



Siemens Matsushita Components

SAW Components
Low Loss Filter for Mobile Communication

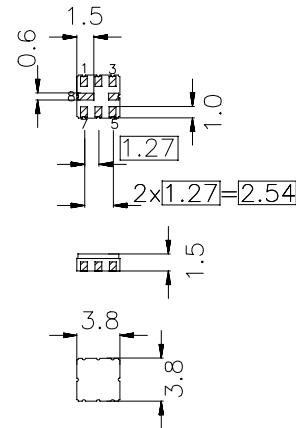
B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Ceramic package **QCC8B**

Features

- Low-loss '2 in 1' RF filter for mobile telephone PCN system, receive path
- Device with two integrated Rx - filters
- Usable passband 75 MHz
- No matching network required for operation at 50 Ω
- Ceramic Package for **Surface Mounted Technology (SMT)**



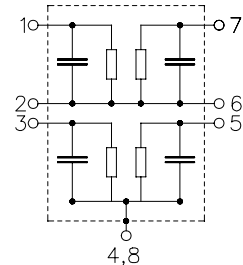
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,07 g

Pin configuration

- | | |
|-----|--------------------------|
| 1 | Input interstage filter |
| 7 | Output interstage filter |
| 2,6 | Ground interstage filter |
| 3 | Input frontend filter |
| 5 | Output frontend filter |
| 4,8 | Case - ground |



Type	Ordering code	Marking and Package according to	Packing according to
B4204	B39182-B4204-Z810	C61157-A7-A46	F61074-V8037-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 25 / + 75	°C	source and load impedance 50 Ω peak power of GSM signal, duty cycle 1 : 8 continuous wave
Storage temperature range	T_{stg}	- 40 / + 85	°C	
DC voltage	V_{DC}	0	V	
Input power max. 1710 ... 1785 MHz	P_{IN}	18	dBm	
elsewhere		0	dBm	



SAW Components
Low Loss Filter for Mobile Communication

B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Characteristics of PCN Rx interstage filter

Operating temperature range $T = 25 \pm 2 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$

			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}		—	3,7	5,0	dB
		1805,0 ... 1880,0 MHz				
Amplitude ripple (p-p)	$\Delta\alpha$		—	2,0	3,3	dB
		1805,0 ... 1880,0 MHz				
Input VSWR			—	2,4	2,6	
		1805,0 ... 1880,0 MHz				
Output VSWR			—	2,4	2,6	
		1805,0 ... 1880,0 MHz				
Attenuation	α					
		10,0 ... 1375,0 MHz	35,0	36,0	—	dB
		1375,0 ... 1590,0 MHz	40,0	42,0	—	dB
		1590,0 ... 1705,0 MHz	25,0	37,0	—	dB
		1705,0 ... 1785,0 MHz	7,5	10,0	—	dB
		1920,0 ... 1980,0 MHz	10,0	30,0	—	dB
		1980,0 ... 2300,0 MHz	20,0	32,0	—	dB
		2300,0 ... 2700,0 MHz	15,0	18,0	—	dB
		2700,0 ... 3500,0 MHz	4,0	6,0	—	dB
Isolation between interstage and frontend filter						
		10,0 ... 1375,0 MHz	50,0	52,0	—	dB
		1375,0 ... 1665,0 MHz	45,0	48,0	—	dB
		1665,0 ... 1785,0 MHz	20,0	28,0	—	dB
		1920,0 ... 2300,0 MHz	35,0	40,0	—	dB
		2300,0 ... 2700,0 MHz	20,0	28,0	—	dB
		2700,0 ... 3500,0 MHz	8,0	14,0	—	dB



SAW Components
Low Loss Filter for Mobile Communication

B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Characteristics of PCN Rx interstage filter

Operating temperature range $T = -25 \text{ to } +75 \text{ }^\circ\text{C}$
Terminating source impedance: $Z_S = 50 \text{ } \Omega$
Terminating load impedance: $Z_L = 50 \text{ } \Omega$

