



# SAW filters for mobile communications

## Series/Type: B4218

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39192B4218U810		2009-07-31	2009-11-30	2010-02-28

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## SAW Components

B4218

## Low-Loss Filter for Mobile Communication

1865,0 & 1895,0 MHz

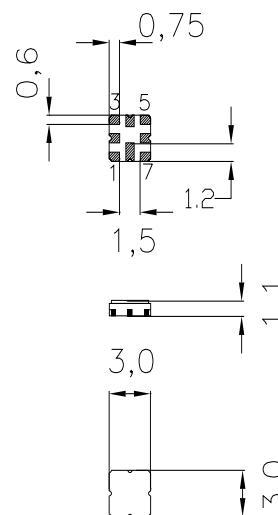
## Data Sheet



Ceramic package QCC8D

### 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 30 MHz
- Usable passband of Tx-filter 2 30 MHz
- No matching network required for operation at 50  $\Omega$
- Package for **Surface Mounted Technology (SMT)**



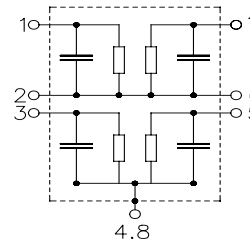
Dimensions in mm, approx. weight 0,037 g

### Terminals

- Ni, gold-plated

### Pin configuration

1	Input Tx-filter 1
7	Output Tx-filter 1
2,6	To be grounded
3	Input Tx-filter 2
5	Output Tx-filter 2
4,8	Case-ground, to be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B4218	B39192-B4218-U810	C61157-A7-A72	F61074-V8101-Z000

Electrostatic Sensitive Device (ESD)

### Maximum ratings

Operable temperature range	$T$	- 40 /+ 85	$^{\circ}\text{C}$	source and load impedance 50 $\Omega$ continuous wave
Storage temperature range	$T_{\text{stg}}$	- 40 /+ 85	$^{\circ}\text{C}$	
DC voltage	$V_{\text{DC}}$	3	V	
Input power max. 1850...1910 MHz	$P_{\text{IN}}$	10	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 ... 1880,0	MHz	—	1,8	2,5	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1850,0 ... 1880,0	MHz	—	0,7	1,4	dB
<b>Input return loss</b>						
	1850,0 ... 1880,0	MHz	9,0	10,0	—	dB
<b>Output return loss</b>						
	1850,0 ... 1880,0	MHz	9,0	10,0	—	dB
<b>Attenuation</b>	$\alpha$					
	10,0 ... 1570,0	MHz	25,0	29,0	—	dB
	1570,0 ... 1580,0	MHz	30,0	32,0	—	dB
	1580,0 ... 1780,0	MHz	29,0	32,0	—	dB
	1780,0 ... 1800,0	MHz	25,0	30,0	—	dB
	1800,0 ... 1805,0	MHz	20,0	26,0	—	dB
	1930,0 ... 1960,0	MHz	38,0	45,0	—	dB
	1960,0 ... 2400,0	MHz	32,0	35,0	—	dB
	2400,0 ... 3000,0	MHz	22,0	32,0	—	dB
	3000,0 ... 4000,0	MHz	15,0	19,0	—	dB
	5550,0 ... 5640,0	MHz	0,0	5,0	—	dB
<b>Rx band suppression</b>	$\alpha$					
	1930,0 ... 1960,0	MHz	38,0	45,0	—	dB
<b>LO suppression</b>	$\alpha$					
	2113,0 ... 2174,0	MHz	32,0	35,0	—	dB



