EPCOS

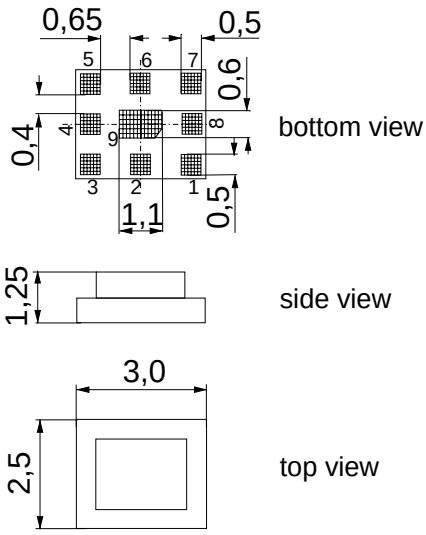
SAW Components

Data Sheet B7639

Chip **Si**zed **S**AW **P**ackage **QCS9L**

Features

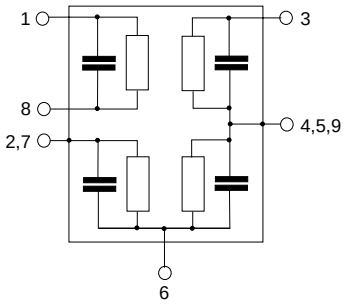
- Low-loss duplexer for cellular band mobile telephone systems
- fully matched by integrated matching network
- Package for **S**urface **M**ounted **T**echnology (**SMT**)
- Small size and low height
- Balanced Rx port, single ended Tx port
- Impedance transformation from 50 Ω to 100 Ω in Rx path



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 **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operating temperature range	T	– 25/+ 85	˚C	
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}			source and load impedance 50 Ω
824,0 ... 849,0 MHz		27	dBm	} continuous wave
elsewhere		10	dBm	T = 55˚C, 50.000 h

1) -acc. toJESD22-115A (Machine Model), 10 negatie & 10 positive pulses

Characteristics

Operating temperature range T = -15 to +80˚C
ANT terminating impedance Z_{ANT} = 50 Ω
RX terminating impedance Z_{RX} = 100 Ω (balanced)
TX terminating impedance Z_{TX} = 50 Ω

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

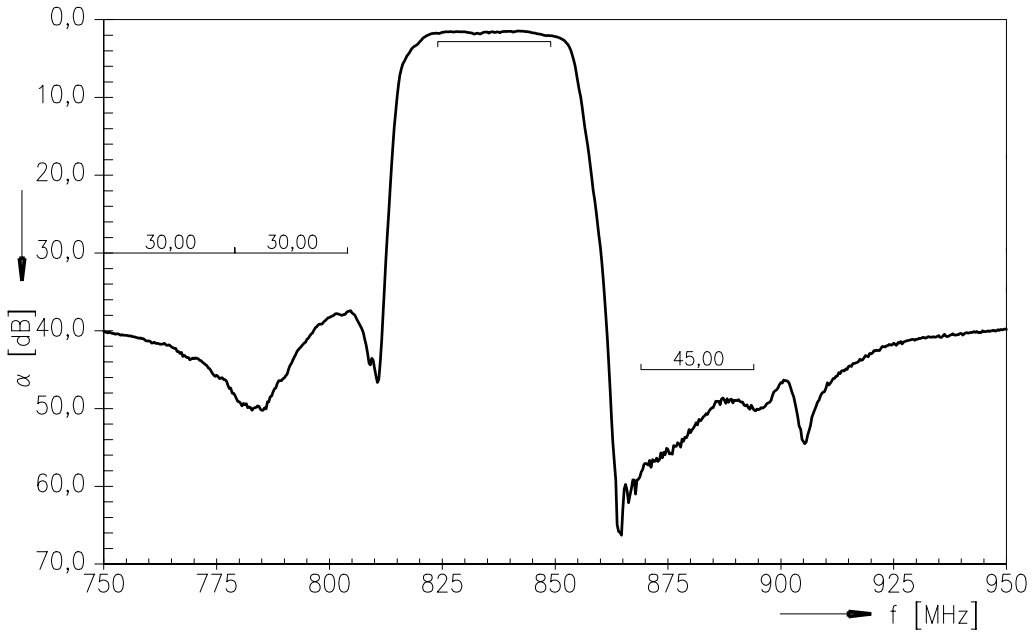
Characteristics

Operating temperature range T = -15 to +80˚C
ANT terminating impedance Z_{ANT} = 50 Ω
RX terminating impedance Z_{RX} = 100 Ω (balanced)
TX terminating impedance Z_{TX} = 50 Ω

