



SAW Components

Data Sheet B7723

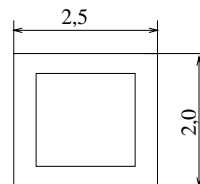
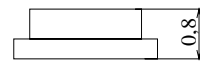
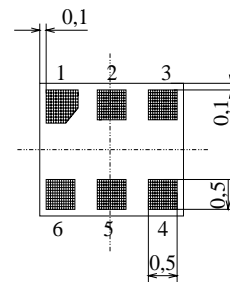




Chip sized SAW package DCS61

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)**



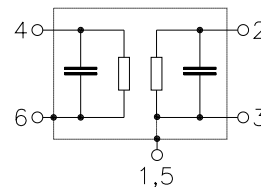
Dimensions in mm, approx. weight 0,014g

Terminals

- Ni, gold-plated

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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B7723

Low-Loss Filter for Mobile Communication

836,5 MHz

Data Sheet

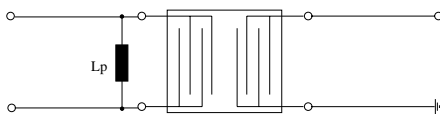


Characteristics

Operating temperature range: $T = 25 \pm 2^\circ\text{C}$
 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}	—	2,1	2,3	dB
	824,0 ... 849,0 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,6	0,8	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	$S_{\text{sc}12}$				
	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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Low-Loss Filter for Mobile Communication	836,5 MHz

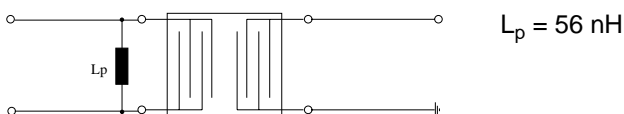
Data Sheet
Characteristics



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)

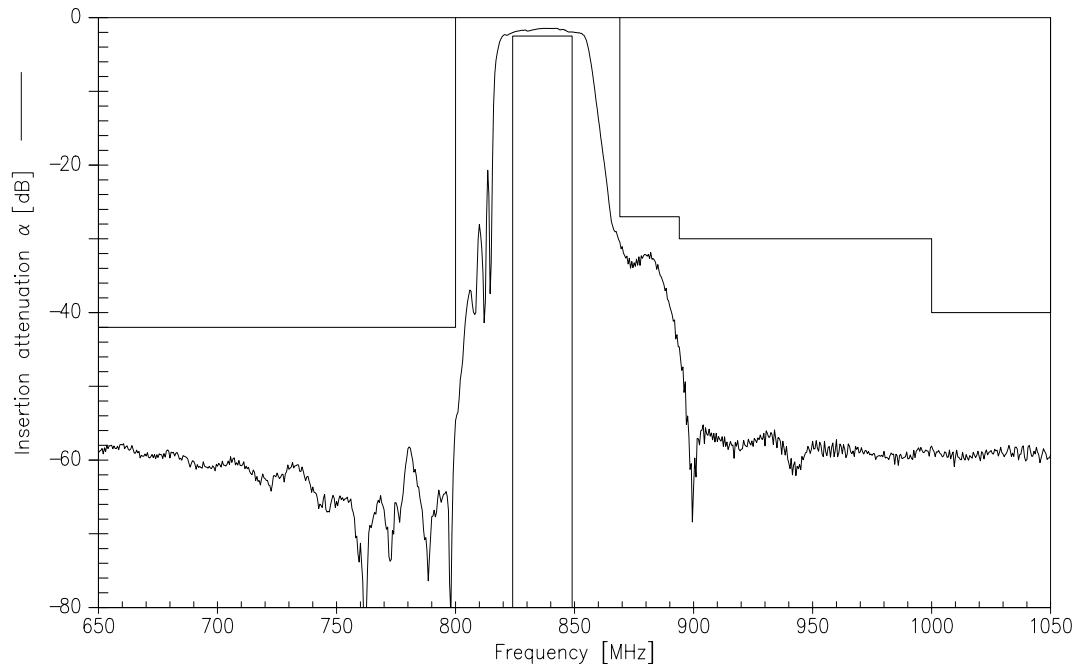
		min.	typ.	max.	
Center frequency	f_C	—	836,5	—	MHz
Maximum insertion attenuation	α_{\max}	—	2,3	2,5	dB
824,0 ... 849,0 MHz					
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,0	dB
824,0 ... 849,0 MHz					
Balanced input VSWR		—	1,7	2,0	
824,0 ... 849,0 MHz					
Unbalanced output VSWR		—	1,7	2,0	
824,0 ... 849,0 MHz					
Differential to Common mode Suppression	S_{sc12}				
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

