



## 2in1 RF Filters for Cellular Phones

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39192B7758E311	B39192B9014E910	2007-12-01	2007-02-28	2007-05-31

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# SAW Components

Data Sheet B7758





**SAW Components**

**B7758**

**Low-Loss Filter for Mobile Communication**

**1865,0 & 1895,0 MHz**

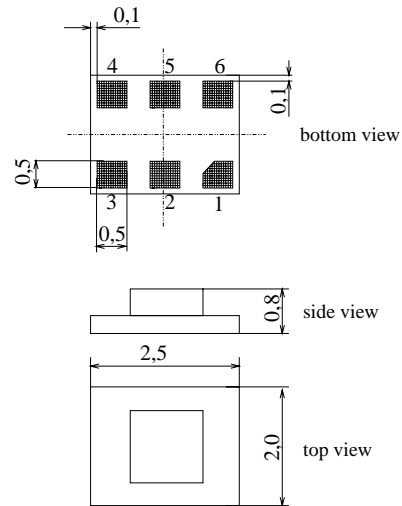
**Data Sheet**



**Chip Sized SAW Package 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 **Surface Mounted Technology (SMT)**



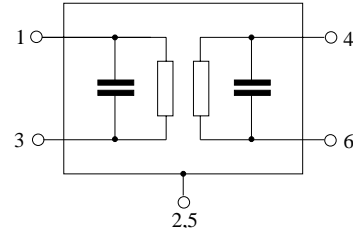
Dimensions in mm, approx. weight 0,015 g

**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 Sensitive Device (ESD)

**Maximum ratings**

Operable temperature range	$T$	- 30 /+ 85	°C	source and load impedance 50 Ω CW signal
Storage temperature range	$T_{stg}$	- 40 /+ 85	°C	
DC voltage	$V_{DC}$	3	V	
Input power max. 1850...1910 MHz	$P_{IN}$	12	dBm	



**Characteristics of Tx-filter 1**

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

		min.	typ.	max.	
<b>Center frequency</b>	$f_c$	—	1865,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{max}$				
1850,0 ... 1885,0	MHz	—	2,4	3,0	dB
1850,0 ... 1880,0	MHz	—	2,4	2,7	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$				
1850,0 ... 1885,0	MHz	—	1,0	1,6	dB
1850,0 ... 1880,0	MHz	—	1,0	1,3	dB
<b>Input return loss</b>					
1850,0 ... 1885,0	MHz	12,0	13,5	—	dB
				—	dB
<b>Output return loss</b>					
1850,0 ... 1885,0	MHz	12,0	13,5	—	dB
				—	dB
<b>Attenuation</b>	$\alpha$				
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
<b>Rx band suppression</b>					
1930,0 ... 1965,0	MHz	40,0	48,0	—	dB
<b>GPS band suppression</b>					
1570,0 ... 1580,0	MHz	35,0	48,0	—	dB
<b>LO suppression</b>					
2113,0 ... 2174,0	MHz	37,0	42,0	—	dB



