EPCOS

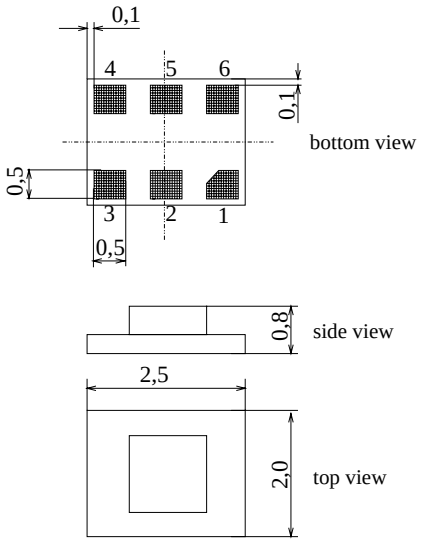
SAW Components

Data Sheet B7758

Chip **S**ized **S**AW **P**ackage **DCS6N**

Features

- Low-loss 2-in-1 RF filter for mobile telephone PCS systems, transmit path
- Device with two integrated Tx-filter
- Usable passband of Tx-filter 1 35 MHz
- Usable passband of Tx-filter 2 35 MHz
- No matching network required for operation at 50 Ω
- Package for **S**urface **M**ounted **T**echnology (**SMT**)



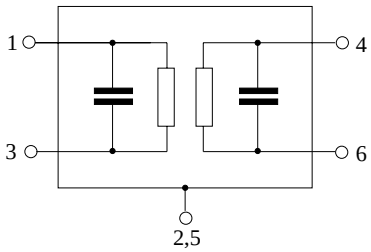
Dimensions in mm, approx. weight 0,015 g

Terminals

- Ni, gold-plated

Pin configuration

3	Input Tx-filter 1
1	Output Tx-filter 1
2,5	To be grounded
4	Input Tx-filter 2
6	Output Tx-filter 2



Type	Ordering code	Marking and Package according to	Packing according to
B7758	B39192-B7758-E311	C61157-Z7-C179	F61074-V8153-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}	3	V	
Input power max. 1850...1910 MHz	P_{IN}	12	dBm	source and load impedance 50 Ω CW signal

Characteristics of Tx-filter 1

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

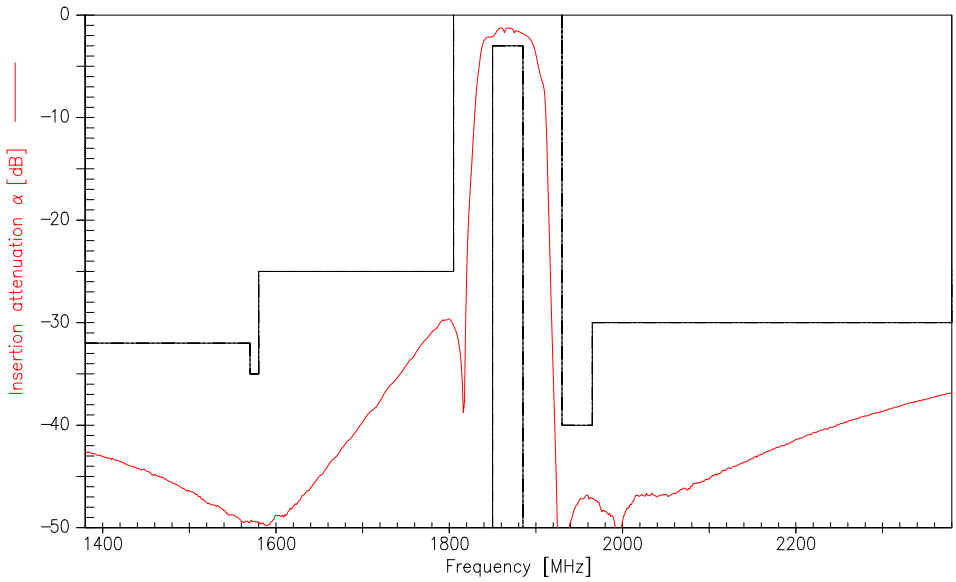
				min.	typ.	max.	
Center frequency			f_c	—	1865,0	—	MHz
Maximum insertion attenuation			α_{max}				
1850,0	...1885,0	MHz		—	2,4	3,0	dB
1850,0	...1880,0	MHz		—	2,4	2,7	dB
Amplitude ripple (p-p)			$\Delta\alpha$				
1850,0	...1885,0	MHz		—	1,0	1,6	dB
1850,0	...1880,0	MHz		—	1,0	1,3	dB
Input return loss							
1850,0	...1885,0	MHz		12,0	13,5	—	dB
						—	dB
Output return loss							
1850,0	...1885,0	MHz		12,0	13,5	—	dB
						—	dB
Attenuation			α				
10,0	...1570,0	MHz		32,0	40,0	—	dB
1570,0	...1580,0	MHz		35,0	48,0	—	dB
1580,0	...1805,0	MHz		25,0	29,0	—	dB
1930,0	...1965,0	MHz		40,0	48,0	—	dB
1965,0	...2500,0	MHz		30,0	36,0	—	dB
2500,0	...3000,0	MHz		25,0	31,0	—	dB
3000,0	...3700,0	MHz		20,0	25,0	—	dB
3700,0	...3760,0	MHz		20,0	25,0	—	dB
3760,0	...6000,0	MHz		15,0	20,0	—	dB
Rx band suppression							
1930,0	...1965,0	MHz		40,0	48,0	—	dB
GPS band suppression							
1570,0	...1580,0	MHz		35,0	48,0	—	dB
LO suppression							
2113,0	...2174,0	MHz		37,0	42,0	—	dB

