EPCOS

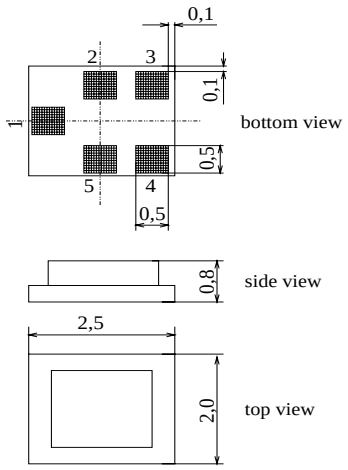
SAW Components

Data Sheet B7701, Pb Free

Chip **S**ized **S**AW **P**ackage **QCS5H**

Features

- Low-loss RF filter for mobile telephone AMPS system, receive path
- Low amplitude ripple
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 200 Ω
- Suitable for GPRS class 1 to 12
- Package for **S**urface **M**ounted **T**echnology **(SMT)**
- Pb-Free

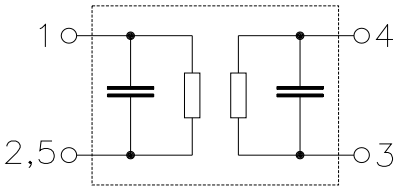


Dimensions in mm, approx. weight 0,015g

Terminals

Pin configuration

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



Type	Ordering code	Marking and Package according to	Packing according to
B7701	B39881-B7701-K910	C61157-A7-A139	F61074-V8189-Z000

Electrostatic **S**ensitive **D**evice (**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^*_{ESD}	100*	V	Machine Model, 10 pulses
Input power at GSM850, GSM900 GSM1800 and GSM1900 Tx bands	P_{IN}	15	dBm	peak power of GSM signal, duty cycle 4:8

* - acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses

Characteristics

Operating temperature range: T = +25 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω

		min.	typ.	max.	
Center frequency	f_C	—	881,5	—	MHz
Maximum insertion attenuation	α_{max}				
869,0 ... 894,0 MHz		—	2,3	2,6	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869,0 ... 894,0 MHz		—	0,6	1,0	dB
VSWR					
869,0 ... 894,0 MHz		—	1,8	2,0	
Output phase balance ($\phi(S_{31})-\phi(S_{32})+180°$)					
869,0 ... 894,0 MHz		-10,0	0	10,0	degree
Output amplitude balance ($\lvert S_{31}/S_{32}\rvert$)					
869,0 ... 894,0 MHz		-1,0	0	1,0	dB
Attenuation	α				
0,0 ... 824,0 MHz		50,0	60,0	—	dB
824,0 ... 849,0 MHz		35,0	40,0	—	dB
914,0 ... 924,0 MHz		25,0	28,0	—	dB
924,0 ... 970,0 MHz		30,0	36,0	—	dB
970,0 ...3000,0 MHz		50,0	70,0	—	dB
3000,0 ...6000,0 MHz		45,0	60,0	—	dB
Tx band suppression	α				
824,0 ... 849,0 MHz		35,0	40,0	—	dB

Characteristics

Operating temperature range: T = -30 to +85 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω