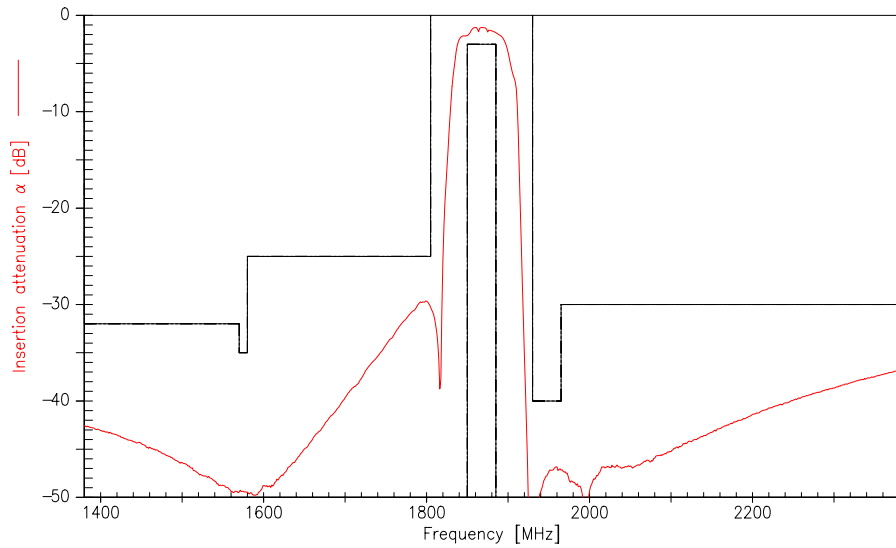
**Characteristics of Tx-filter 2**

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

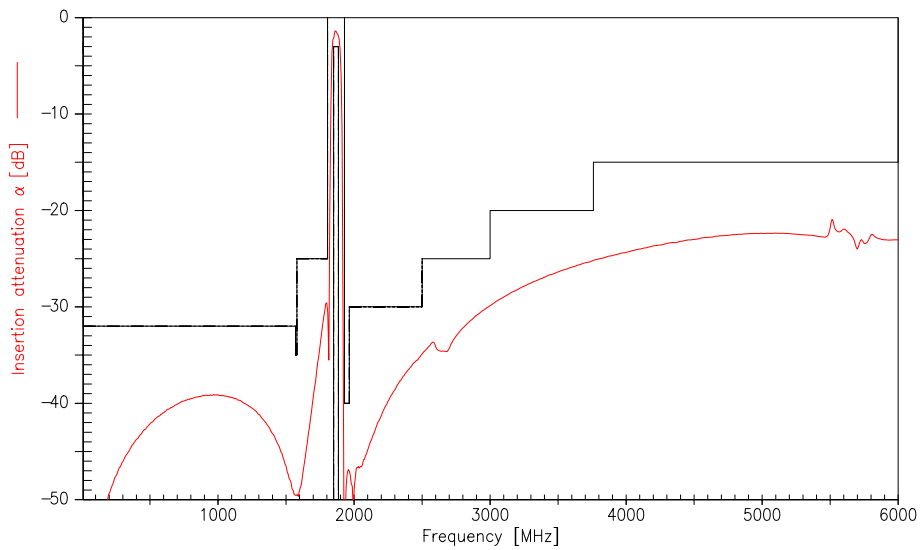
				min.	typ.	max.	
<b>Center frequency</b>		$f_c$		—	1895,0	—	MHz
<b>Maximum insertion attenuation</b>			$\alpha_{max}$				
	1875,0 ... 1910,0	MHz		—	2,6	3,0	dB
	1880,0 ... 1910,0	MHz		—	2,4	2,7	dB
<b>Amplitude ripple (p-p)</b>			$\Delta\alpha$				
	1875,0 ... 1910,0	MHz		—	1,2	1,6	dB
	1880,0 ... 1910,0	MHz		—	1,0	1,3	
<b>Input return loss</b>	1875,0 ... 1910,0	MHz		12,0	13,5	—	dB
<b>Output return loss</b>	1875,0 ... 1910,0	MHz		12,0	13,5	—	dB
<b>Attenuation</b>			$\alpha$				
	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
<b>Rx band suppression</b>	1955,0 ... 1990,0	MHz		40,0	48,0	—	dB
<b>GPS band suppression</b>	1570,0 ... 1580,0	MHz		35,0	48,0	—	dB
<b>LO suppression</b>	2113,0 ... 2174,0	MHz		37,0	42,0	—	dB



Transfer function Tx-filter 1

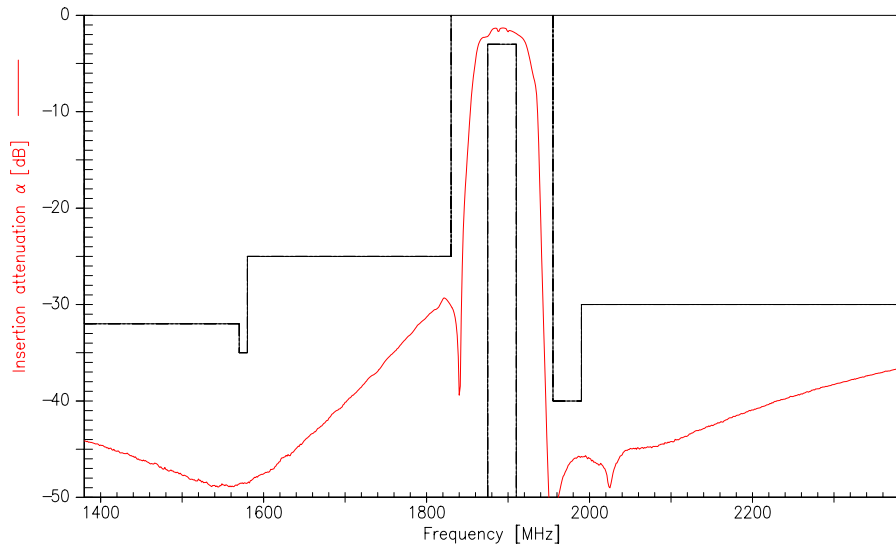


Transfer function Tx-filter 1(wideband)

