



SAW Components

Data Sheet B4230





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Low-Loss Dual Band Filter for Mobile Communication

942,5 / 1842,5 MHz

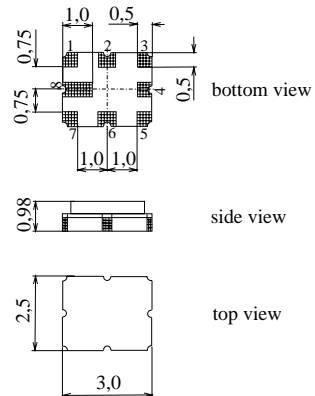
Data Sheet



Ceramic package **QCC8E**

Features

- Low-loss RF filter for mobile telephone EGSM and PCN system , receive path
- Usable passband:
Filter 1 (EGSM): 35 MHz
Filter 2 (PCN): 75 MHz
- Suitable for GPRS class 1 to 12
- Ceramic package for **Surface Mounted Technology (SMT)**



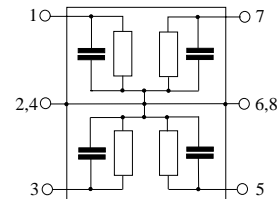
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,037 g

Pin configuration

- 1 Input [Filter 1]
- 3 Input [Filter 2]
- 5 Output [Filter 2]
- 7 Output [Filter 1]
- 2, 6 to be grounded
- 4, 8 Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B4230	B39182-B4230-H410	C61157-A7-A92	F61074-V8129-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 20 / + 70	°C
Storage temperature range	T_{stg}	- 40 / + 85	°C
DC voltage	V_{DC}	3	V
Input power max.	P_{IN}		
EGSM:		15	dBm
PCN:		12	dBm



Characteristics Filter 1 (EGSM)

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

		min.	typ.	max.	
Center frequency	f_c	—	942,50	—	MHz
Maximum insertion attenuation	α_{\max}				
925,0 ... 960,0 MHz		—	2,8	3,2	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,7	1,9	dB
Input VSWR					
925,0 ... 960,0 MHz		—	1,9	2,2	
Output VSWR					
925,0 ... 960,0 MHz		—	1,9	2,2	
Attenuation	α_{\min}				
0,0 ... 800,0 MHz		18	21	—	dB
800,0 ... 880,0 MHz		20	23	—	dB
880,0 ... 905,0 MHz		25	31	—	dB
905,0 ... 915,0 MHz		15	23	—	dB
980,0 ... 1005,0 MHz		23	28	—	dB
1005,0 ... 2000,0 MHz		20	25	—	dB
2000,0 ... 3000,0 MHz		15	19	—	dB
3000,0 ... 6000,0 MHz		10	15	—	dB
Input reflection coefficient @ 1842,5 MHz					
	Phase	-160	-150	-140	°



Characteristics Filter 1 (EGSM)

Operating temperature range: $T = -20 \text{ to } +70^\circ \text{C}$
 Terminating source impedance: $Z_S = 50 \Omega$
 Terminating load impedance: $Z_L = 50 \Omega$

		min.	typ.	max.	
Center frequency	f_c	—	942,50	—	MHz
Maximum insertion attenuation	α_{max}	—	3,3	3,9	dB
925,0 ... 960,0	MHz				
Amplitude ripple (p-p)	$\Delta\alpha$	—	1,9	2,1	dB
925,0 ... 960,0	MHz				
Input VSWR		—	2,0	2,3	
925,0 ... 960,0	MHz				
Output VSWR		—	2,0	2,3	
925,0 ... 960,0	MHz				
Attenuation	α_{min}				
0,0 ... 800,0	MHz	18	21	—	dB
800,0 ... 880,0	MHz	20	23	—	
880,0 ... 905,0	MHz	25	30	—	
905,0 ... 915,0	MHz	15	19	—	
980,0 ... 1005,0	MHz	23	27	—	
1005,0 ... 2000,0	MHz	20	25	—	
2000,0 ... 3000,0	MHz	15	19	—	
3000,0 ... 6000,0	MHz	10	15	—	
Input reflection coefficient @ 1842,5 MHz					
	Phase	-160	-150	-140	°



Characteristics Filter 2 (PCN)

Operating temperature range: $T = 25 \pm 2^\circ\text{C}$

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		—	2,7	3,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1805,0 ... 1880,0 MHz		—	1,3	1,6	dB
Input VSWR					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
Output VSWR					
1805,0 ... 1880,0 MHz		—	2,1	2,3	
Attenuation	α_{\min}				
0,0 ... 1480,0 MHz		33	37	—	dB
1480,0 ... 1765,0 MHz		25	29	—	dB
1765,0 ... 1785,0 MHz		10	12	—	dB
1920,0 ... 1980,0 MHz		20	24	—	dB
1980,0 ... 4000,0 MHz		23	27	—	dB
4000,0 ... 5000,0 MHz		15	22	—	dB
5000,0 ... 6000,0 MHz		6	9	—	dB
Input reflection coefficient @ 942,5 MHz					
	Phase	-150	-140	-130	°