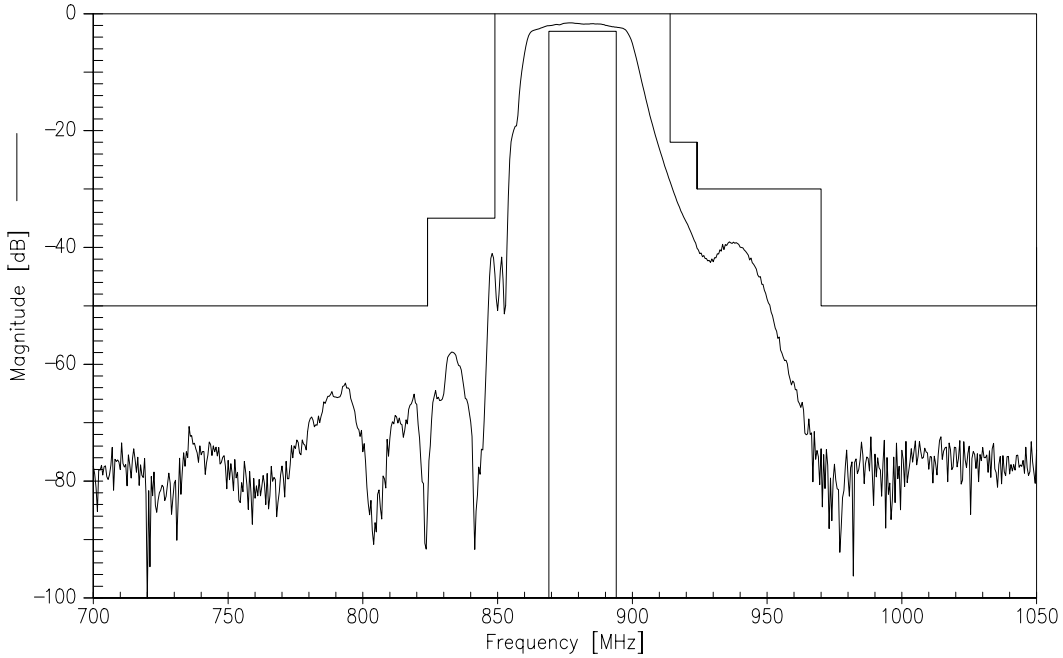
		min.	typ.	max.	
Center frequency	f_C	—	881,5	—	MHz
Maximum insertion attenuation	α_{max}				
869,0 ... 894,0 MHz		—	2,6	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869,0 ... 894,0 MHz		—	1,0	1,4	dB
VSWR					
869,0 ... 894,0 MHz		—	1,8	2,0	
Output phase balance ($\phi(S_{31})-\phi(S_{32})+180°$)					
869,0 ... 894,0 MHz		-10,0	0	10,0	degree
Output amplitude balance ($\lvert S_{31}/S_{32}\rvert$)					
869,0 ... 894,0 MHz		-1,0	0	1,0	dB
Attenuation	α				
0,0 ... 824,0 MHz		50,0	60,0	—	dB
824,0 ... 849,0 MHz		35,0	40,0	—	dB
914,0 ... 924,0 MHz		22,0	26,0	—	dB
924,0 ... 970,0 MHz		30,0	36,0	—	dB
970,0 ...3000,0 MHz		50,0	70,0	—	dB
3000,0 ...6000,0 MHz		45,0	60,0	—	dB
Tx band suppression	α				
824,0 ... 849,0 MHz		35,0	40,0	—	dB

Characteristics

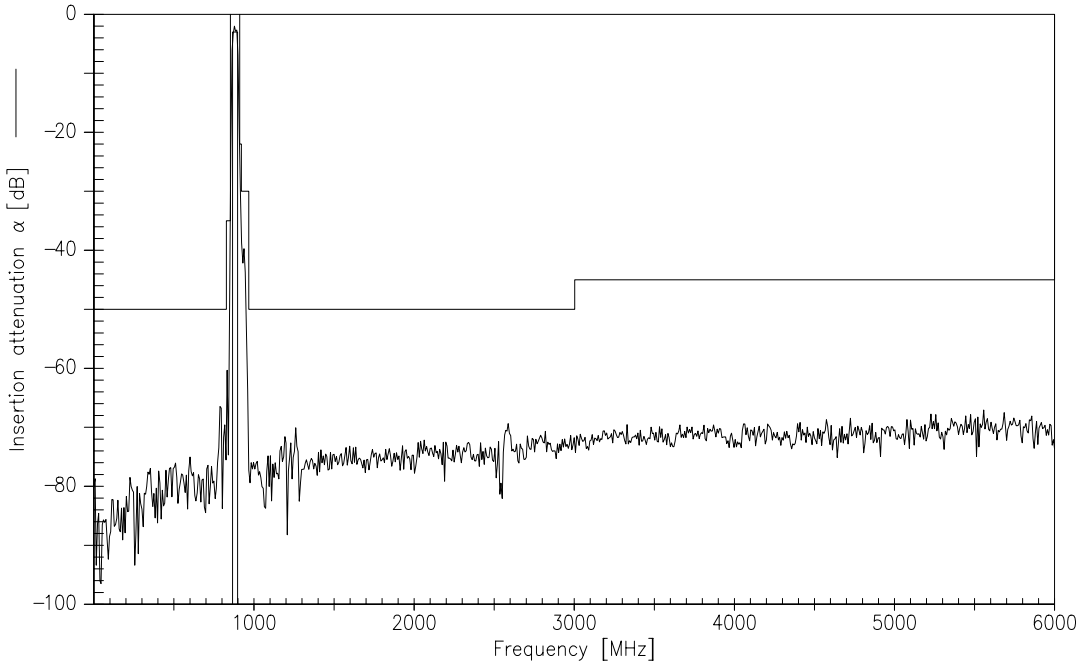
Operating temperature range: T = -40 to +85 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 200 Ω

