EPCOS

SAW Components

Data Sheet B9011



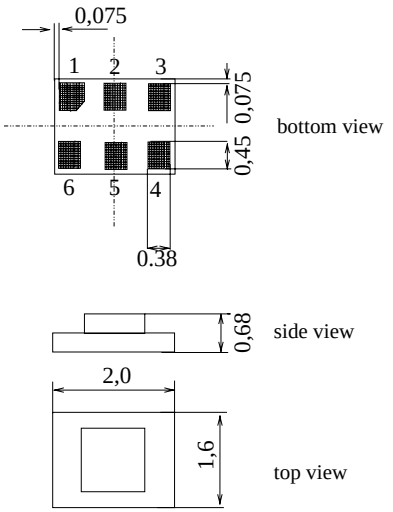
Features

- 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 **S**urface **M**ounted **T**echnology (**SMT**)
- Pb-free

Terminals

- Ni, gold-plated

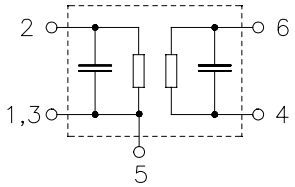
Chip sized SAW package DCS6Q



Dimensions in mm, approx. weight 0,010 g

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

Characteristics

Operating temperature range: T = 25 ± 2 °C
Terminating source impedance: Z_S = 100 Ω || 82nH (balanced)
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_C	—	836,5	—	MHz
Maximum insertion attenuation	α_{max}				
824,0 ... 849,0 MHz		—	2,1	2,6	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
824,0 ... 849,0 MHz		—	0,7	1,3	dB
Input VSWR					
824,0 ... 849,0 MHz		—	1,7	2,0	
Output VSWR					
824,0 ... 849,0 MHz		—	1,7	2,0	
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180°$)					
824,0 ... 849,0 MHz		-10	—	10	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
824,0 ... 849,0 MHz		-1,0	—	1,0	dB
Diff. to common mode suppression	S_{sc12}				
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	50	—	dB
804,0 ... 814,0 MHz		14	23	—	dB
859,0 ... 869,0 MHz		9	20	—	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

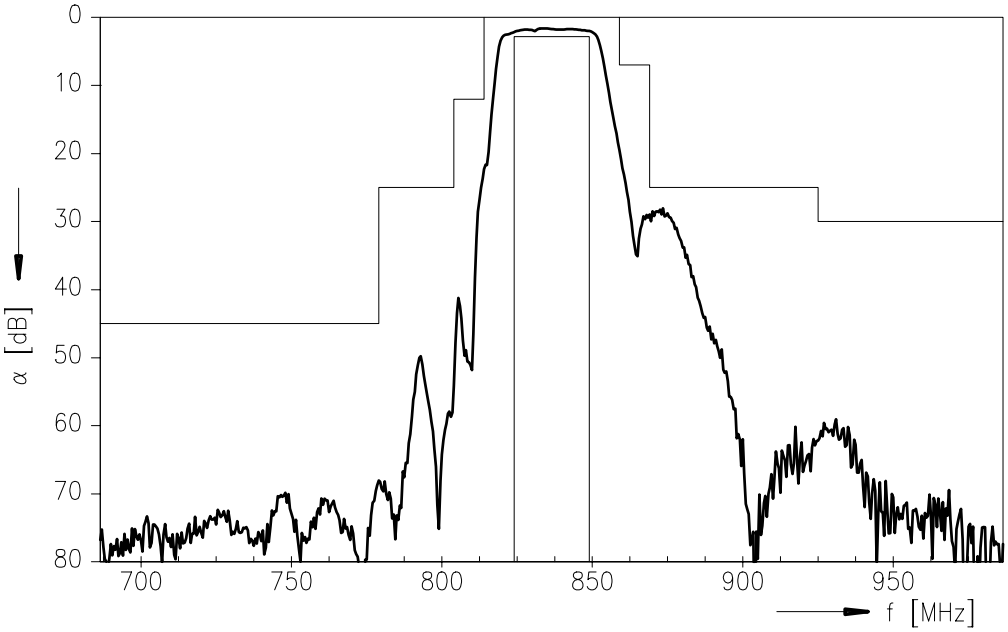
Characteristics

Operating temperature range: T = -10 to + 80 °C
Terminating source impedance: Z_S = 100 Ω || 82nH (balanced)
Terminating load impedance: Z_L = 50 Ω

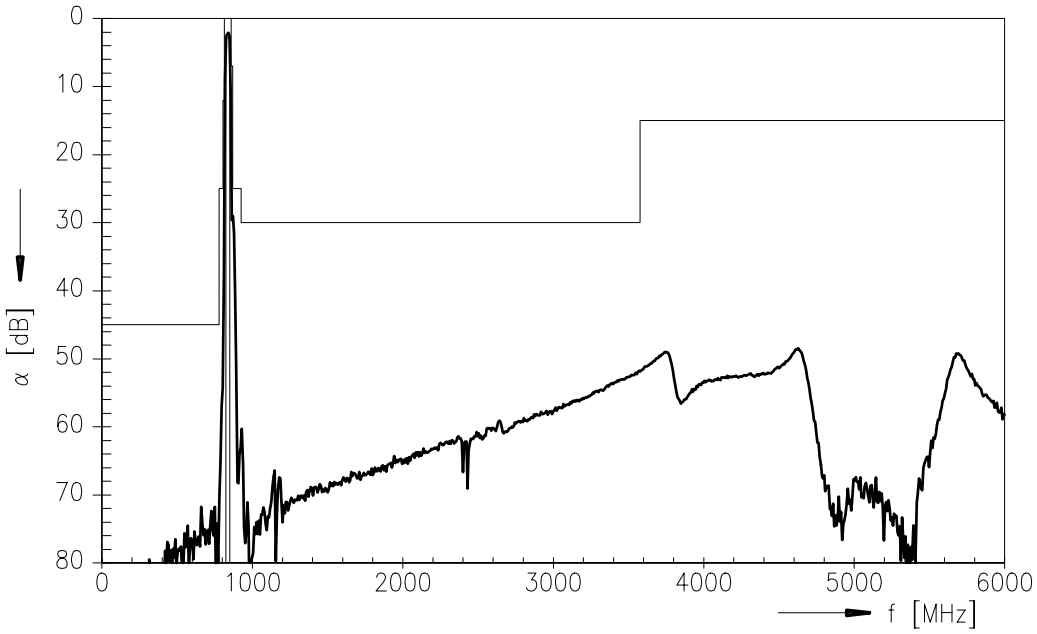
		min.	typ.	max.	
Center frequency	f_C	—	836,5	—	MHz
Maximum insertion attenuation	α_{max}				
824,0 ... 849,0 MHz		—	2,2	2,8[1)]	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
824,0 ... 849,0 MHz		—	0,8	1,5	dB
Input VSWR					
824,0 ... 849,0 MHz		—	1,8	2,0	
Output VSWR					
824,0 ... 849,0 MHz		—	1,8	2,0	
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180°$)					
824,0 ... 849,0 MHz		-10	—	10	degree
Output amplitude balance ($\lvert S_{31}/S_{21}\rvert$)					
824,0 ... 849,0 MHz		-1,0	—	1,0	dB
Diff. to common mode suppression	S_{sc12}				
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)



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC WT
P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2004. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.