



SAW Components

Data Sheet B7639





SAW Components

B7639

Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

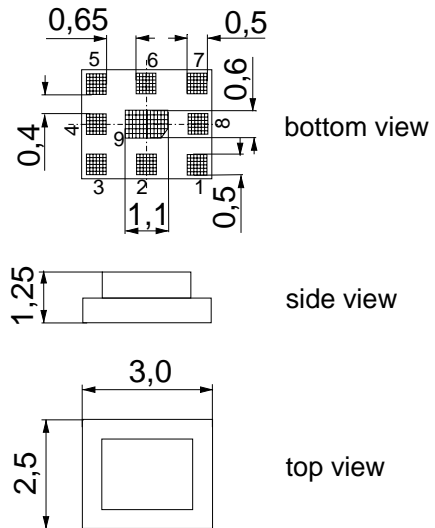
Data Sheet



Chip Sized SAW Package QCS9L

Features

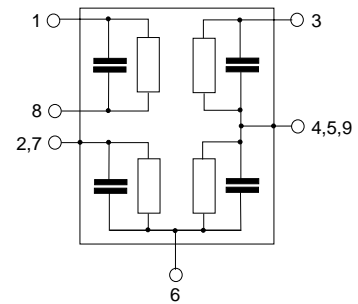
- Low-loss duplexer for cellular band mobile telephone systems
- fully matched by integrated matching network
- Package for **Surface Mounted Technology (SMT)**
- Small size and low height
- Balanced Rx port, single ended Tx port
- Impedance transformation from 50 Ω to 100 Ω in Rx path



Dimensions in mm, approx. weight 0,035 g

Pin configuration

- 3 se. TX Input
- 1,8 bal. RX Output
- 6 Antenna
- 2, 4, 5, 7, 9 Ground



Type	Ordering code	Marking and Package according to	Packing according to
B7639	B39881-B7639-P710	C61157-A3-A19	F61074-V8211-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operating temperature range	T	- 25/+ 85	°C	source and load impedance 50 Ω } continuous wave } $T = 55^{\circ}\text{C}, 50.000\text{ h}$
Storage temperature range	T_{stg}	- 40/+ 85	°C	
DC voltage	V_{DC}	5	V	
ESD voltage	V_{ESD}	100 ¹⁾	V	
Input power max.	P_{IN}			
		824,0 ... 849,0 MHz	27	dBm
		elsewhere	10	

1) -acc. to JESD22-115A (Machine Model), 10 negative & 10 positive pulses



Characteristics

Operating temperature range $T = -15$ to $+80^{\circ}\text{C}$
 ANT terminating impedance $Z_{\text{ANT}} = 50 \Omega$
 RX terminating impedance $Z_{\text{RX}} = 100 \Omega$ (balanced)
 TX terminating impedance $Z_{\text{TX}} = 50 \Omega$

Characteristics TX - ANT		min.	typ.	max.	
Center frequency	f_c	—	836,50	—	MHz
Maximum insertion attenuation	α_{max}				
	824,00 ... 849,00 MHz	—	2,4	2,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	824,00 ... 849,00 MHz	—	0,9	1,3	dB
Return loss					
	824,00 ... 849,00 MHz	10,0	11,5	—	dB
Attenuation	α				
	100,00 ... 779,00 MHz	30	39	—	dB
	779,00 ... 804,00 MHz	30	37	—	dB
	869,00 ... 894,00 MHz	45	49	—	dB
	1550,00 ... 1600,00 MHz	35	39	—	dB
	1648,00 ... 1698,00 MHz	30	37	—	dB
	2400,00 ... 2547,00 MHz	18	22	—	dB
	2547,00 ... 6000,00 MHz	—	3,0	—	dB



