EPCOS

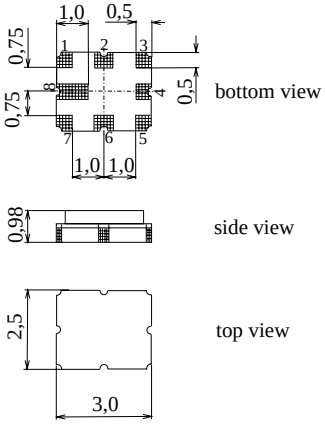
SAW Components

Data Sheet B4230

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 **S**urface **M**ounted **T**echnology (**SMT**)



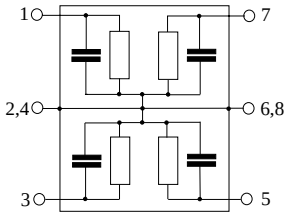
Terminals

- 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 **S**ensitive **D**evice (**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 ± 2°C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		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 to +70˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Center frequency	f_c	—	942,50	—	MHz
Maximum insertion attenuation	α_{max}				
925,0 ... 960,0 MHz		—	3,3	3,9	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,9	2,1	dB
Input VSWR					
925,0 ... 960,0 MHz		—	2,0	2,3	
Output VSWR					
925,0 ... 960,0 MHz		—	2,0	2,3	
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	30	—	dB
905,0 ... 915,0 MHz		15	19	—	dB
980,0 ...1005,0 MHz		23	27	—	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 2 (PCN)

Operating temperature range: T = 25 ± 2°C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

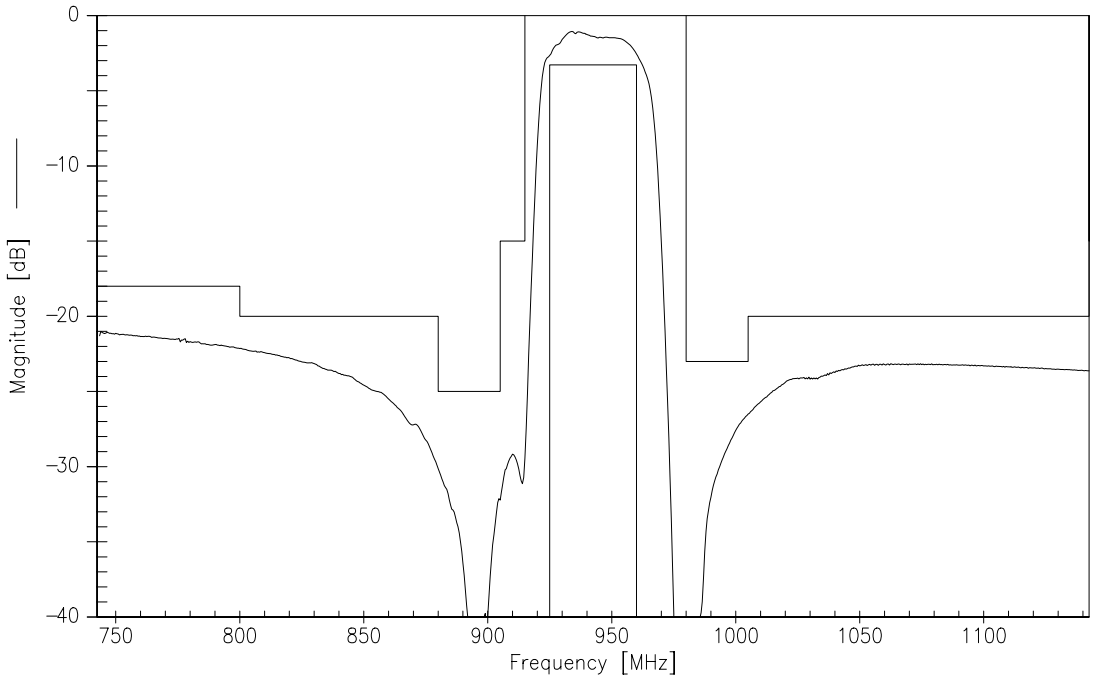
			min.	typ.	max.	
Center frequency		f_c	—	1842,5	—	MHz
Maximum insertion attenuation		α_{max}				
	1805,0 ...1880,0 MHz		—	2,7	3,0	dB
Amplitude ripple (p-p)		$\Delta\alpha$				
	1805,0 ...1880,0 MHz		—	1,3	1,6	dB
Input VSWR						
	1805,0 ...1880,0 MHz		—	2,1	2,3	
Output VSWR						
	1805,0 ...1880,0 MHz		—	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)