			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}					
		1805,0 ... 1880,0 MHz	—	4,2	5,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
		1805,0 ... 1880,0 MHz	—	2,5	3,8	dB
Input VSWR						
		1805,0 ... 1880,0 MHz	—	2,4	2,6	
Output VSWR						
		1805,0 ... 1880,0 MHz	—	2,4	2,6	
Attenuation	α					
		10,0 ... 1375,0 MHz	35,0	36,0	—	dB
		1375,0 ... 1590,0 MHz	40,0	42,0	—	dB
		1590,0 ... 1705,0 MHz	25,0	37,0	—	dB
		1705,0 ... 1785,0 MHz	6,5	9,0	—	dB
		1920,0 ... 1980,0 MHz	10,0	25,0	—	dB
		1980,0 ... 2300,0 MHz	20,0	32,0	—	dB
		2300,0 ... 2700,0 MHz	15,0	18,0	—	dB
		2700,0 ... 3500,0 MHz	4,0	6,0	—	dB
Isolation between interstage and frontend filter						
		10,0 ... 1375,0 MHz	50,0	52,0	—	dB
		1375,0 ... 1665,0 MHz	45,0	48,0	—	dB
		1665,0 ... 1785,0 MHz	20,0	28,0	—	dB
		1920,0 ... 2300,0 MHz	35,0	40,0	—	dB
		2300,0 ... 2700,0 MHz	20,0	28,0	—	dB
		2700,0 ... 3500,0 MHz	8,0	14,0	—	dB



SAW Components
Low Loss Filter for Mobile Communication

B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Characteristics of PCN Rx frontend filter

Operating temperature range: $T = 25 \pm 2 \text{ }^\circ\text{C}$
 Terminating source impedance: $Z_S = 50 \text{ } \Omega$
 Terminating load impedance: $Z_L = 50 \text{ } \Omega$

			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}		—	2,5	3,0	dB
1805,0 ... 1880,0	MHz					
Amplitude ripple (p-p)	$\Delta\alpha$		—	1,1	1,6	dB
1805,0 ... 1880,0	MHz					
Input VSWR			—	2,2	2,4	
1805,0 ... 1880,0	MHz					
Output VSWR			—	2,2	2,4	
1805,0 ... 1880,0	MHz					
Attenuation	α					
10,0 ... 1375,0	MHz		24,0	25,0	—	dB
1375,0 ... 1590,0	MHz		24,0	25,0	—	
1590,0 ... 1705,0	MHz		15,0	29,0	—	
1705,0 ... 1785,0	MHz		6,5	12,0	—	
1920,0 ... 1980,0	MHz		10,0	25,0	—	
1980,0 ... 2300,0	MHz		21,0	30,0	—	
2300,0 ... 2700,0	MHz		21,0	24,0	—	
2700,0 ... 3500,0	MHz		12,0	15,0	—	



SAW Components
Low Loss Filter for Mobile Communication

B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Characteristics of PCN Rx frontend filter

Operating temperature range: $T = -25$ to $+75$ °C
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$

			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{max}					
		1805,0 ... 1880,0 MHz	—	2,9	3,2	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
		1805,0 ... 1880,0 MHz	—	1,5	1,8	dB
Input VSWR						
		1805,0 ... 1880,0 MHz	—	2,2	2,4	
Output VSWR						
		1805,0 ... 1880,0 MHz	—	2,2	2,4	
Attenuation	α					
		10,0 ... 1375,0 MHz	24,0	25,0	—	dB
		1375,0 ... 1590,0 MHz	24,0	25,0	—	dB
		1590,0 ... 1705,0 MHz	15,0	29,0	—	dB
		1705,0 ... 1785,0 MHz	4,5	10,0	—	dB
		1920,0 ... 1980,0 MHz	10,0	20,0	—	dB
		1980,0 ... 2300,0 MHz	21,0	30,0	—	dB
		2300,0 ... 2700,0 MHz	21,0	24,0	—	dB
		2700,0 ... 3500,0 MHz	12,0	15,0	—	dB