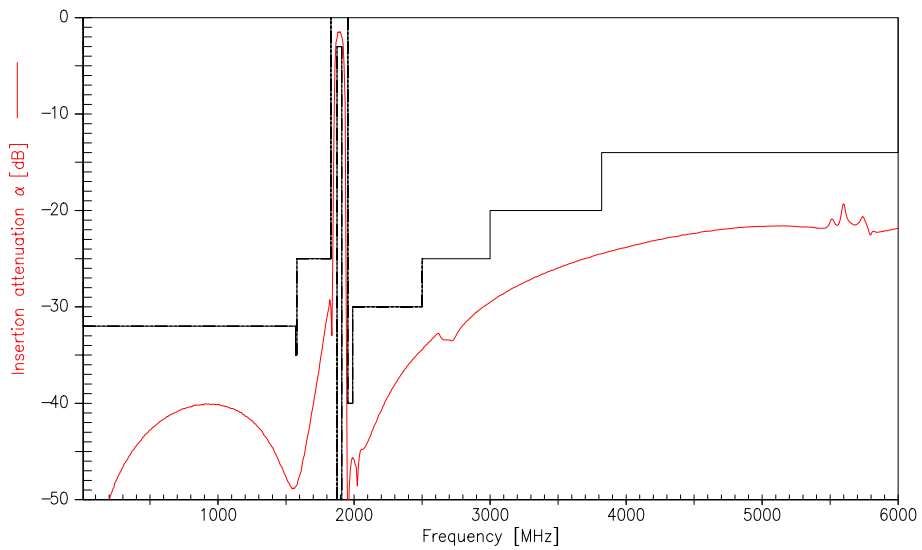




Transfer function Tx-filter 2

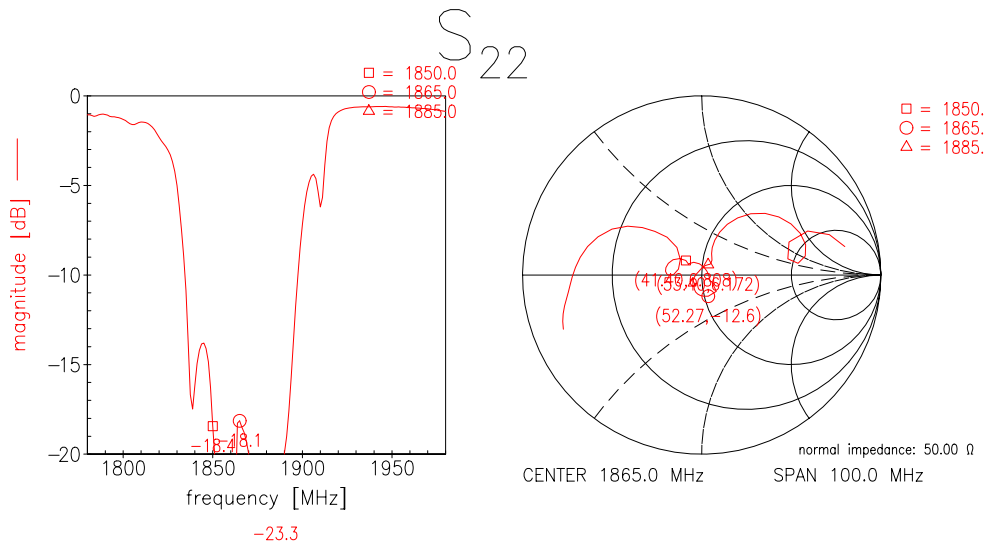
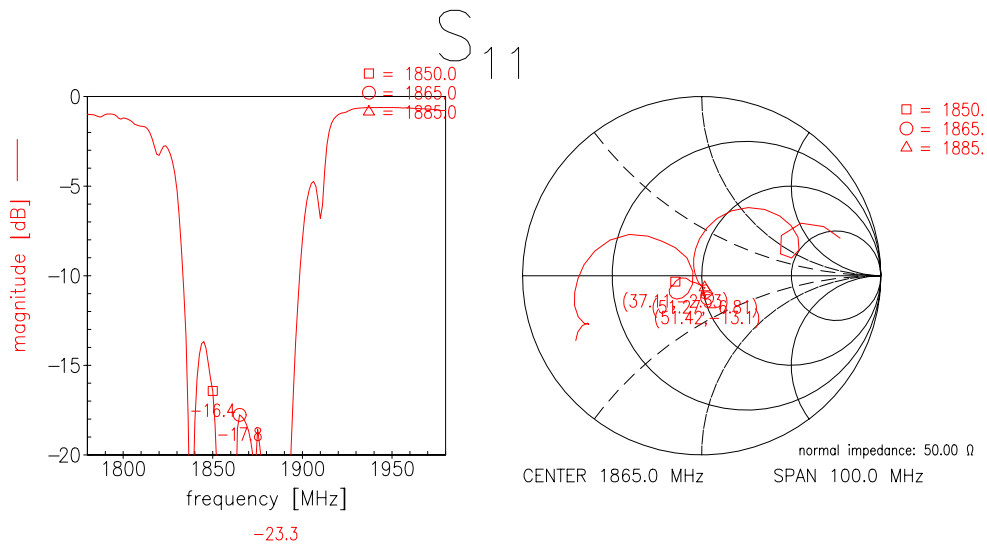


