



Siemens Matsushita Components

SAW Components
Low Loss Filter for Mobile Communication

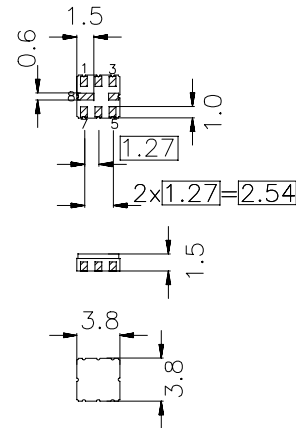
B4204
1842,50 MHz
1842,50 MHz

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)**



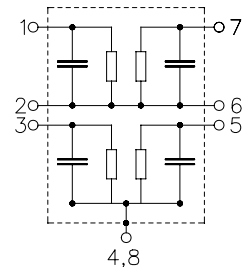
Terminals

- 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	



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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}					
		1805,0 ... 1880,0 MHz	—	3,7	5,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
		1805,0 ... 1880,0 MHz	—	2,0	3,3	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	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



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Characteristics of PCN Rx interstage 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	—	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



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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	—	dB
		1590,0 ... 1705,0 MHz	15,0	29,0	—	dB
		1705,0 ... 1785,0 MHz	6,5	12,0	—	dB
		1920,0 ... 1980,0 MHz	10,0	25,0	—	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



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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



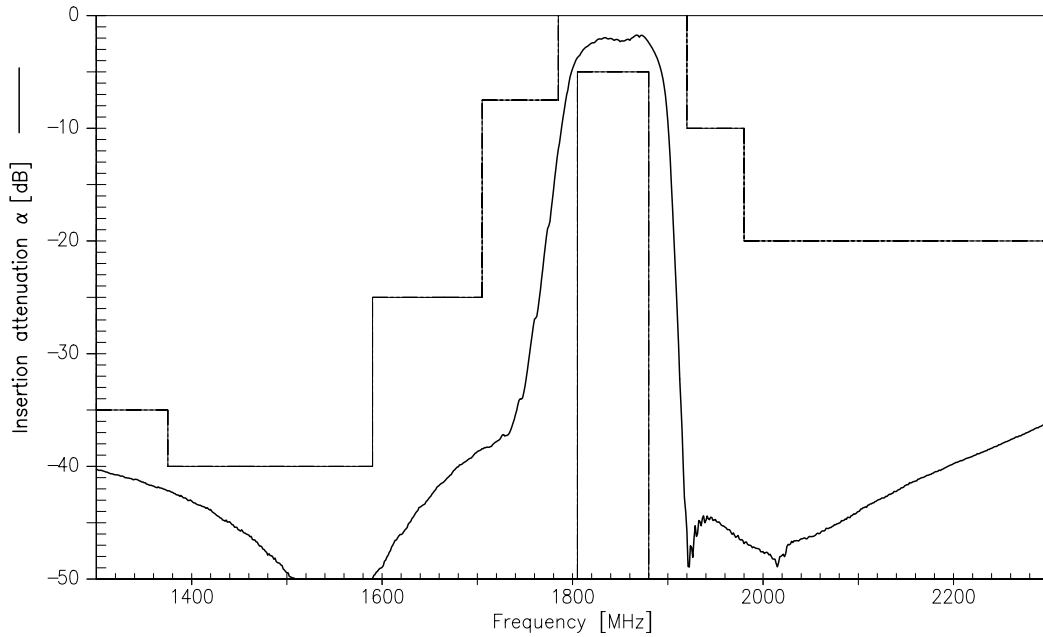
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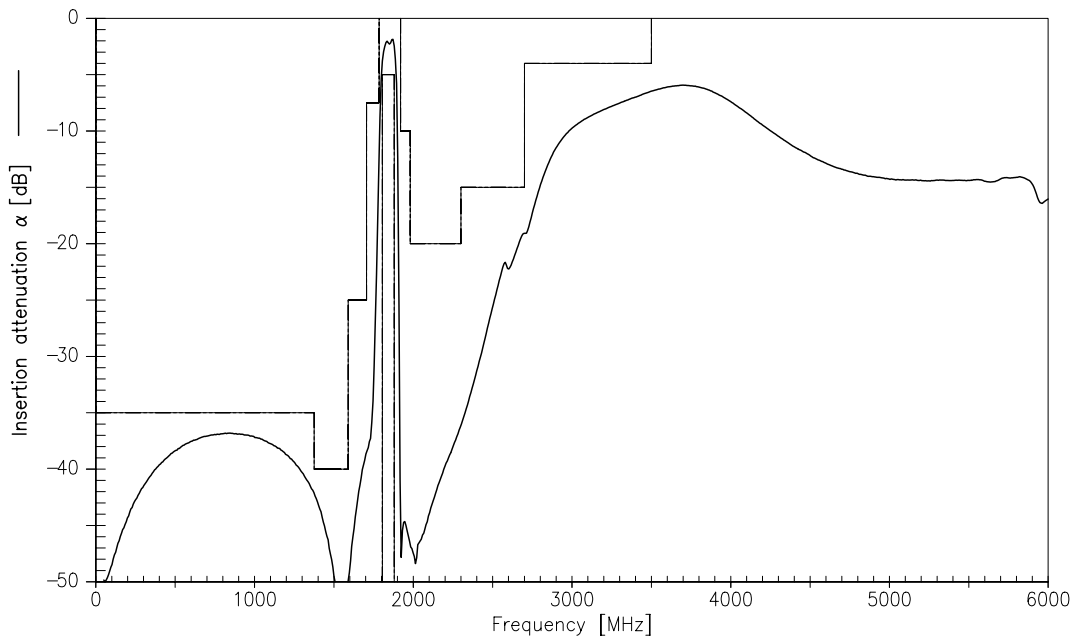
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Transfer function for interstage filter (spec for 25° C)