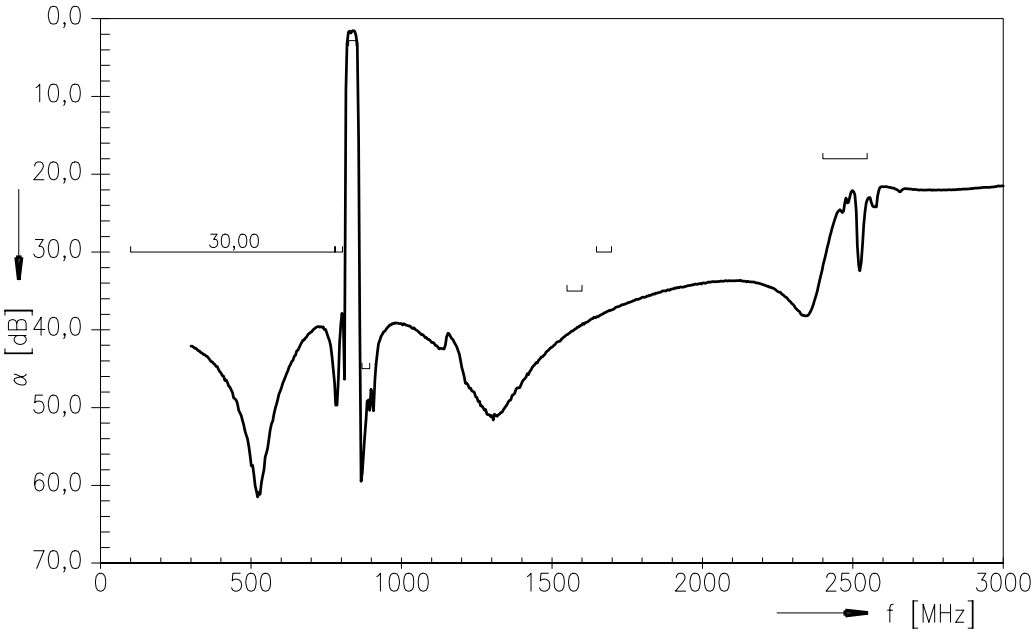
Characteristics ANT - RX			min.	typ.	max.	
Center frequency		f_c	—	881,50	—	MHz
Maximum insertion attenuation		α_{max}				
	869,00 ... 894,00 MHz		—	2,3	3,0	dB
Amplitude ripple (p-p)		$\Delta\alpha$				
	869,00 ... 894,00 MHz		—	0,8	1,5	dB
Return loss						
	869,00 ... 894,00 MHz		7,0	8,5	—	dB
Attenuation		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