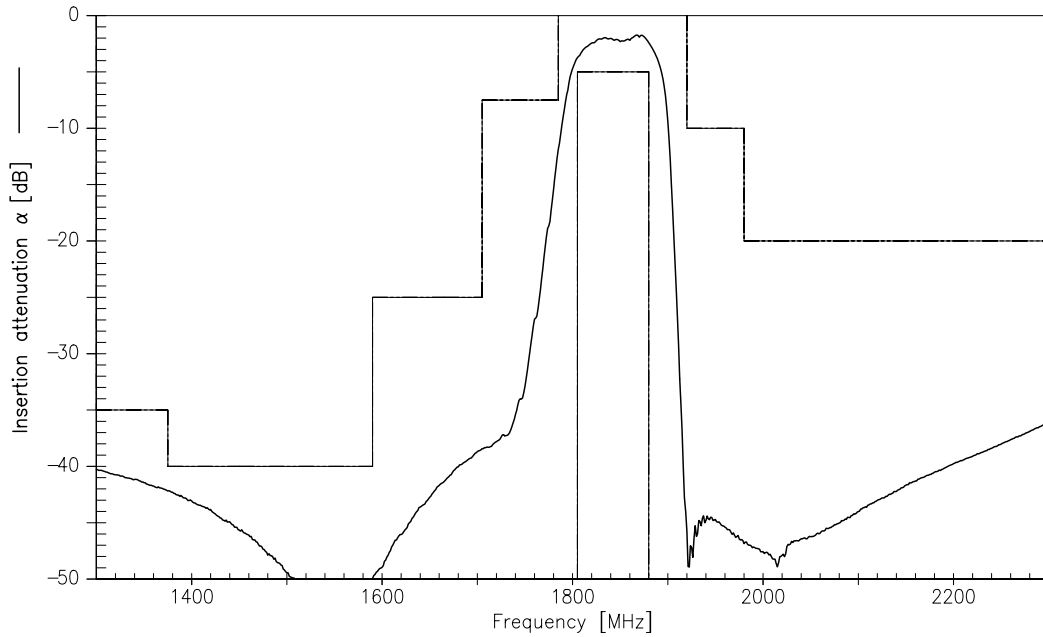
Siemens Matsushita Components

SAW Components
Low Loss Filter for Mobile Communication

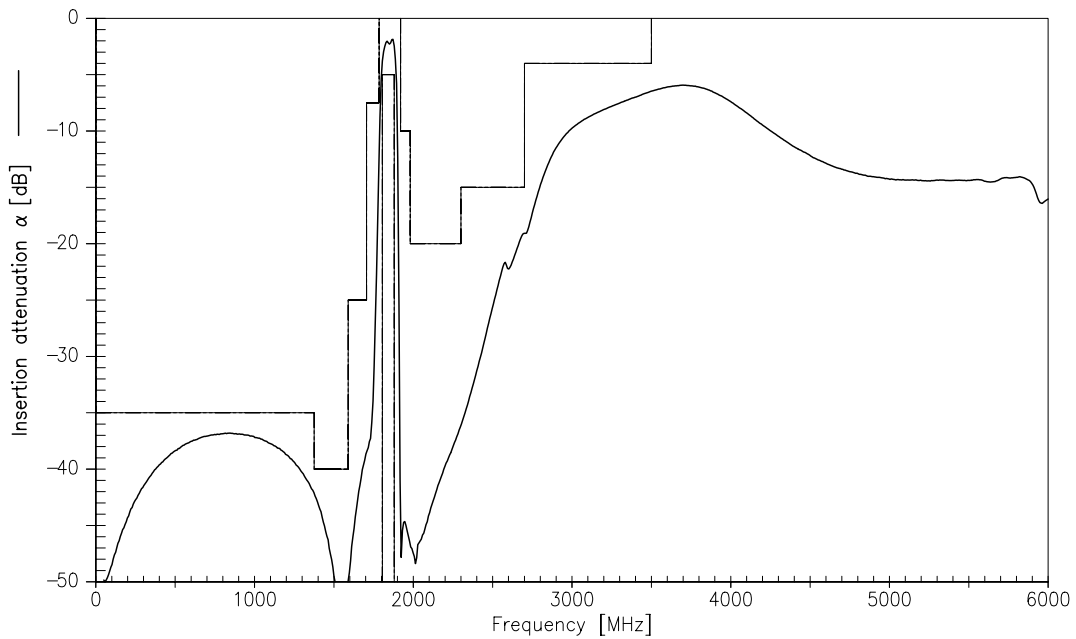
B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Transfer function for interstage filter (spec for 25° C)