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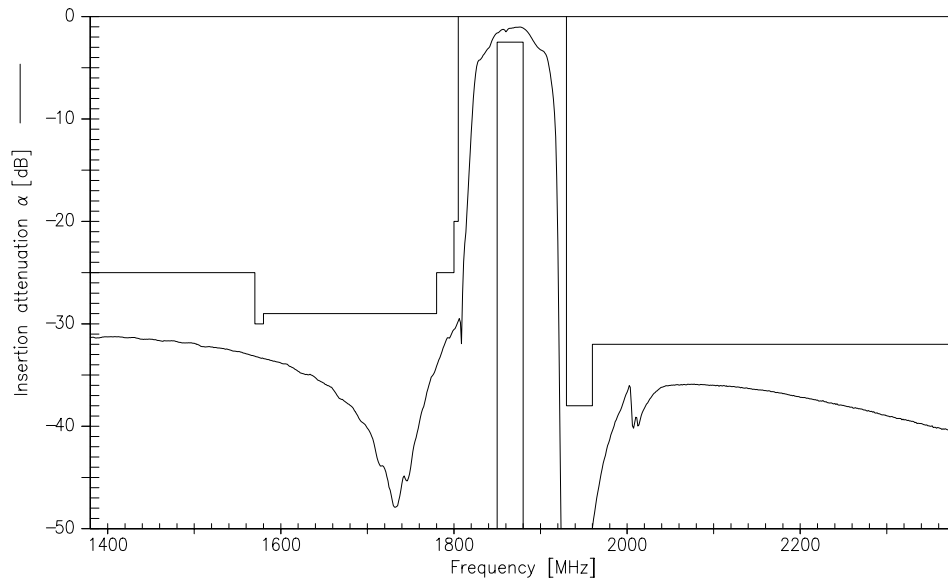


#### Characteristics of Tx-filter 2

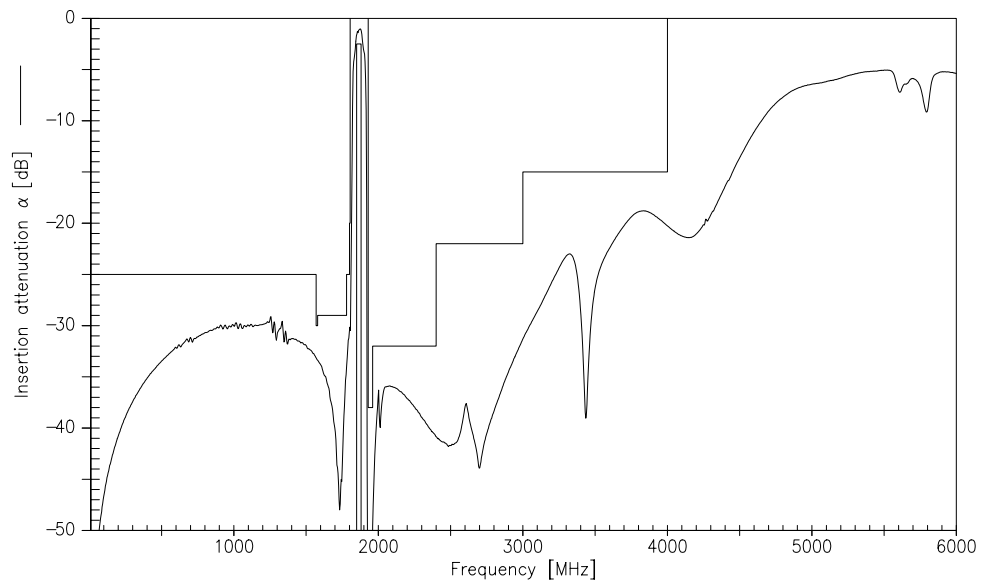
Operating temperature range:  $T = -30$  to  $+85$  °C  
Terminating source impedance:  $Z_S = 50 \Omega$   
Terminating load impedance:  $Z_L = 50 \Omega$

			min.	typ.	max.	
<b>Center frequency</b>	$f_c$		—	1895,0	—	MHz
<b>Maximum insertion attenuation</b>	$\alpha_{\max}$					
	1880,0 ... 1910,0 MHz		—	1,8	2,5	dB
<b>Amplitude ripple (p-p)</b>	$\Delta\alpha$					
	1880,0 ... 1910,0 MHz		—	0,7	1,4	dB
<b>Input return loss</b>						
	1880,0 ... 1910,0 MHz		9,0	10,0	—	dB
<b>Output return loss</b>						
	1880,0 ... 1910,0 MHz		9,0	10,0	—	dB
<b>Attenuation</b>	$\alpha$					
	10,0 ... 1570,0 MHz		25,0	29,0	—	dB
	1570,0 ... 1580,0 MHz		30,0	32,0	—	dB
	1580,0 ... 1780,0 MHz		29,0	32,0	—	dB
	1780,0 ... 1800,0 MHz		25,0	30,0	—	dB
	1800,0 ... 1830,0 MHz		22,0	29,0	—	dB
	1960,0 ... 1990,0 MHz		38,0	45,0	—	dB
	1990,0 ... 2400,0 MHz		32,0	35,0	—	dB
	2400,0 ... 3000,0 MHz		22,0	30,0	—	dB
	3000,0 ... 4000,0 MHz		15,0	19,0	—	dB
	5640,0 ... 5730,0 MHz		0,0	5,0	—	dB
<b>Rx band suppression</b>	$\alpha$					
	1960,0 ... 1990,0 MHz		38,0	45,0	—	dB
<b>LO suppression</b>	$\alpha$					
	2113,0 ... 2174,0 MHz		32,0	35,0	—	dB