Data Sheet



Characteristics

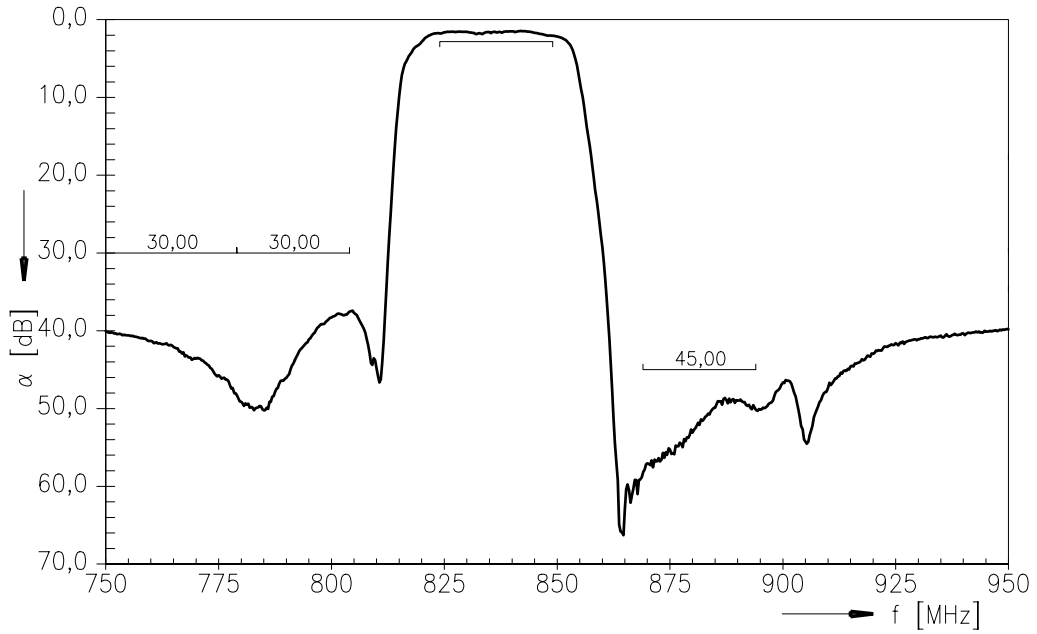
Operating temperature range $T = -15$ to $+80^{\circ}\text{C}$
 ANT terminating impedance $Z_{\text{ANT}} = 50\ \Omega$
 RX terminating impedance $Z_{\text{RX}} = 100\ \Omega$ (balanced)
 TX terminating impedance $Z_{\text{TX}} = 50\ \Omega$

Characteristics ANT - RX		min.	typ.	max.	
Center frequency	f_c	—	881,50	—	MHz
Maximum insertion attenuation	α_{max}	—	2,3	3,0	dB
	869,00 ... 894,00 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$	—	0,8	1,5	dB
	869,00 ... 894,00 MHz				
Return loss		7,0	8,5	—	dB
	869,00 ... 894,00 MHz				
Attenuation	α				
	100,00 ... 779,00 MHz	40	56	—	dB
	779,00 ... 824,00 MHz	40	53	—	dB
	824,00 ... 849,00 MHz	47	50	—	dB
	849,00 ... 854,00 MHz	30	35	—	dB
	914,00 ... 1693,00 MHz	30	35	—	dB
	1693,00 ... 1788,00 MHz	40	57	—	dB
	1788,00 ... 2400,00 MHz	40	56	—	dB
	2400,00 ... 2500,00 MHz	40	48	—	dB
	2500,00 ... 2682,00 MHz	40	47	—	dB
	2682,00 ... 5000,00 MHz	35	43	—	dB
	5150,00 ... 5825,00 MHz	—	46	—	dB
	5825,00 ... 6000,00 MHz	—	44	—	dB

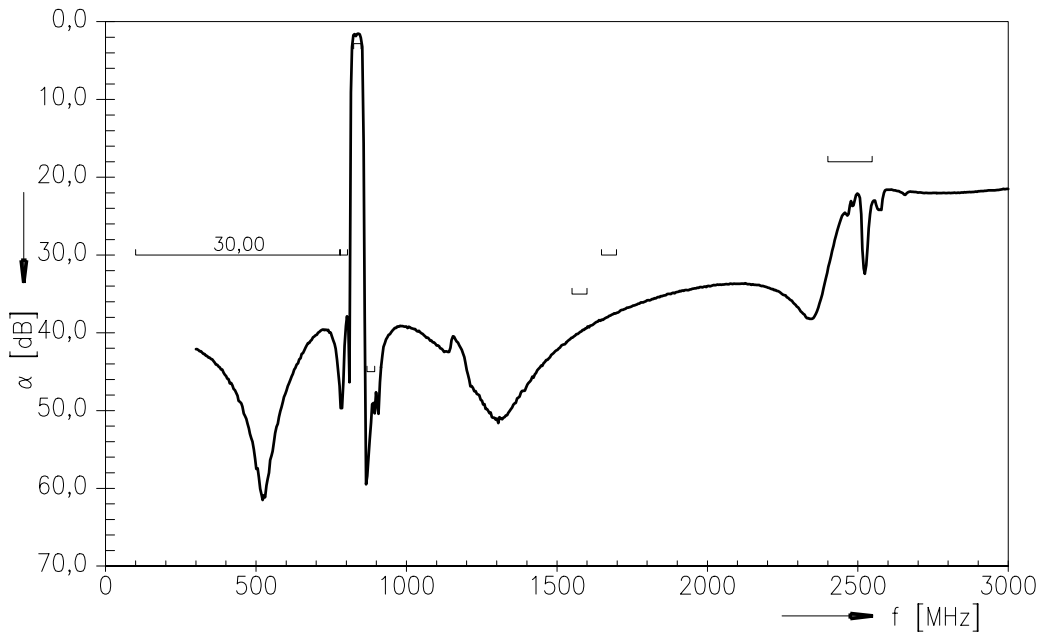
Characteristics TX - RX		min.	typ.	max.	
Isolation between TX and RX path	α				
	824,00 ... 849,00 MHz	49	53	—	dB
	869,00 ... 894,00 MHz	45	50	—	dB