Transfer function for interstage filter (wideband)





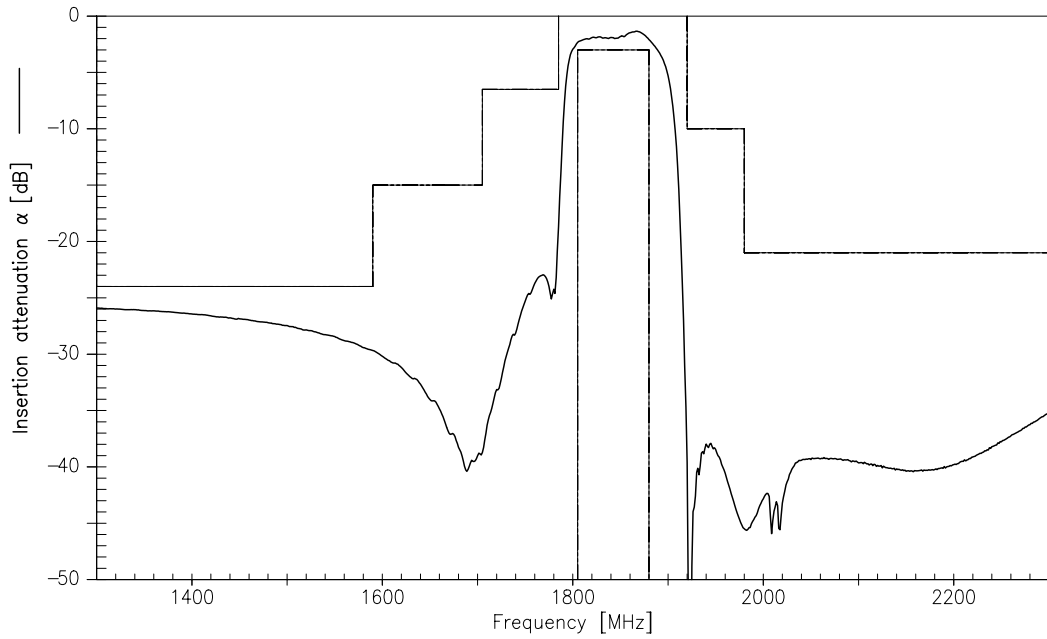
Siemens Matsushita Components

SAW Components
Low Loss Filter for Mobile Communication

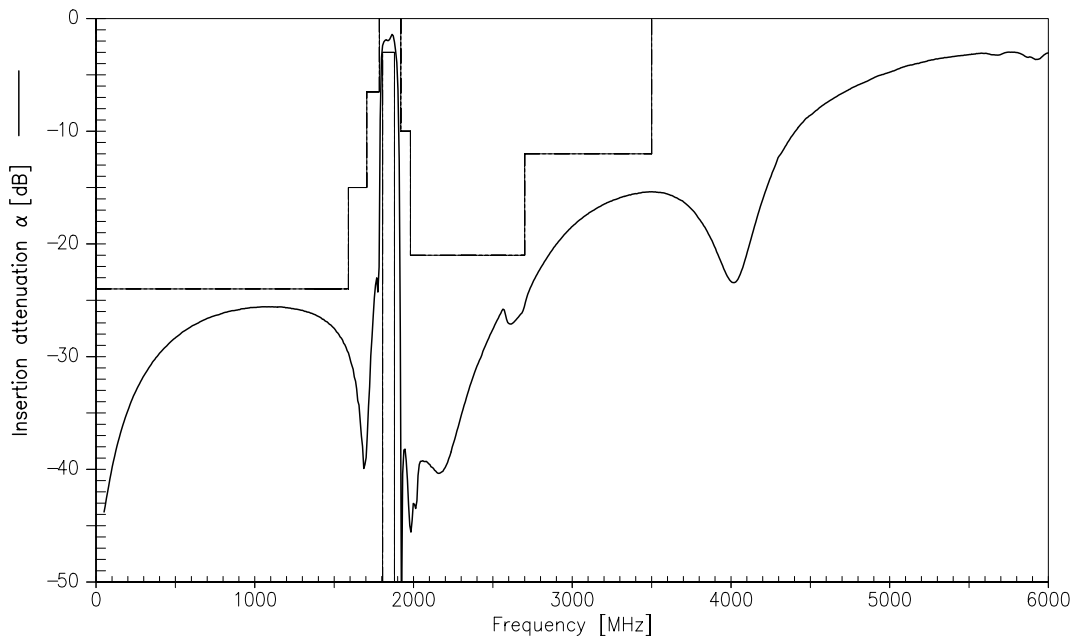
B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Transfer function for frontend filter (spec for 25°C)