		min.	typ.	max.	
Center frequency	f_C	—	881,5	—	MHz
Maximum insertion attenuation	α_{max}				
869,0 ... 894,0 MHz		—	2,6	3,1	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869,0 ... 894,0 MHz		—	1,0	1,5	dB
VSWR					
869,0 ... 894,0 MHz		—	1,8	2,2	
Output phase balance ($\phi(S_{31})-\phi(S_{32})+180°$)					
869,0 ... 894,0 MHz		-10,0	0	10,0	degree
Output amplitude balance ($\lvert S_{31}/S_{32}\rvert$)					
869,0 ... 894,0 MHz		-1,0	0	1,0	dB
Attenuation	α				
0,0 ... 824,0 MHz		50,0	60,0	—	dB
824,0 ... 849,0 MHz		35,0	40,0	—	dB
914,0 ... 924,0 MHz		22,0	26,0	—	dB
924,0 ... 970,0 MHz		30,0	36,0	—	dB
970,0 ...3000,0 MHz		50,0	70,0	—	dB
3000,0 ...6000,0 MHz		45,0	60,0	—	dB
Tx band suppression	α				
824,0 ... 849,0 MHz		35,0	40,0	—	dB

Transfer function (narrowband measurement)

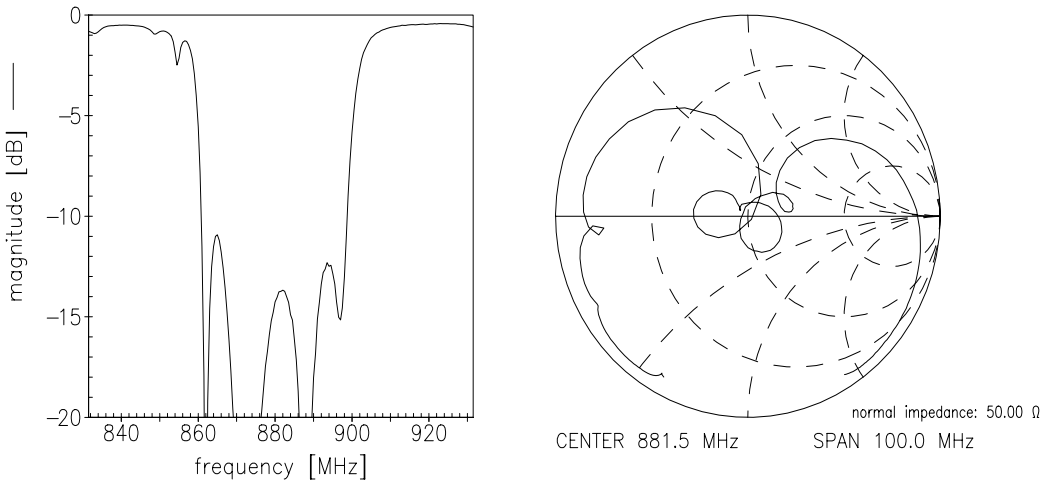


Transfer function (wideband measurement)

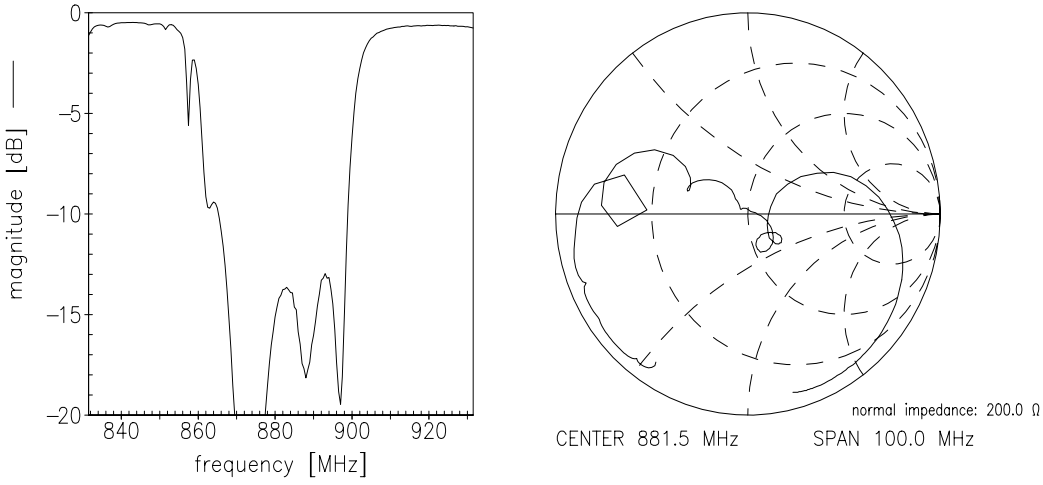


Reflection functions (measurement)