Transfer function for interstage filter (wideband)





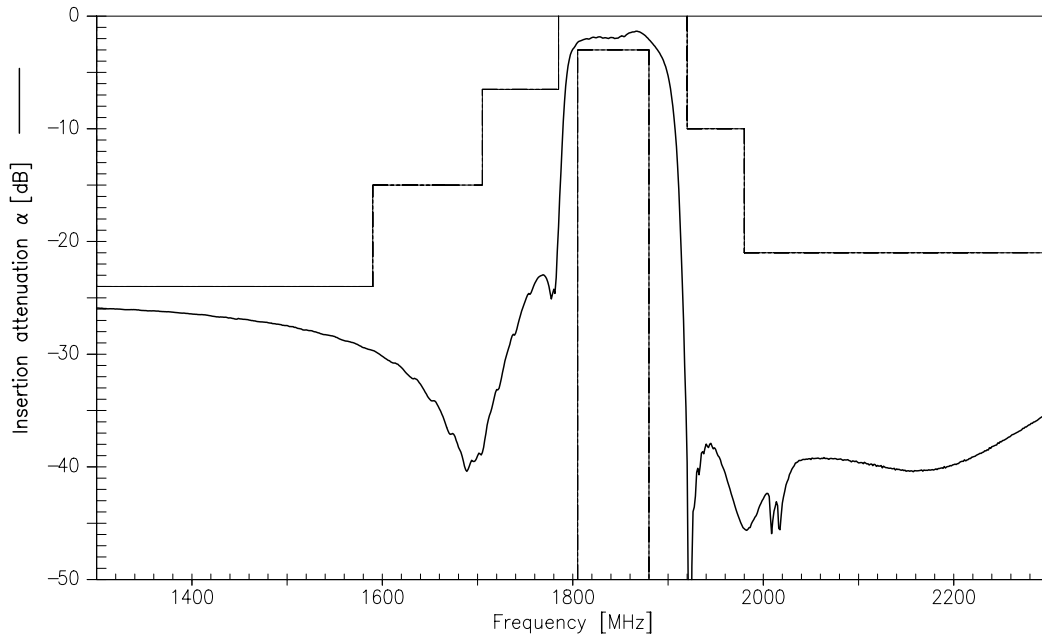
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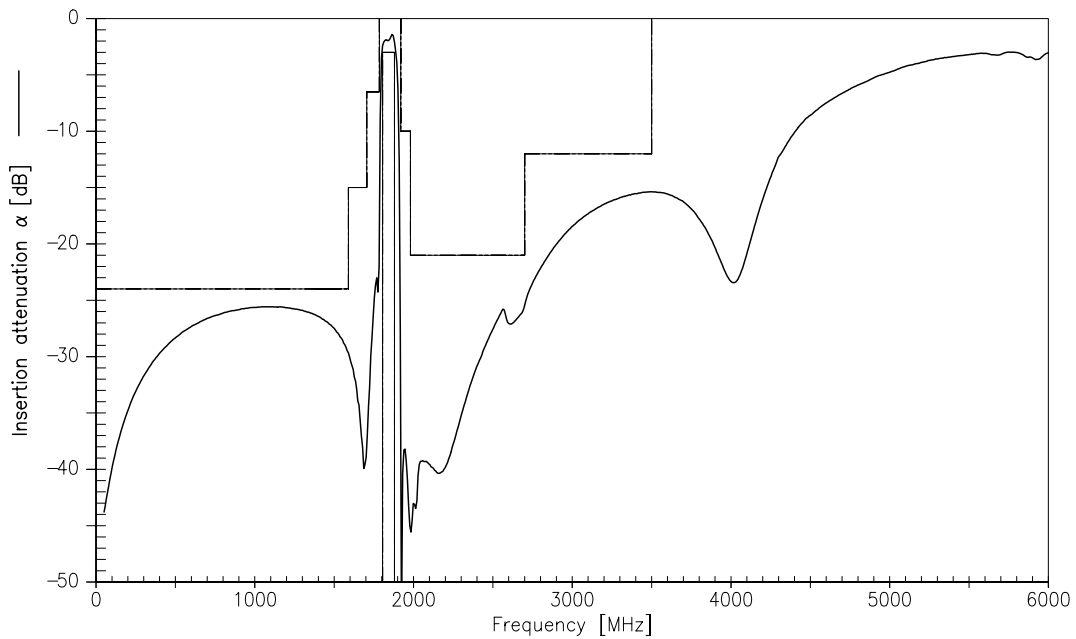
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Transfer function for frontend filter (spec for 25°C)