Characteristics of Tx-filter 2

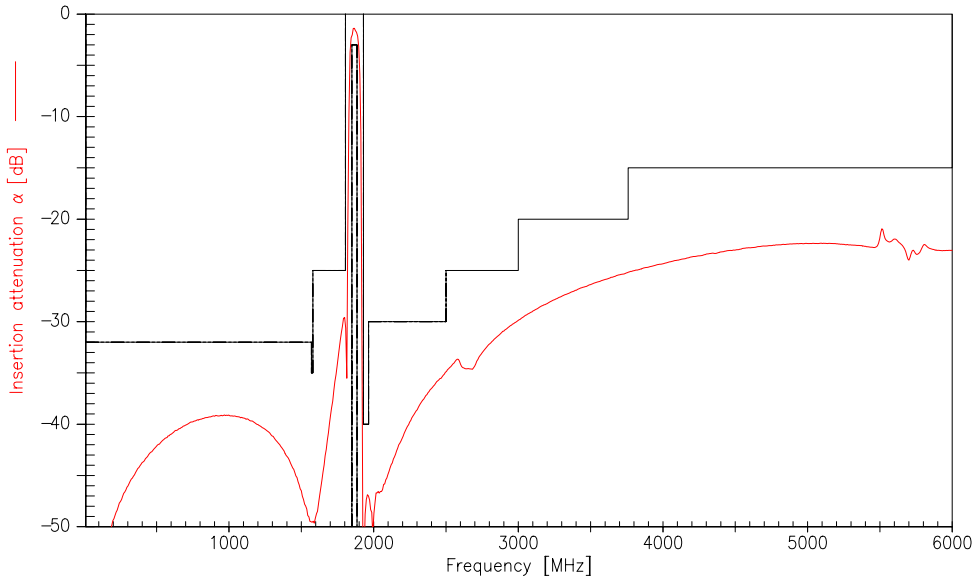
Operating temperature range: T = -30 to +85 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			min.	typ.	max.	
Center frequency	f_c		—	1895,0	—	MHz
Maximum insertion attenuation	α_{max}					
1875,0 ...1910,0	MHz		—	2,6	3,0	dB
1880,0 ...1910,0	MHz		—	2,4	2,7	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
1875,0 ...1910,0	MHz		—	1,2	1,6	dB
1880,0 ...1910,0	MHz		—	1,0	1,3	
Input return loss						
1875,0 ...1910,0	MHz		12,0	13,5	—	dB
Output return loss						
1875,0 ...1910,0	MHz		12,0	13,5	—	dB
Attenuation	α					
10,0 ...1570,0	MHz		32,0	40,0	—	dB
1570,0 ...1580,0	MHz		35,0	48,0	—	dB
1580,0 ...1830,0	MHz		25,0	30,0	—	dB
1955,0 ...1990,0	MHz		40,0	48,0	—	dB
1990,0 ...2500,0	MHz		30,0	36,0	—	dB
2500,0 ...3000,0	MHz		25,0	30,0	—	dB
3000,0 ...3760,0	MHz		20,0	25,0	—	dB
3760,0 ...3820,0	MHz		20,0	25,0	—	dB
3820,0 ...6000,0	MHz		14,0	19,0	—	dB
Rx band suppression						
1955,0 ...1990,0	MHz		40,0	48,0	—	dB
GPS band suppression						
1570,0 ...1580,0	MHz		35,0	48,0	—	dB
LO suppression						
2113,0 ...2174,0	MHz		37,0	42,0	—	dB