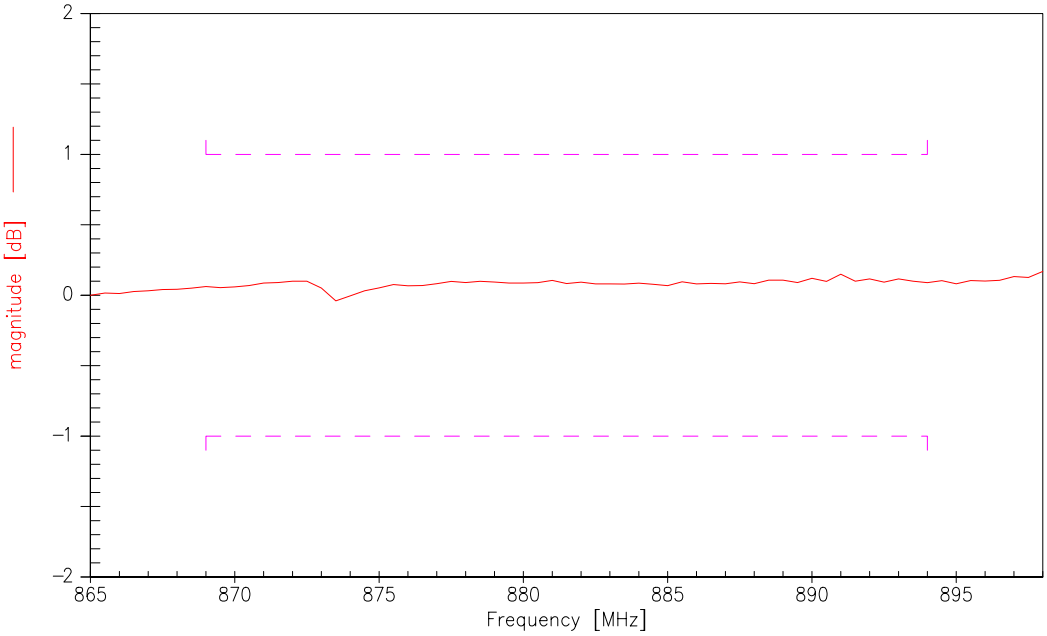
S_{11}



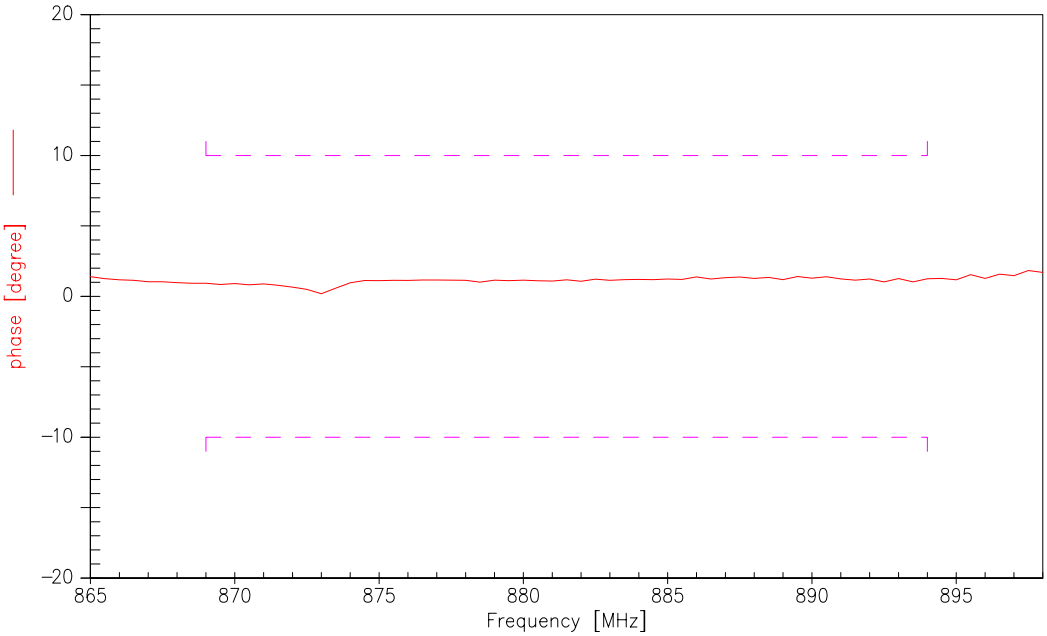
S_{22}



Output amplitude balance ($|S_{31}/S_{21}|$; measurement)



Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^{\circ}$; measurement)



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

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.