◈TDK

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The following products presented in this data sheet are being withdrawn.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

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

∰TDK

SAW Components	**B4218**
Low-Loss Filter for Mobile Communication	**1865,0 & 1895,0 MHz**

Data Sheet　　　　　　　　　　　SMD

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 Ω
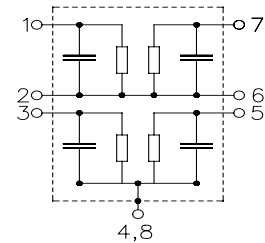- Package for **S**urface **M**ounted **T**echnology (**SMT**)

Terminals
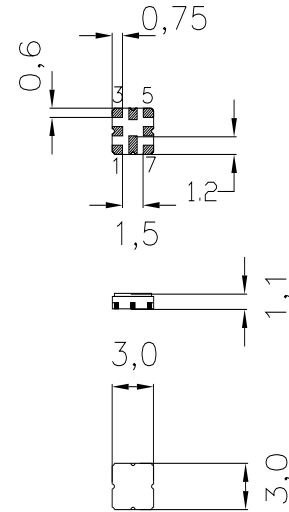
- Ni, gold-plated

Dimensions in mm, approx. weight 0,037 g

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

Maximum ratings

Operable temperature range	T	– 40 /+ 85	˚C	
Storage temperature range	T_{stg}	– 40 /+ 85	˚C	
DC voltage	V_{DC}	3	V	
Input power max.				source and load impedance 50 Ω
1850...1910 MHz	P_{IN}	10	dBm	continuous wave

SAW Components	**B4218**
Low-Loss Filter for Mobile Communication	**1865,0 & 1895,0 MHz**

Data Sheet SMD

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 ...1880,0 MHz		—	1,8	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1850,0 ...1880,0 MHz		—	0,7	1,4	dB
Input return loss					
1850,0 ...1880,0 MHz		9,0	10,0	—	dB
Output return loss					
1850,0 ...1880,0 MHz		9,0	10,0	—	dB
Attenuation	α				
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
Rx band suppression	α				
1930,0 ...1960,0 MHz		38,0	45,0	—	dB
LO suppression	α				
2113,0 ...2174,0 MHz		32,0	35,0	—	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}				
1880,0	...1910,0	MHz	—	1,8	2,5	dB
Amplitude ripple (p-p)		$\Delta\alpha$				
1880,0	...1910,0	MHz	—	0,7	1,4	dB
Input return loss						
1880,0	...1910,0	MHz	9,0	10,0	—	dB
Output return loss						
1880,0	...1910,0	MHz	9,0	10,0	—	dB
Attenuation		α				
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
Rx band suppression		α				
1960,0	...1990,0	MHz	38,0	45,0	—	dB
LO suppression		α				
2113,0	...2174,0	MHz	32,0	35,0	—	dB

Data Sheet

Transfer function Tx-filter 1
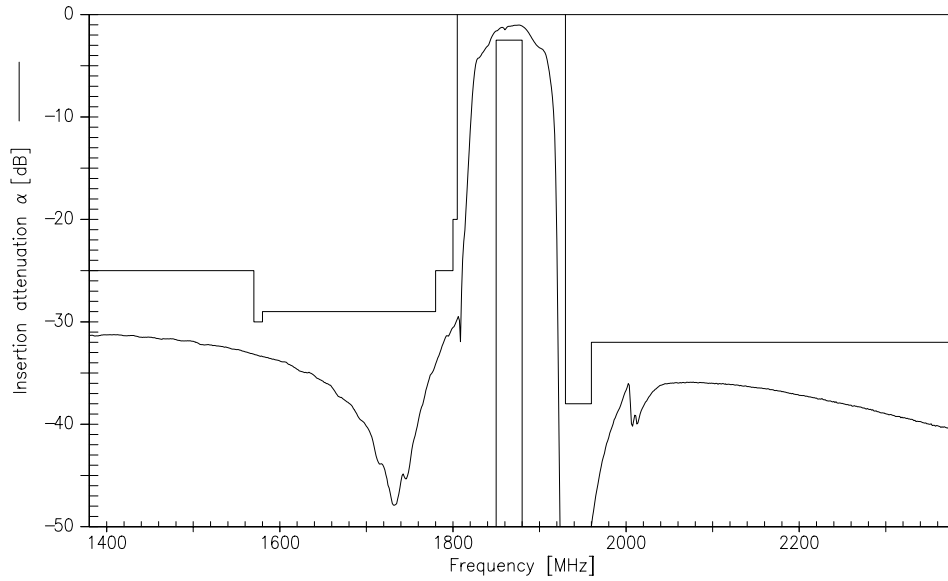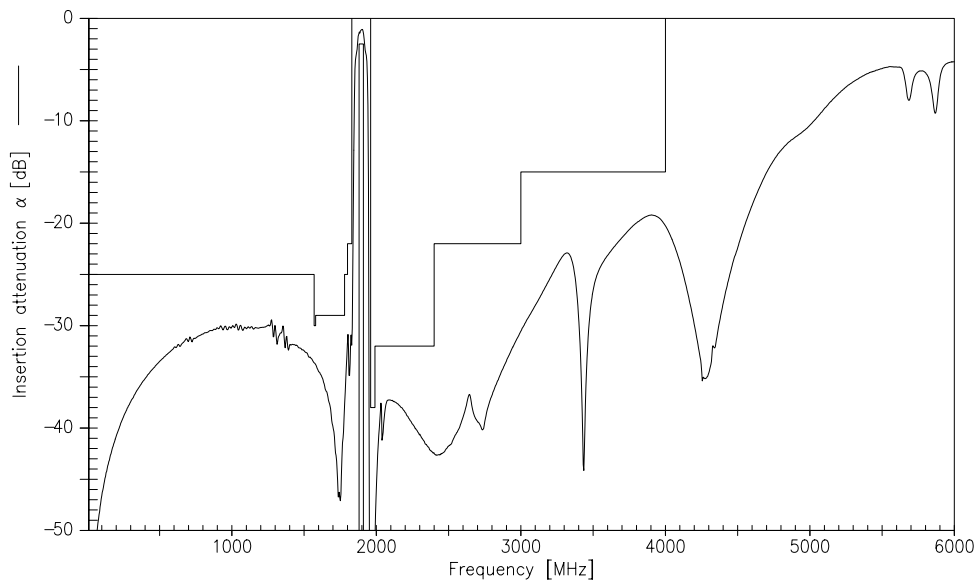