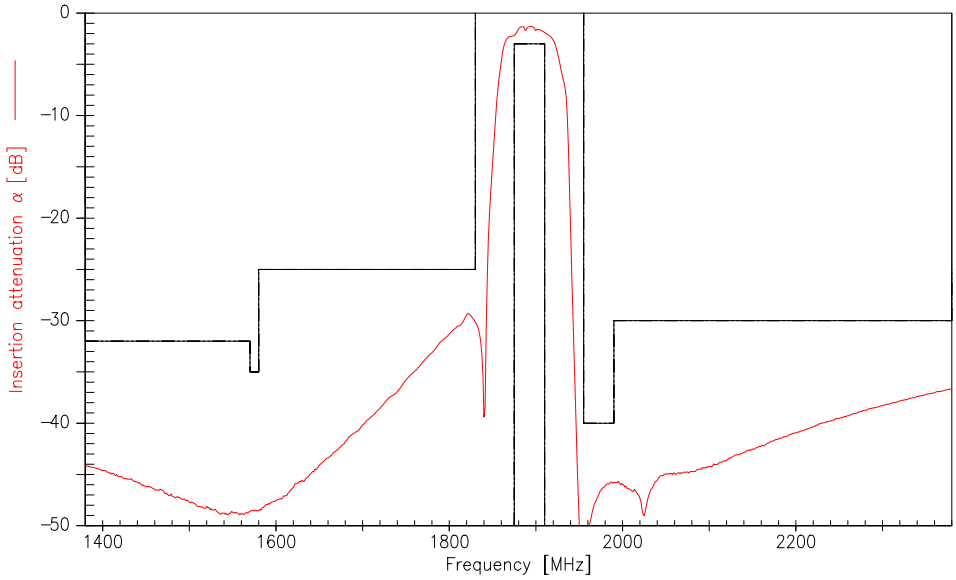
Transfer function Tx-filter 1



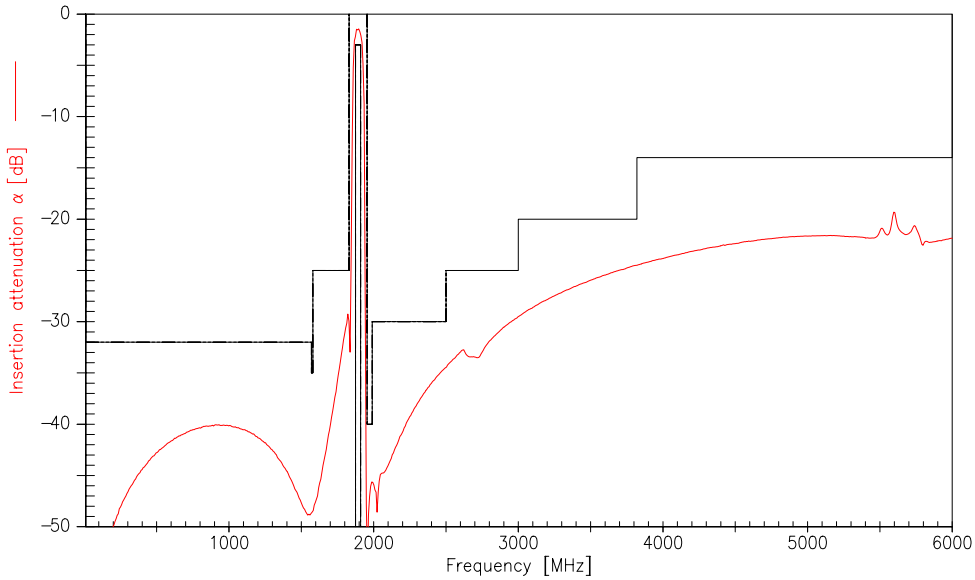
Transfer function Tx-filter 1(wideband)