Transfer function Tx-filter 2(wideband)





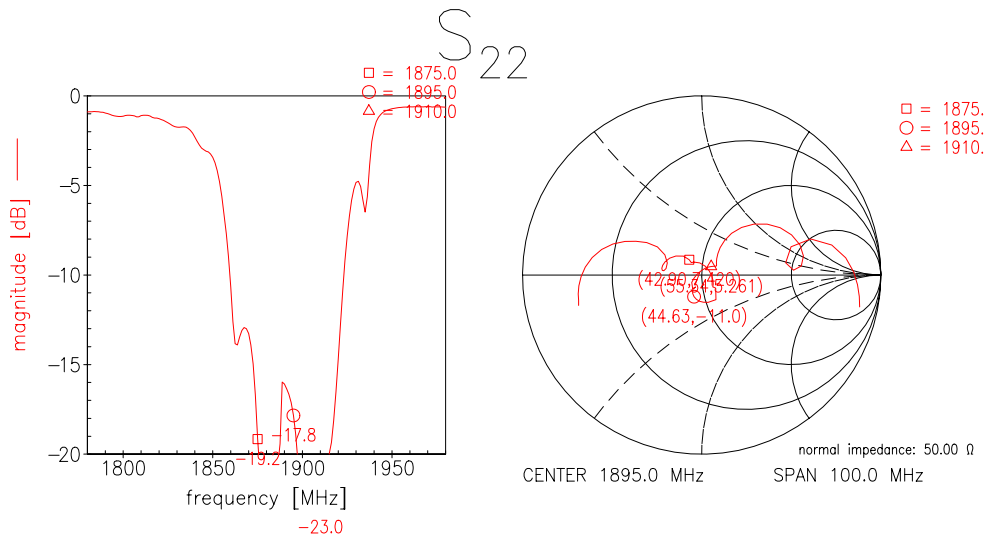
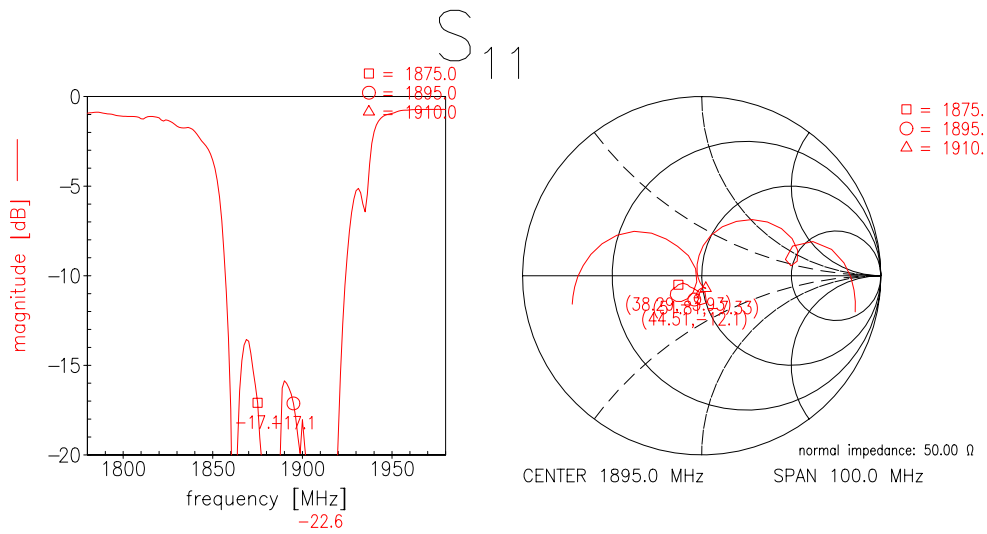
Reflection functions of Tx-filter 1







Reflection functions of Tx-filter 2





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**1865,0 & 1895,0 MHz**

Data Sheet



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