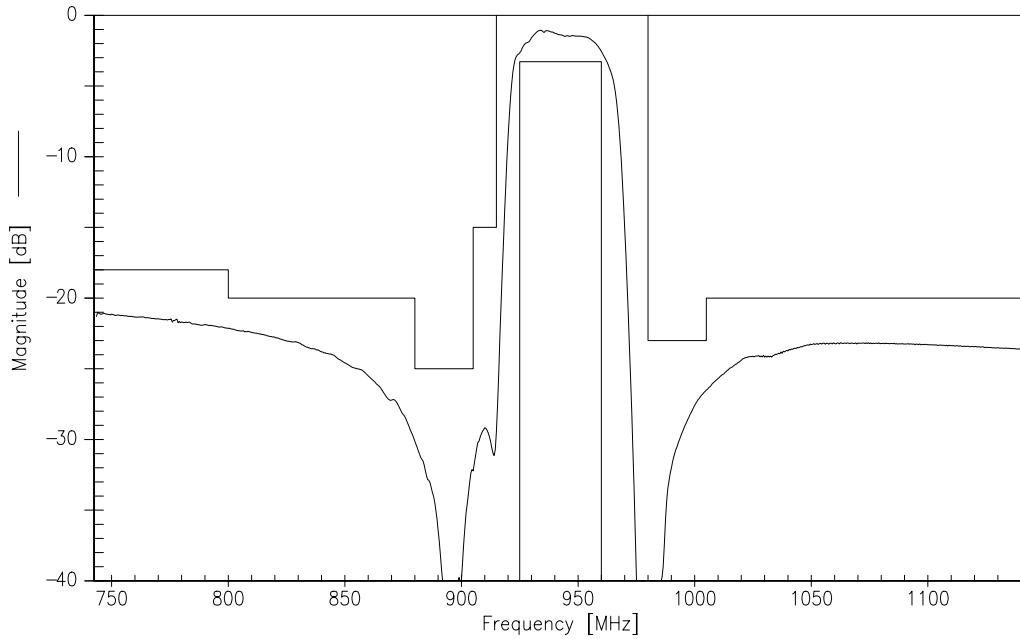
Characteristics Filter 2 (PCN)

Operating temperature range: $T = -20$ to $+70^{\circ}\text{C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

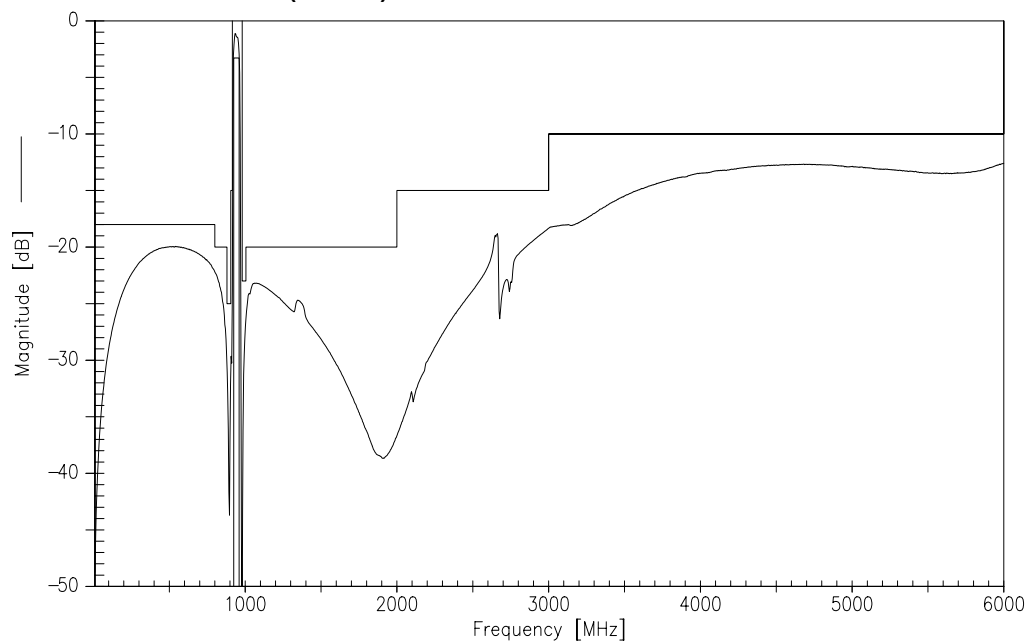
			min.	typ.	max.	
Center frequency	f_c		—	1842,5	—	MHz
Maximum insertion attenuation	α_{\max}	1805,0 ... 1880,0 MHz	—	3,0	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$	1805,0 ... 1880,0 MHz	—	1,5	1,8	dB
Input VSWR		1805,0 ... 1880,0 MHz	—	2,1	2,3	
Output VSWR		1805,0 ... 1880,0 MHz	—	2,1	2,3	
Attenuation	α_{\min}	0,0 ... 1480,0 MHz	33	37	—	dB
		1480,0 ... 1765,0 MHz	25	29	—	dB
		1765,0 ... 1785,0 MHz	9	11	—	dB
		1920,0 ... 1980,0 MHz	20	24	—	dB
		1980,0 ... 4000,0 MHz	23	26	—	dB
		4000,0 ... 5000,0 MHz	15	22	—	dB
		5000,0 ... 6000,0 MHz	6	9	—	dB
Input reflection coefficient @ 942,5 MHz						
	Phase		-150	-140	-130	°