Frequency Response TX - ANT

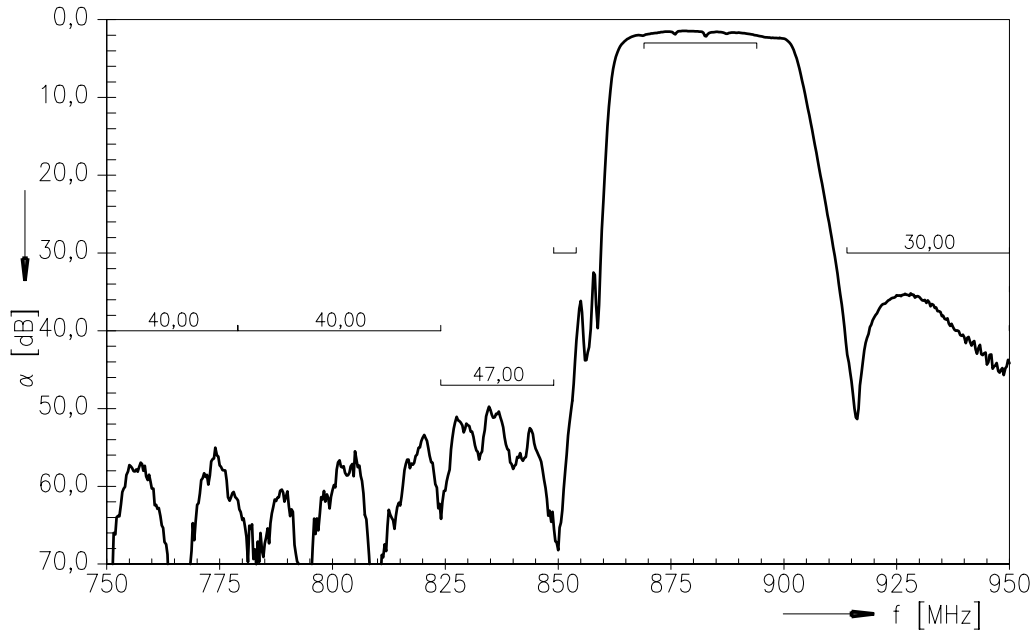


Frequency Response TX - ANT (wideband)

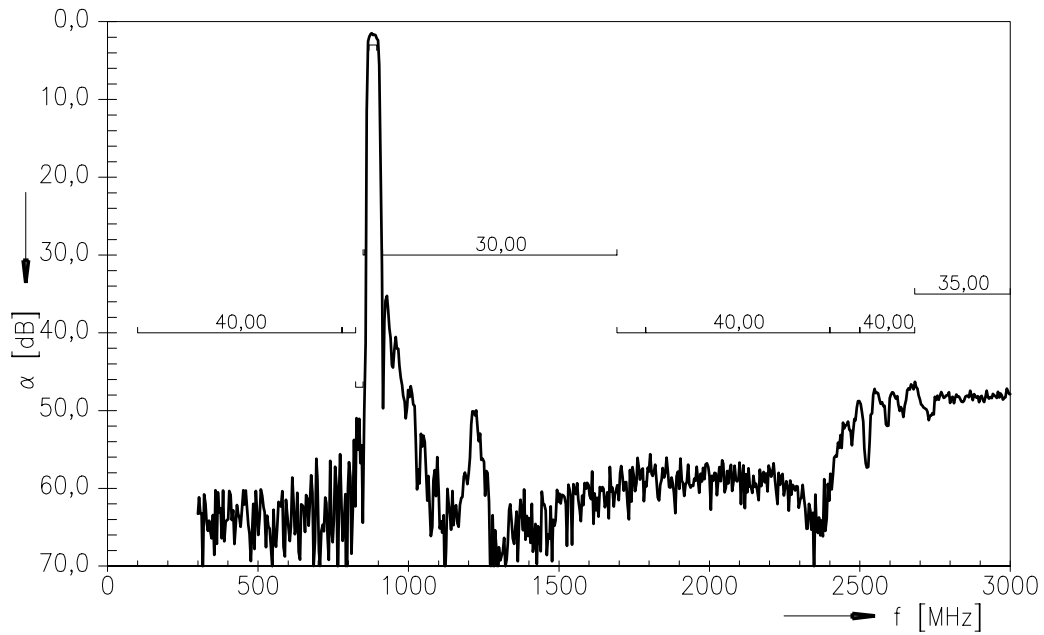




Frequency Response ANT - RX



Frequency Response ANT - RX (wideband)