Transfer function Tx-filter 1(wideband)
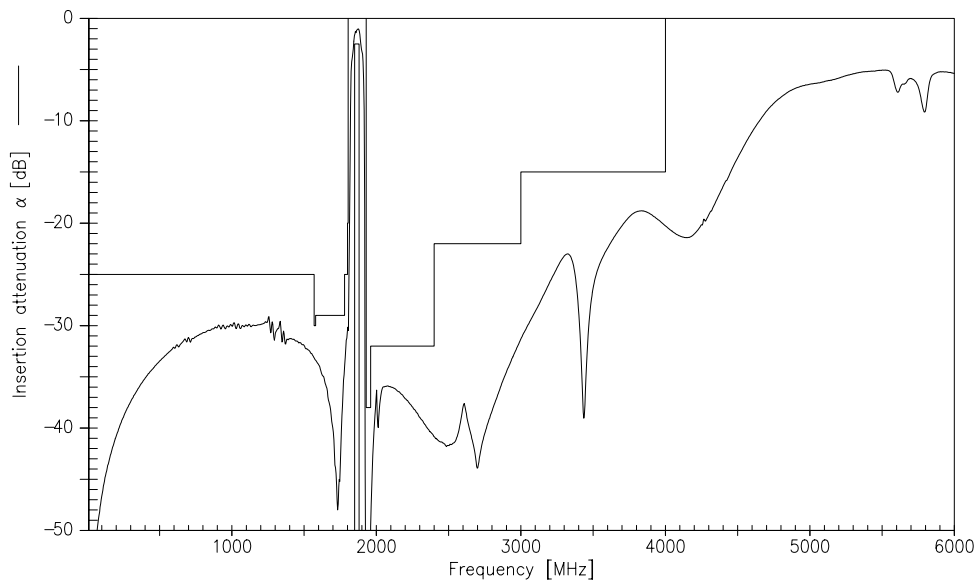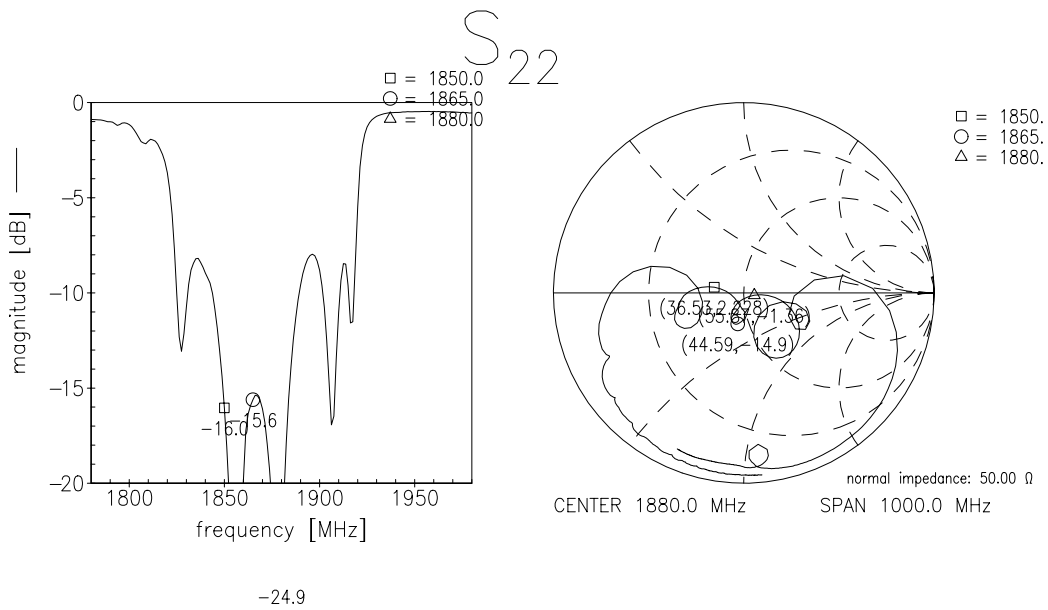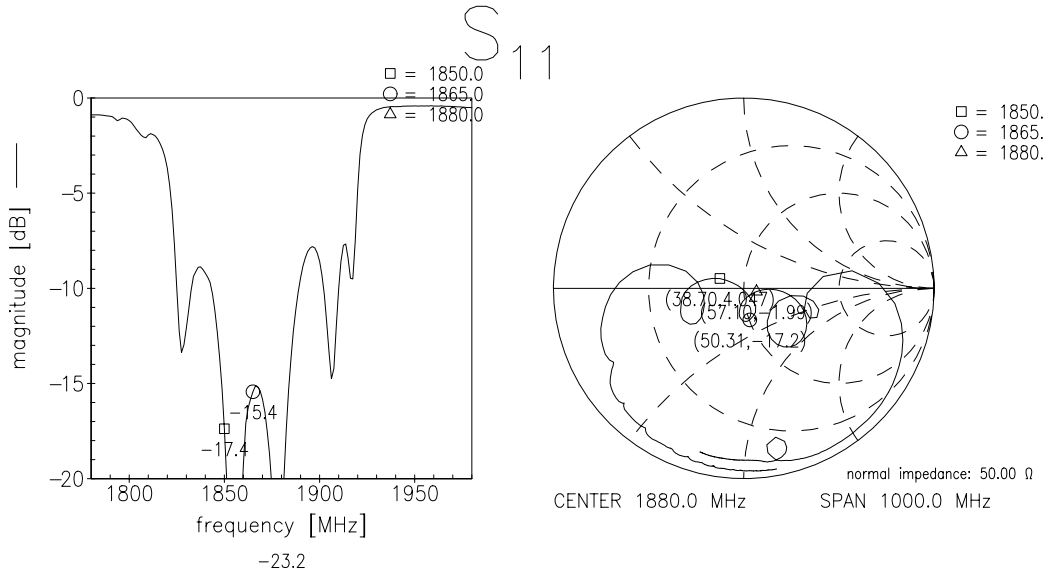
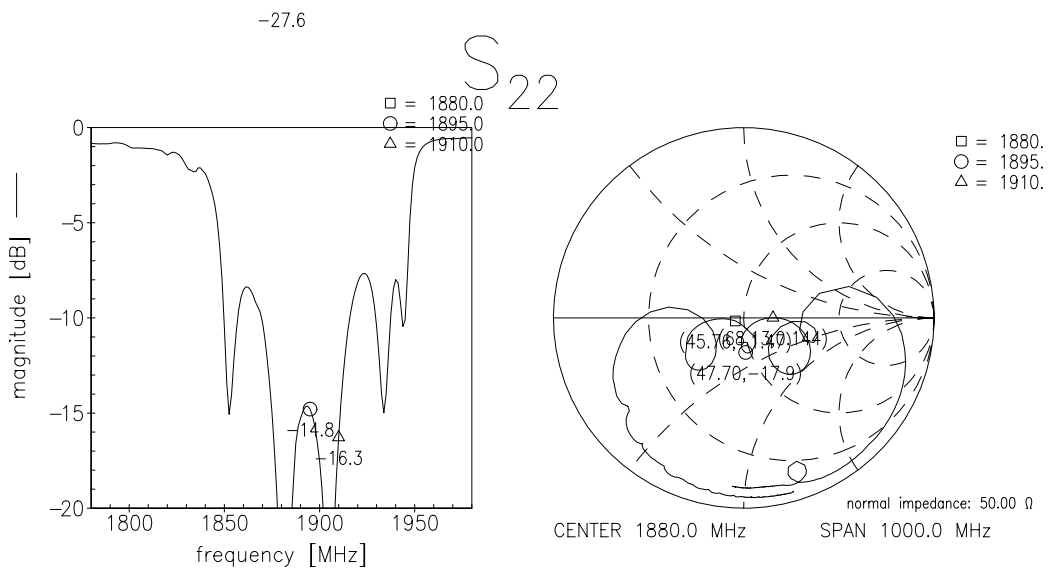### Transfer function Tx-filter 2
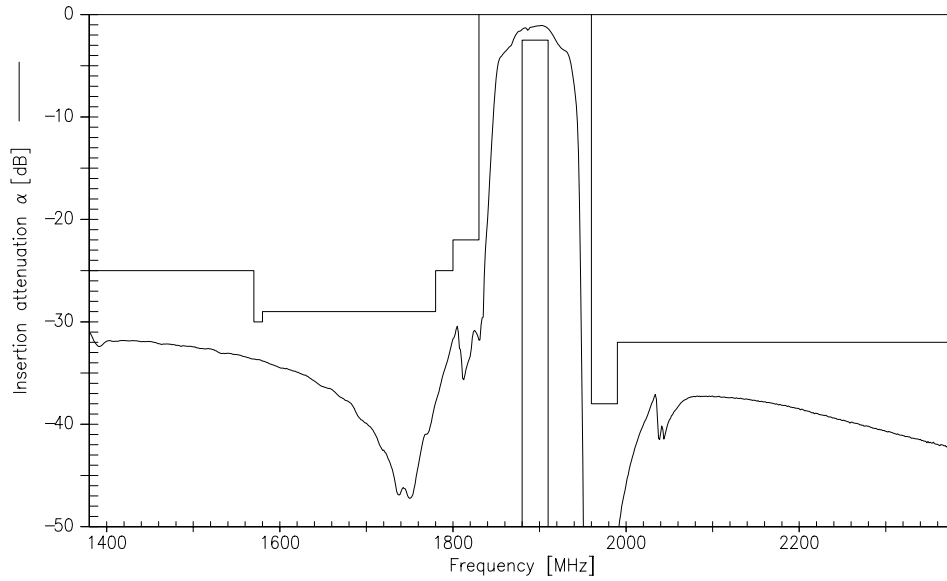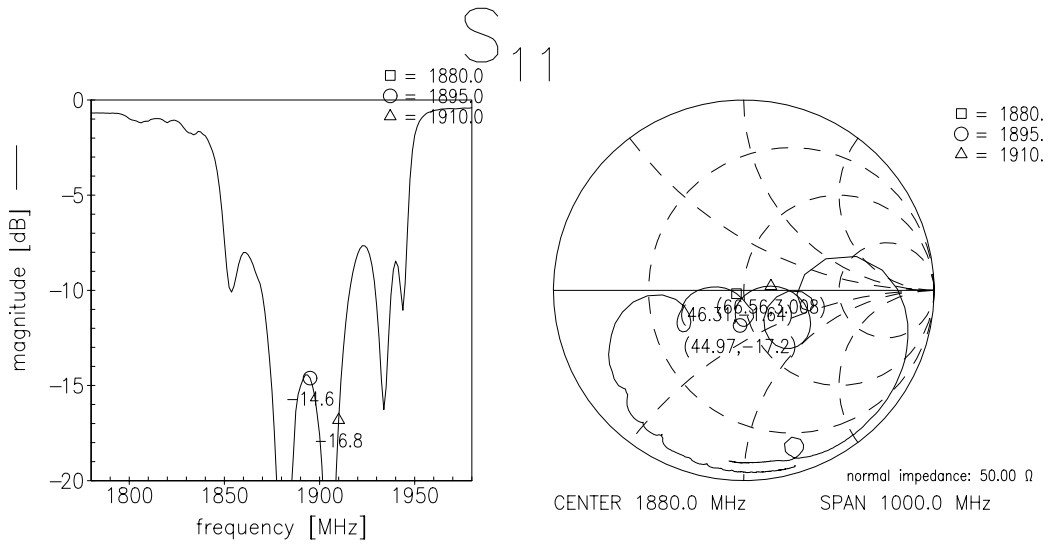

Transfer function Tx-filter 2(wideband)

Reflection functions of Tx-filter 1

S_{11}

□ = 1850.0
○ = 1865,0
△ = 1880.0

□ = 1850.
○ = 1865.
△ = 1880.

(38.70,–4.04)
(57.1 , –1.99)
(50.31, –17.2)

−15,4

−17,4

−23.2

normal impedance: 50.00 Ω

CENTER 1880.0 MHz   SPAN 1000.0 MHz

S_{22}

□ = 1850.0
○ = 1865,0
△ = 1880.0

□ = 1850.
○ = 1865.
△ = 1880.

(36.5,3.2 ,28)
(55.6 , –1.36)
(44.59, –14.9)

−16,0
−15,6

−24.9

normal impedance: 50.00 Ω

CENTER 1880.0 MHz   SPAN 1000.0 MHz

Reflection functions of Tx-filter 2

S_{11}

S_{22}

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. 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.