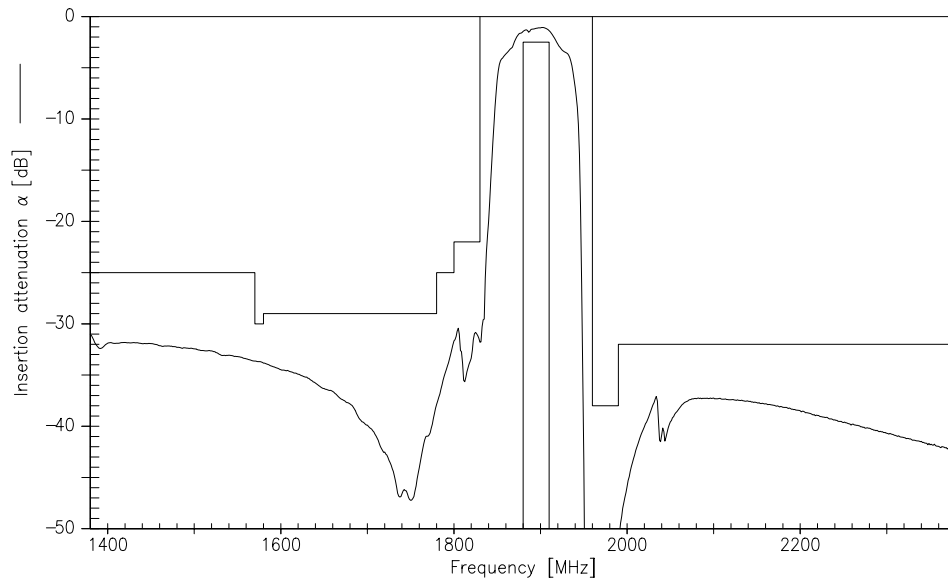
Transfer function Tx-filter 1



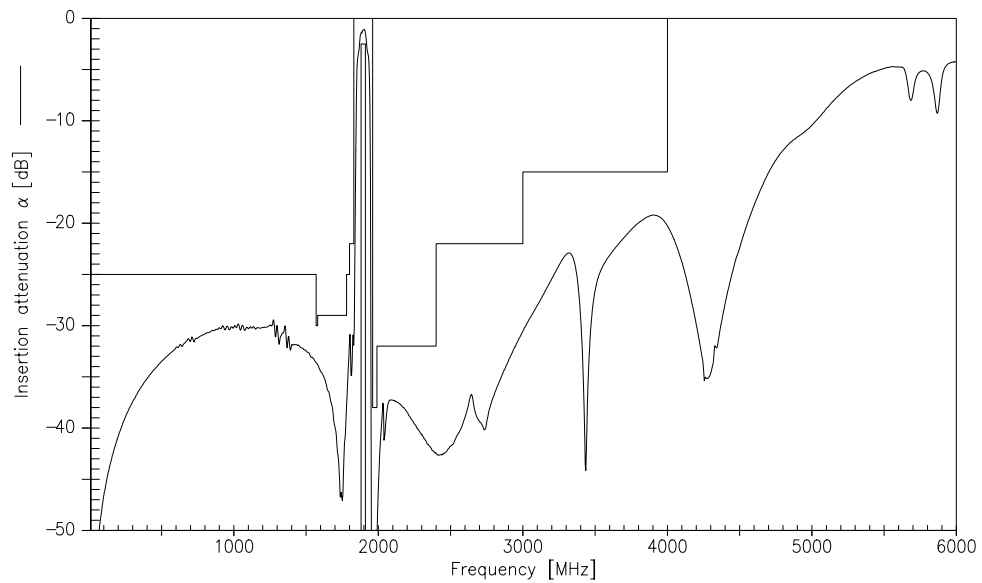
Transfer function Tx-filter 1(wideband)



