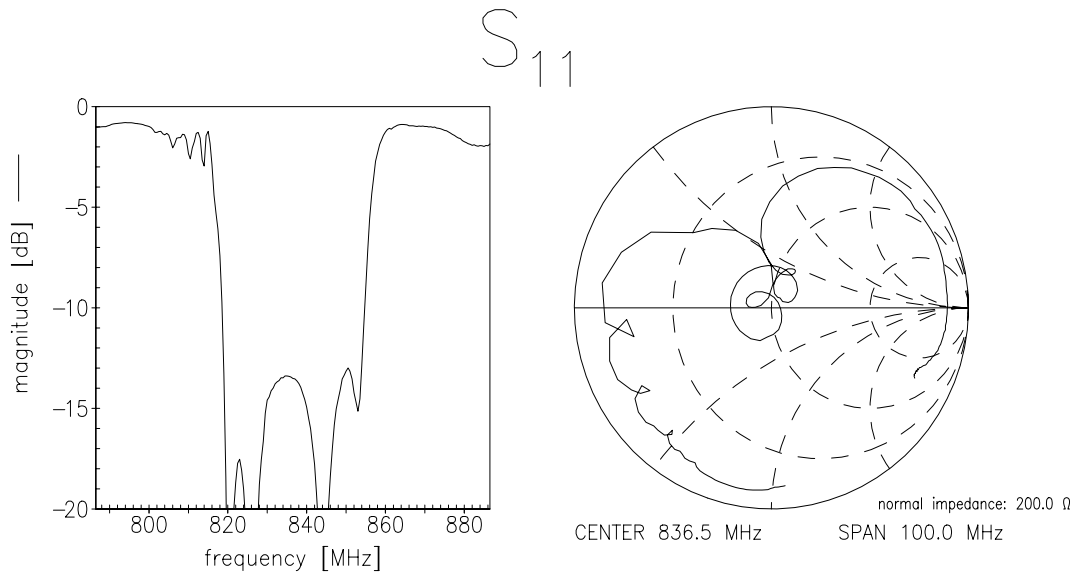
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Matching (measurement including calculated matching network; S11 is balanced input)





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Data Sheet	SMD

Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC WT PD

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