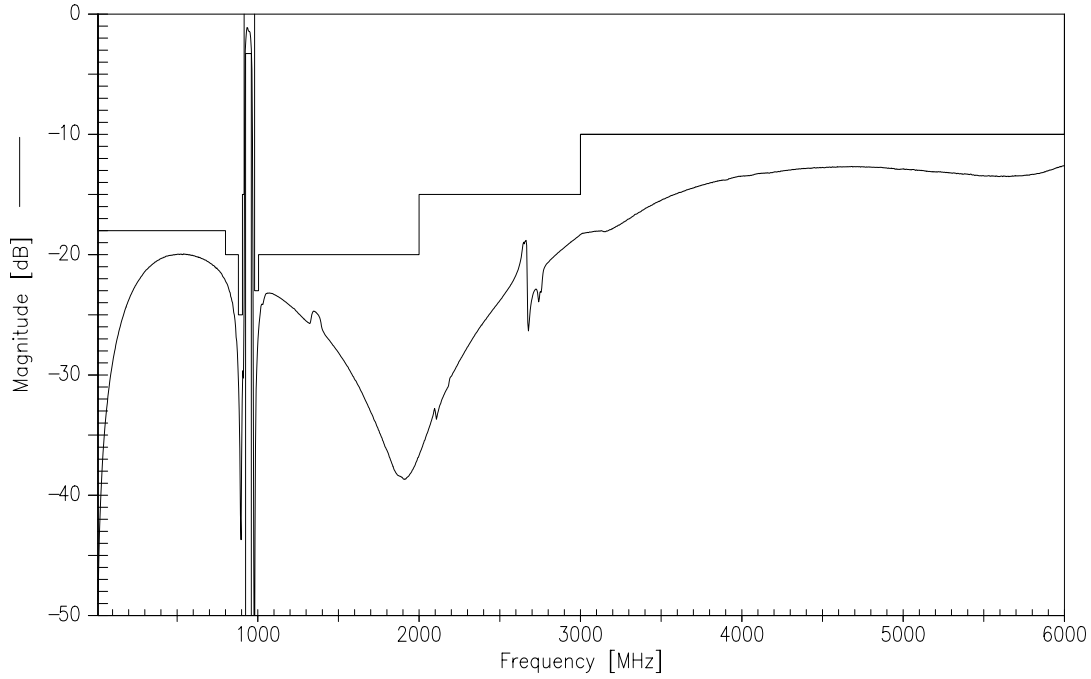
Operating temperature range: T = -20 to +70˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			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	˚