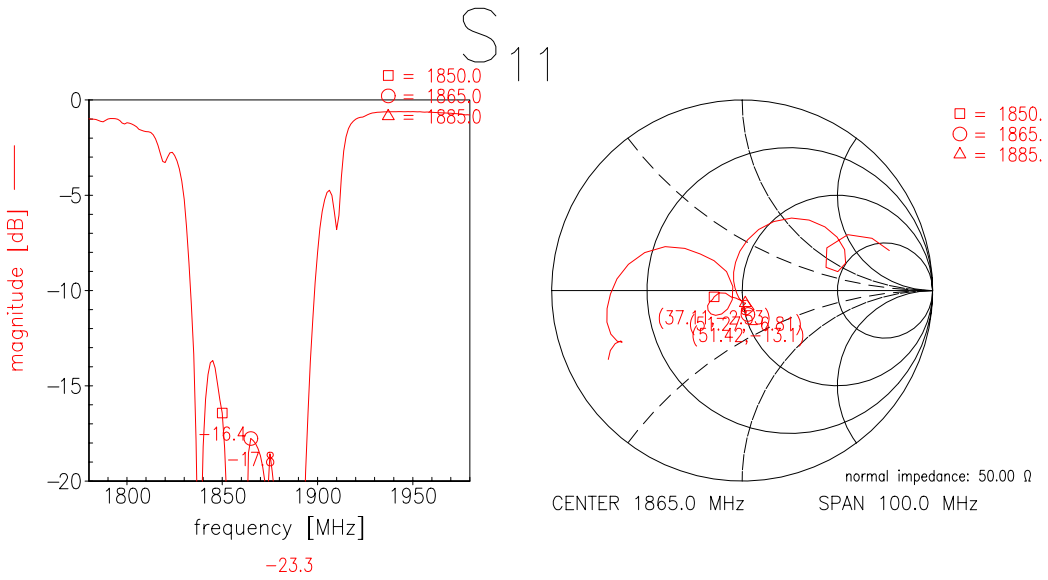
Transfer function Tx-filter 2

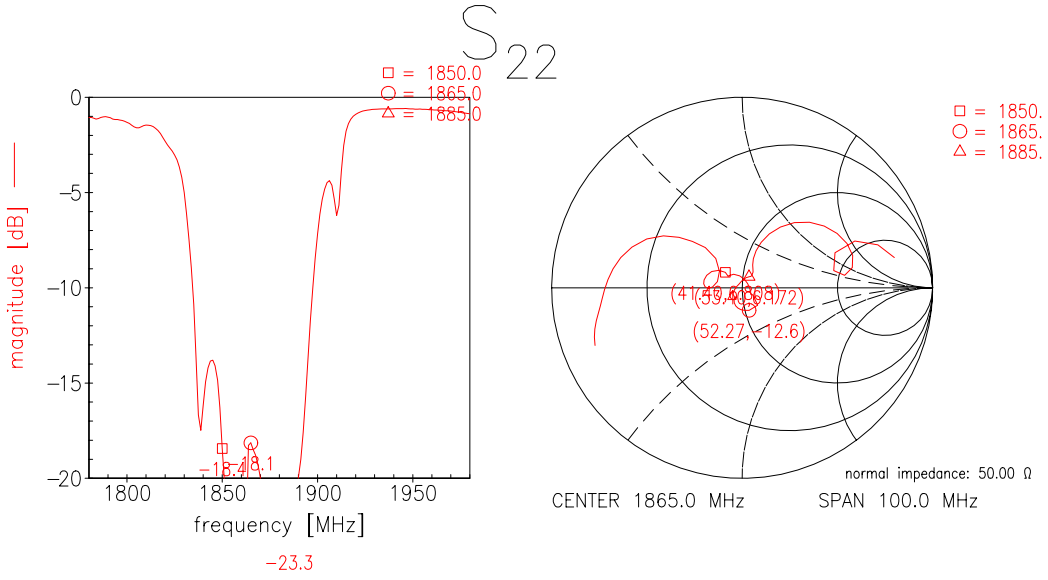


Transfer function Tx-filter 2(wideband)