SAW Components

B7639

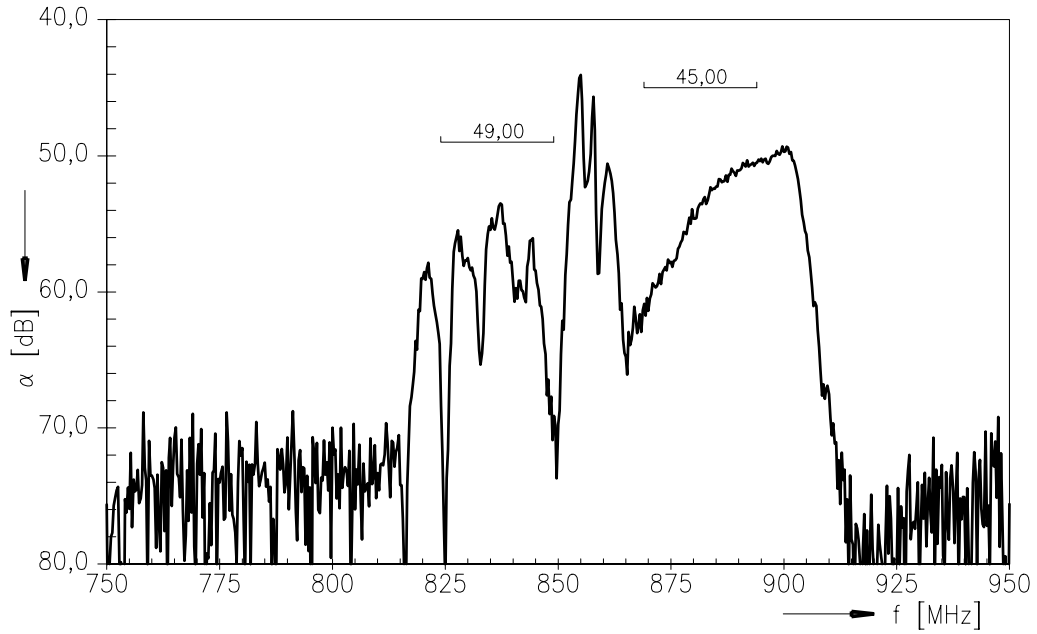
Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

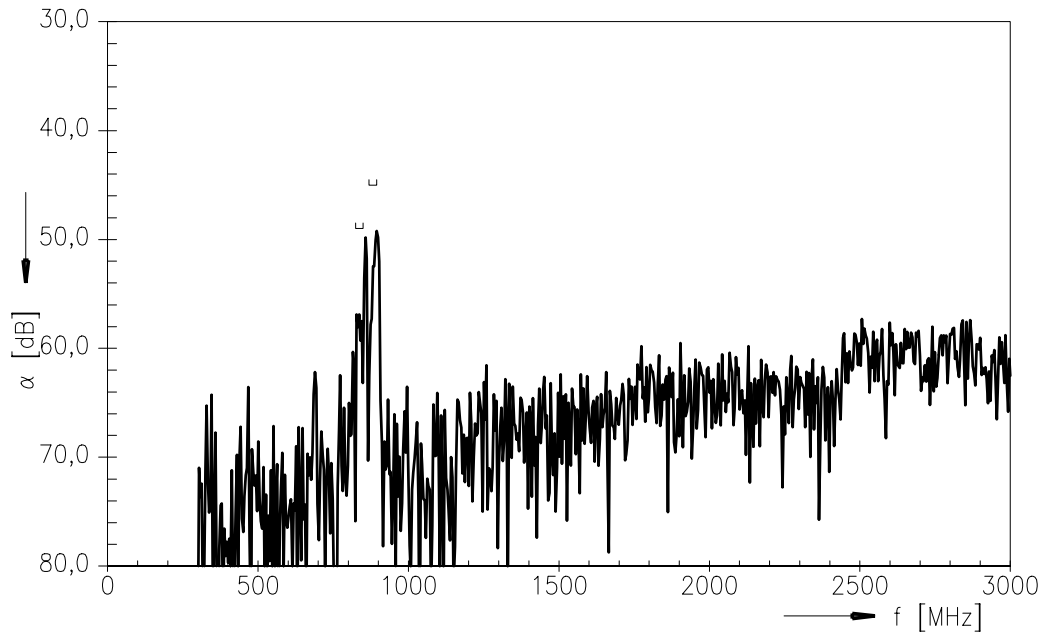
Data Sheet



Frequency Response TX - RX



Frequency Response TX - RX (wideband)





SAW Components

B7639

Low-Loss Filter for Mobile Communication

836,5 / 881,5 MHz

Data Sheet



Published by EPCOS AG

Surface Acoustic Wave Components Division, SAW MC WT

P.O. Box 80 17 09, 81617 Munich, GERMANY

© EPCOS AG 2005. 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.