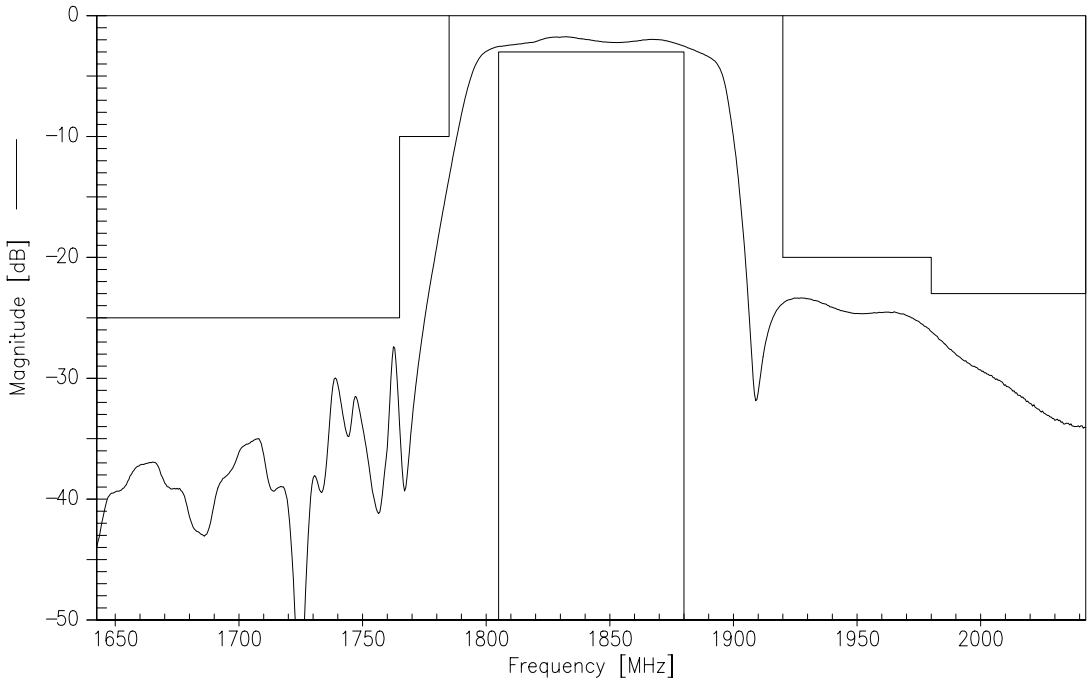
Transfer function Filter 1 (EGSM)- spec at 25 ˚C



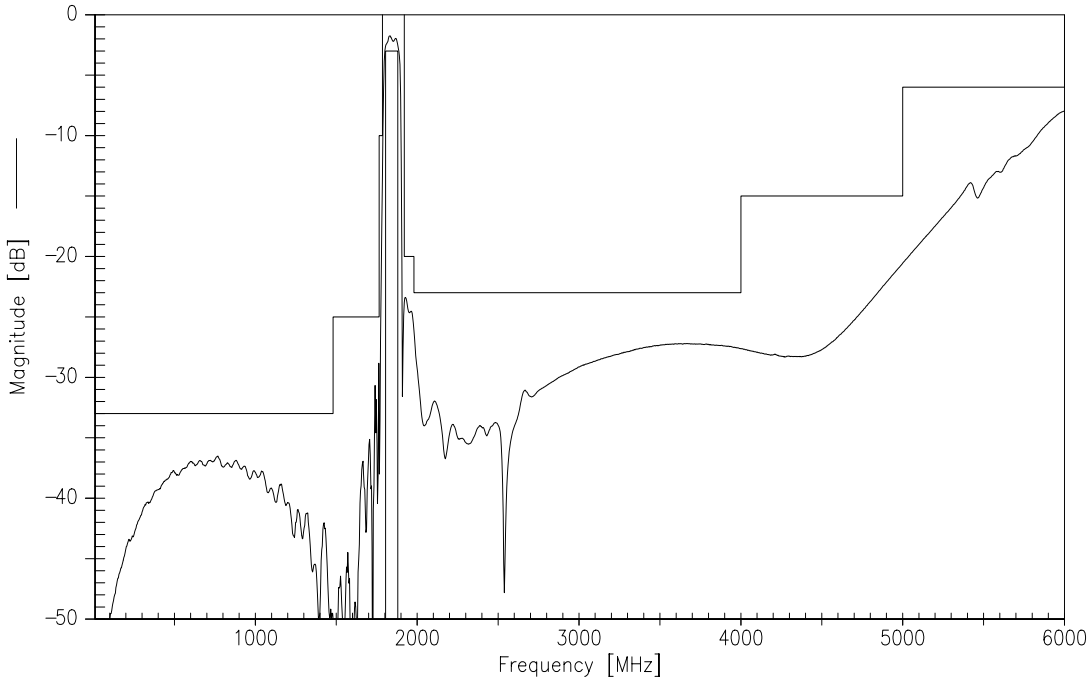
Transfer function Filter 1 (EGSM) - wideband



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



Transfer function Filter 2 (PCN) - wideband



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