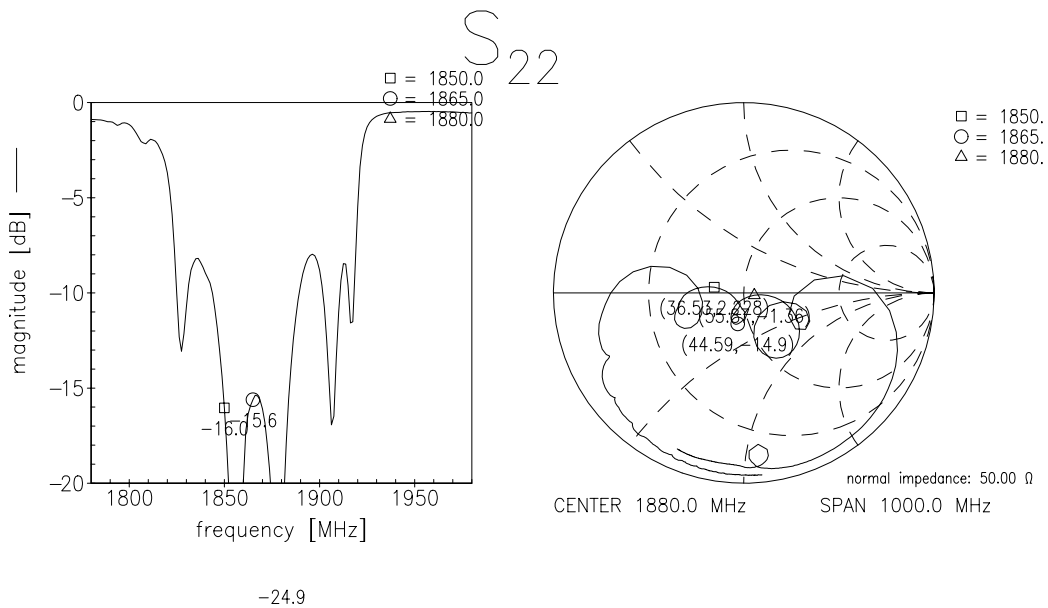
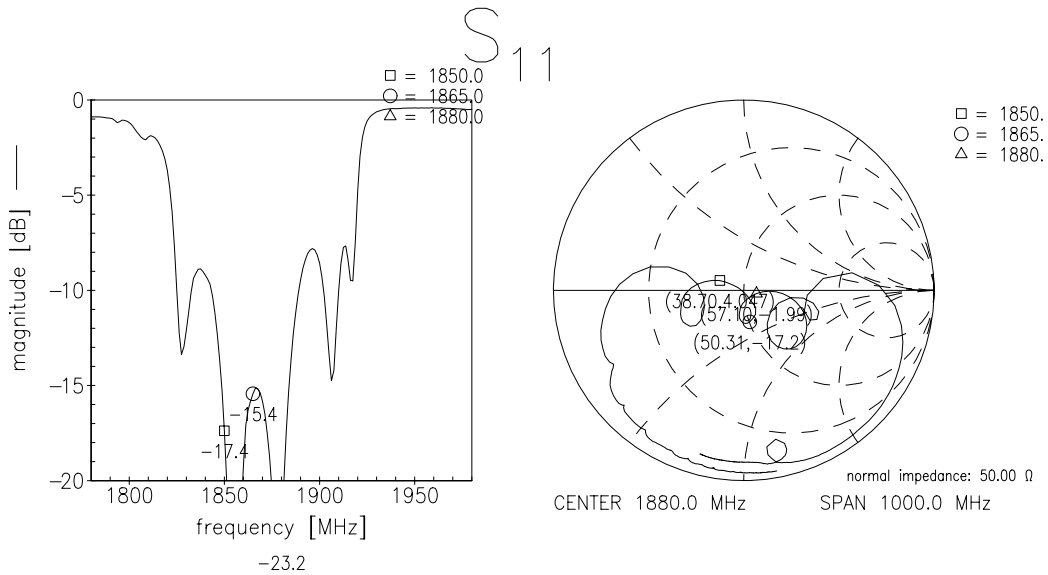
Transfer function Tx-filter 2