Transfer function Filter 1 (EGSM)- spec at 25 °C



Transfer function Filter 1 (EGSM) - wideband





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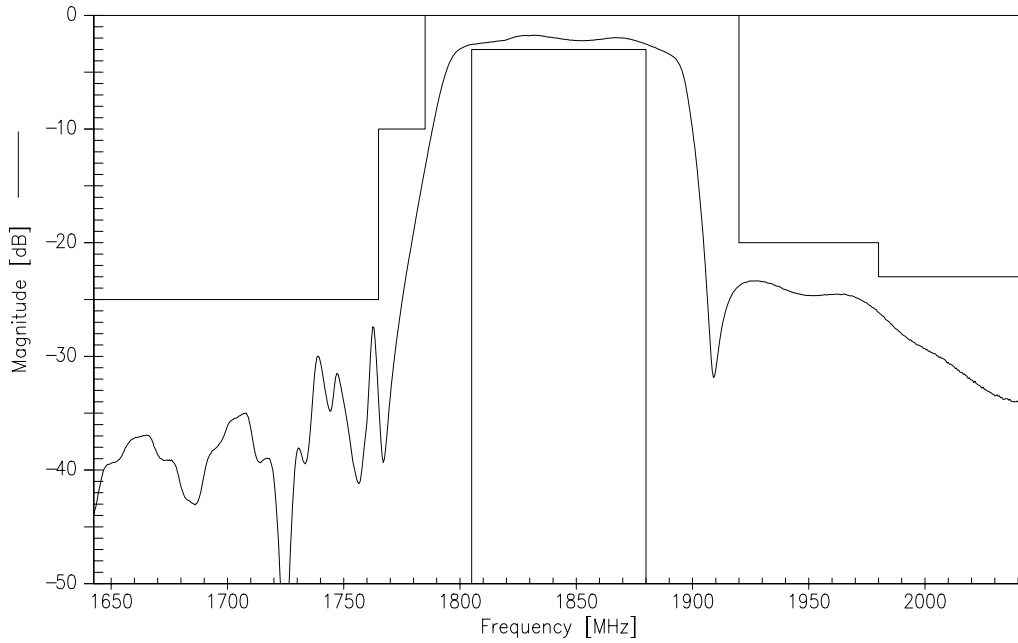
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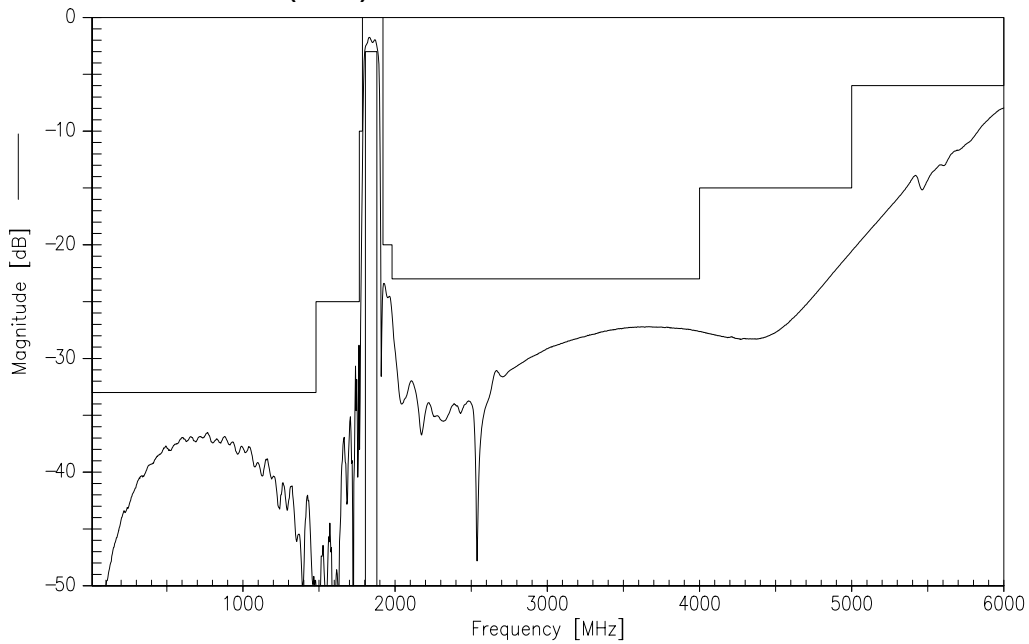
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Transfer function Filter 2 (PCN) - spec at 25 °C



Transfer function Filter 2 (PCN) - wideband





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Published by EPCOS AG

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