Transfer function for frontend filter (wideband)



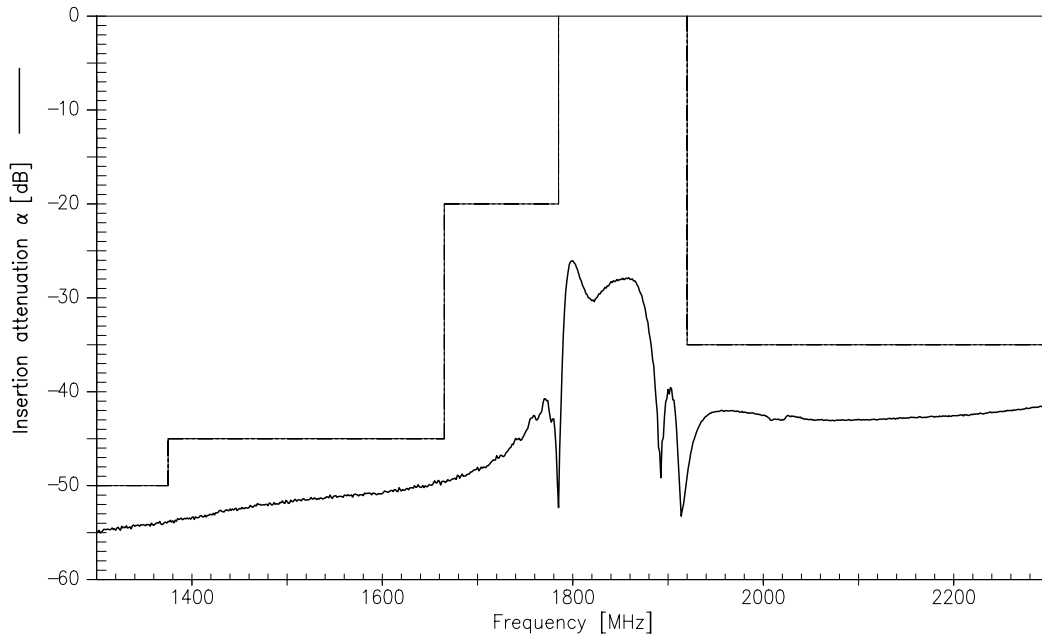


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Transfer function for Isolation between interstage and frontend filter



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