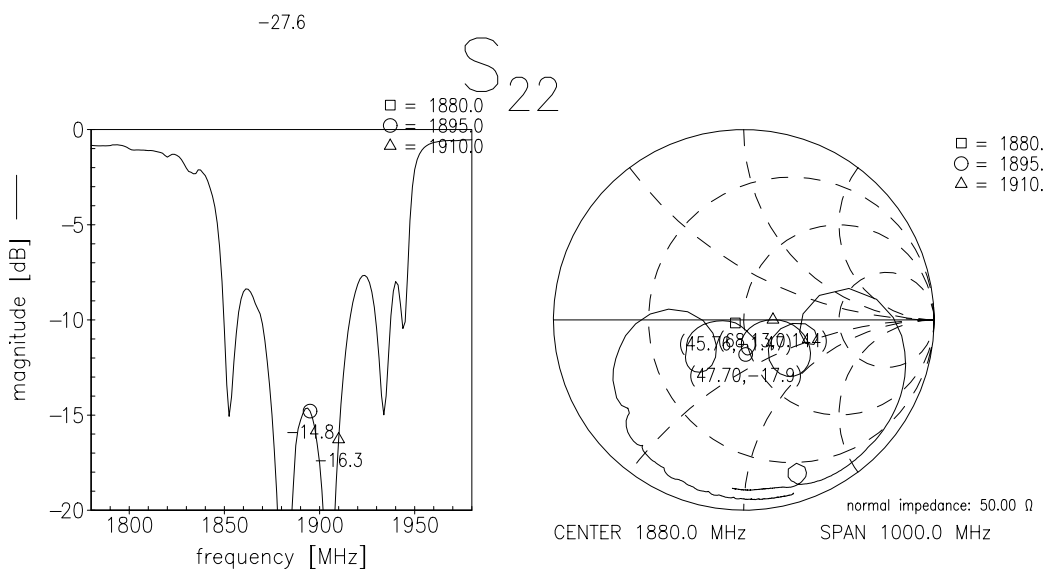
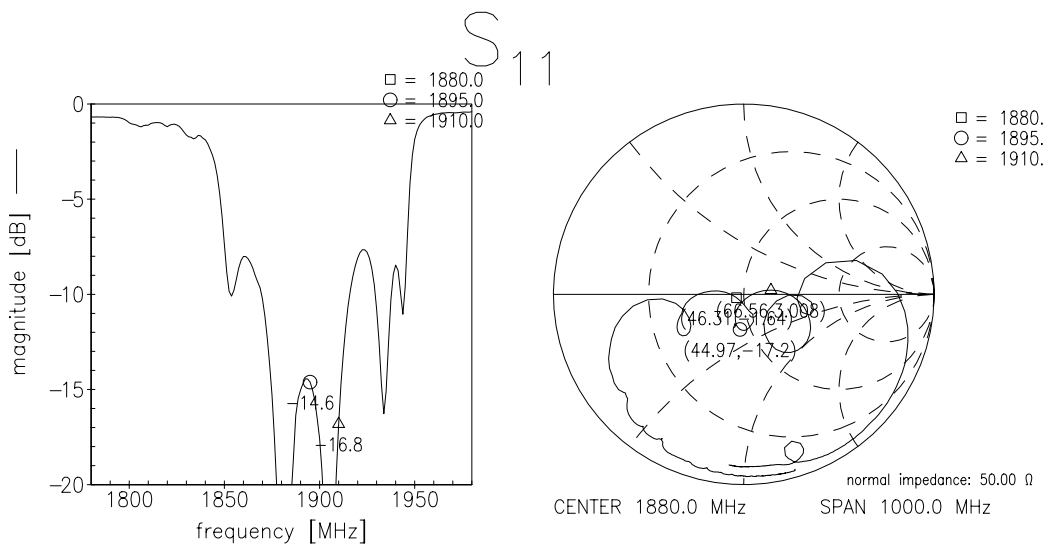
Transfer function Tx-filter 2(wideband)



Reflection functions of Tx-filter 1



Reflection functions of Tx-filter 2







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<b>Low-Loss Filter for Mobile Communication</b>		<b>1865,0 &amp; 1895,0 MHz</b>
<b>Data Sheet</b>		

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