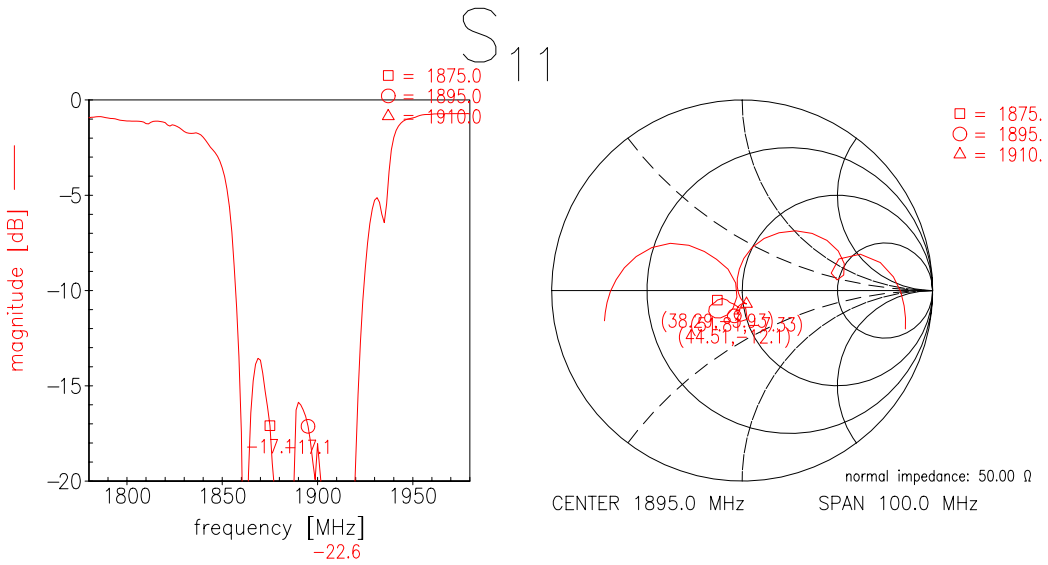


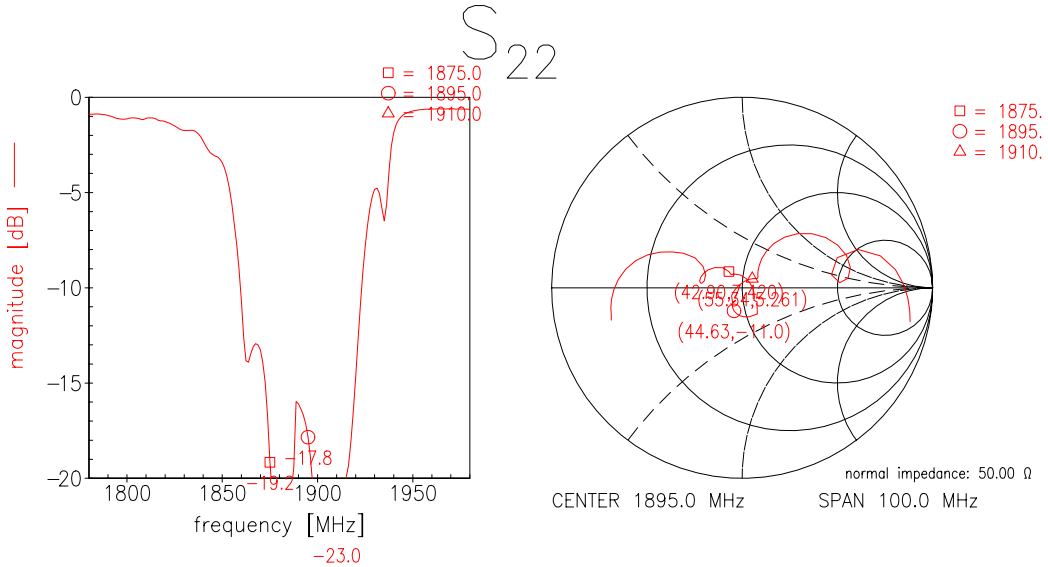
Reflection functions of Tx-filter 1





Reflection functions of Tx-filter 2





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