Transfer function for frontend filter (wideband)



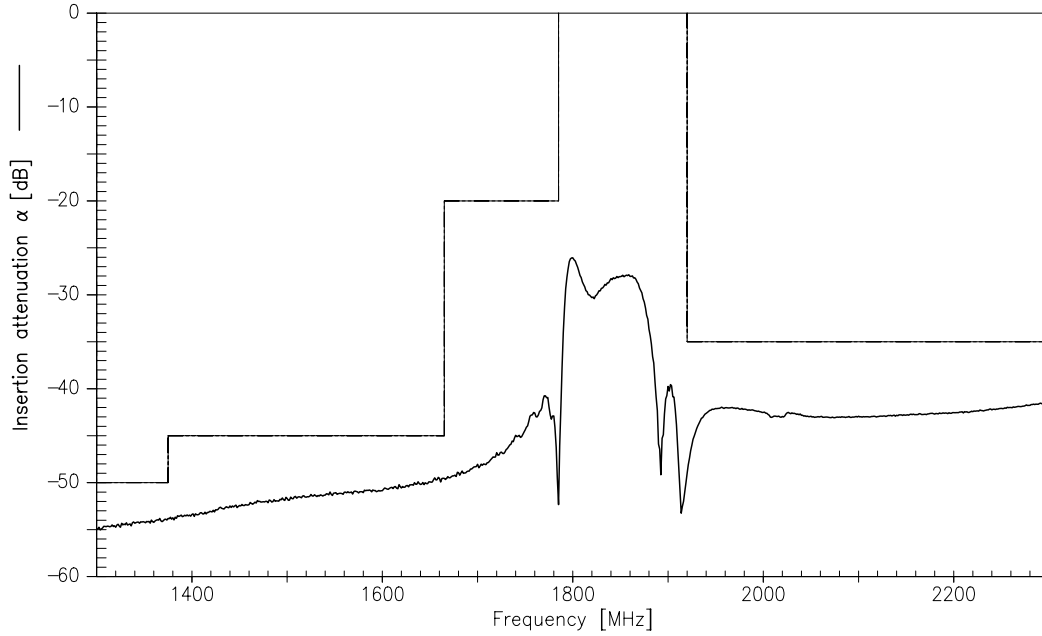


SAW Components
Low Loss Filter for Mobile Communication

B4204
1842,50 MHz
1842,50 MHz

Data Sheet

Transfer function for Isolation between interstage and frontend filter



Transfer function for Isolation between interstage and frontend filter (wideband)