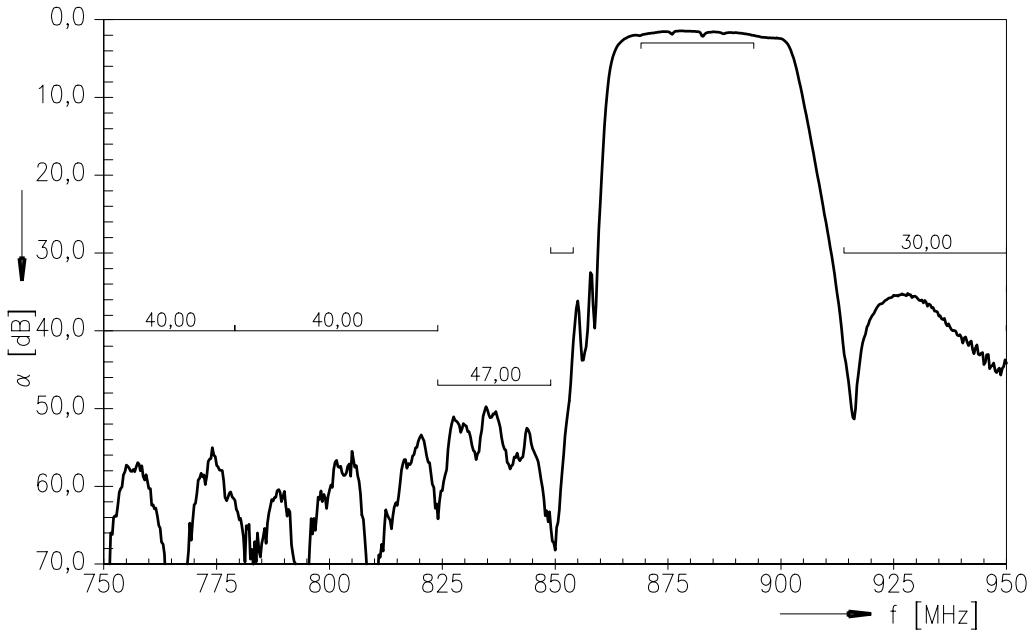
Frequency Response TX - ANT



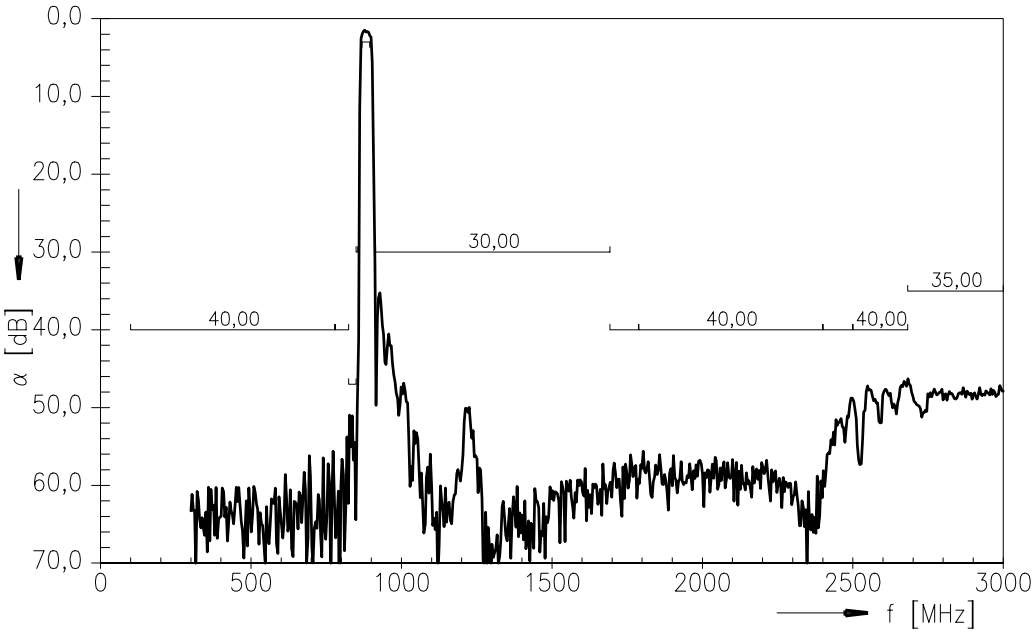
Frequency Response TX - ANT (wideband)