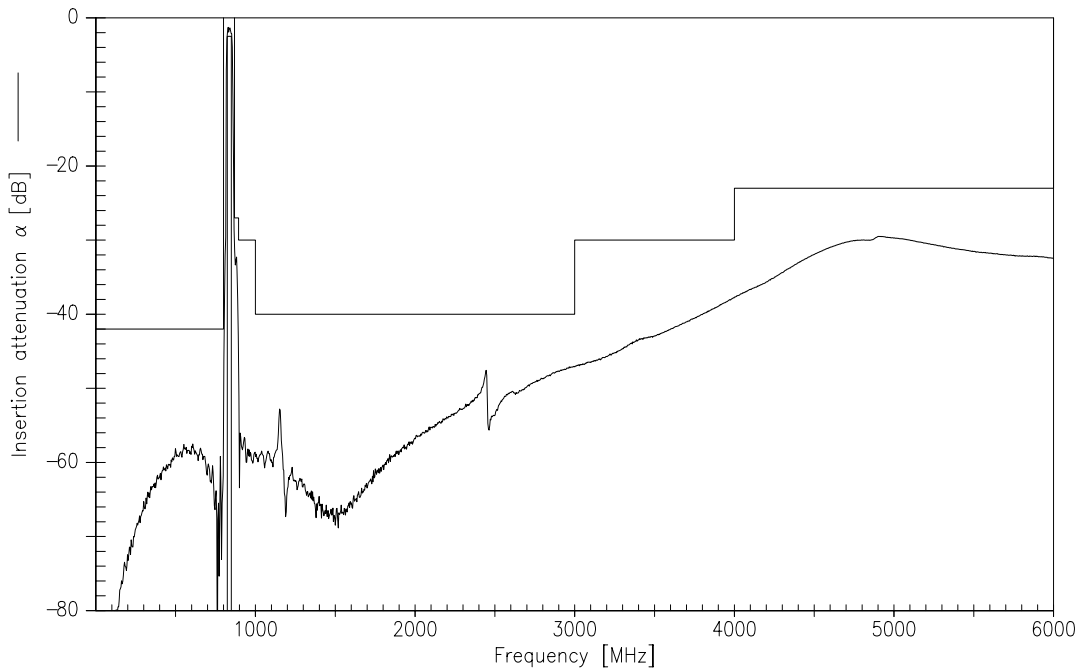




Transfer function (spec at 25°C)



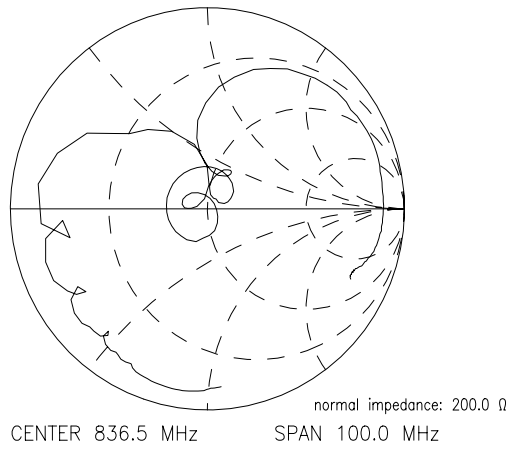
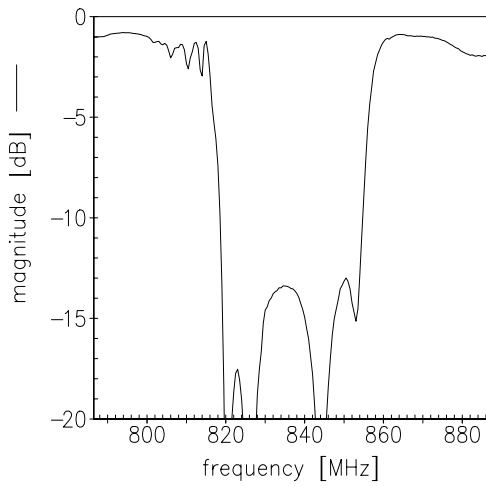
Transfer function (wideband)



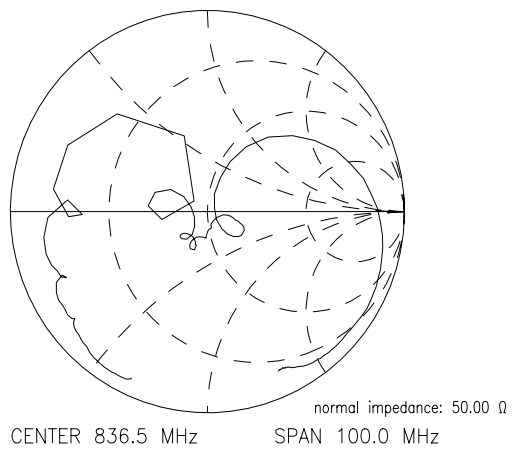
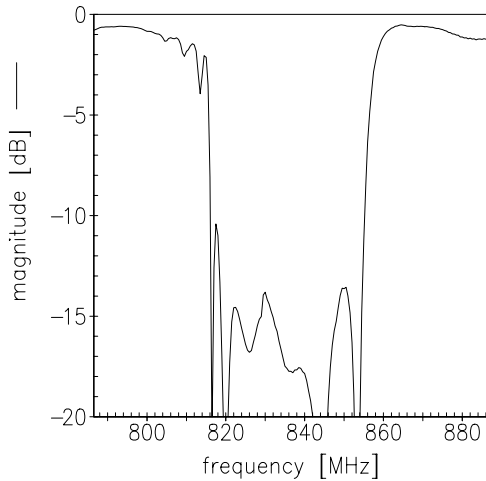


Matching (measurement including calculated matching network; S11 is balanced input)

S₁₁



S₂₂





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836,5 MHz

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