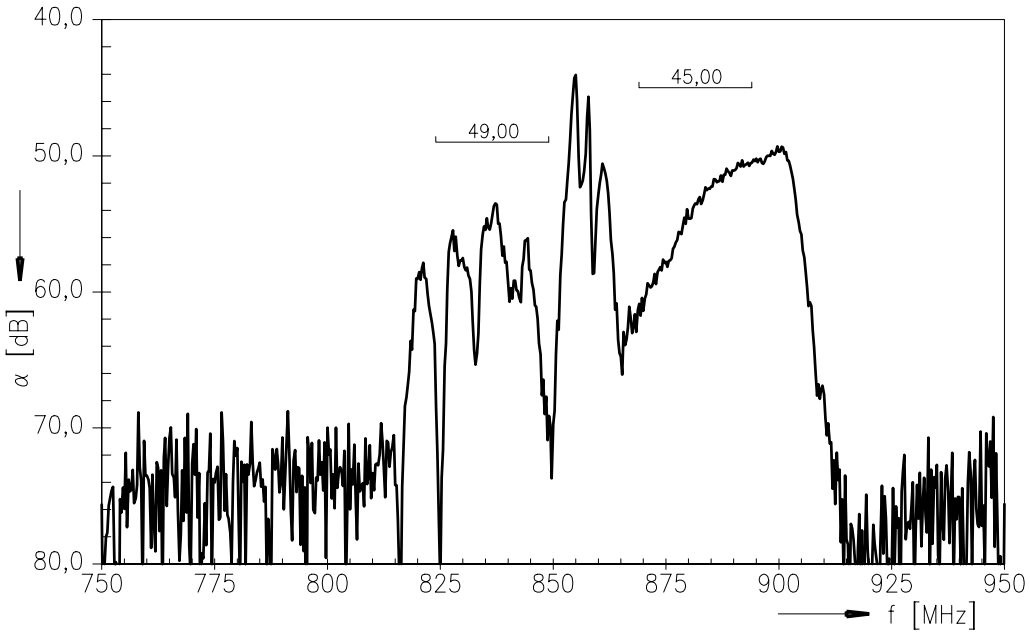
Frequency Response ANT - RX



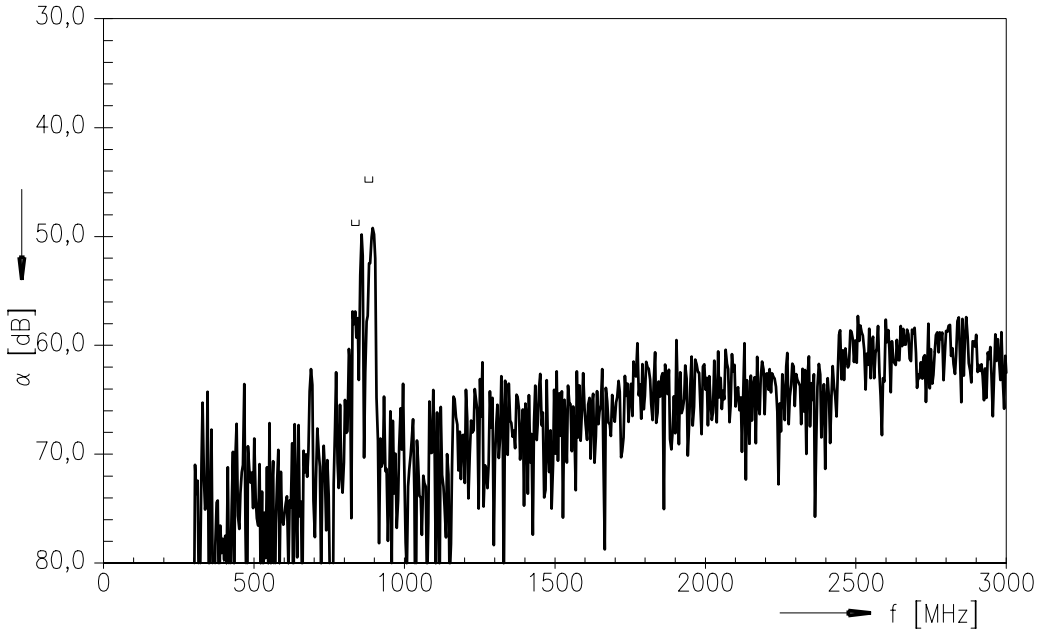
Frequency Response ANT - RX (wideband)



Frequency Response TX - RX



Frequency Response TX - RX (wideband)



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