



SAW Components

Data Sheet B4230





SAW Components

B4230

Low-Loss Dual Band Filter for Mobile Communication

942,5 / 1842,5 MHz

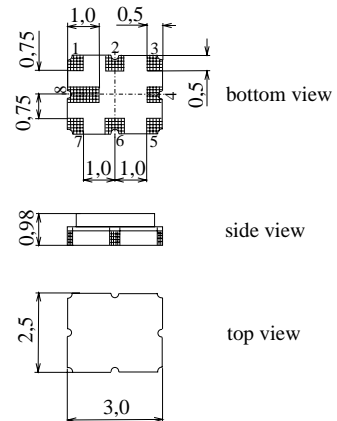
Data Sheet



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)**



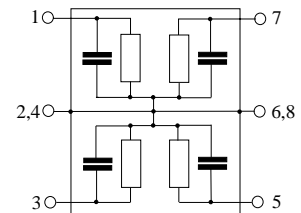
Terminals

- 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: $T = -20$ 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}	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	$^{\circ}$



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	°



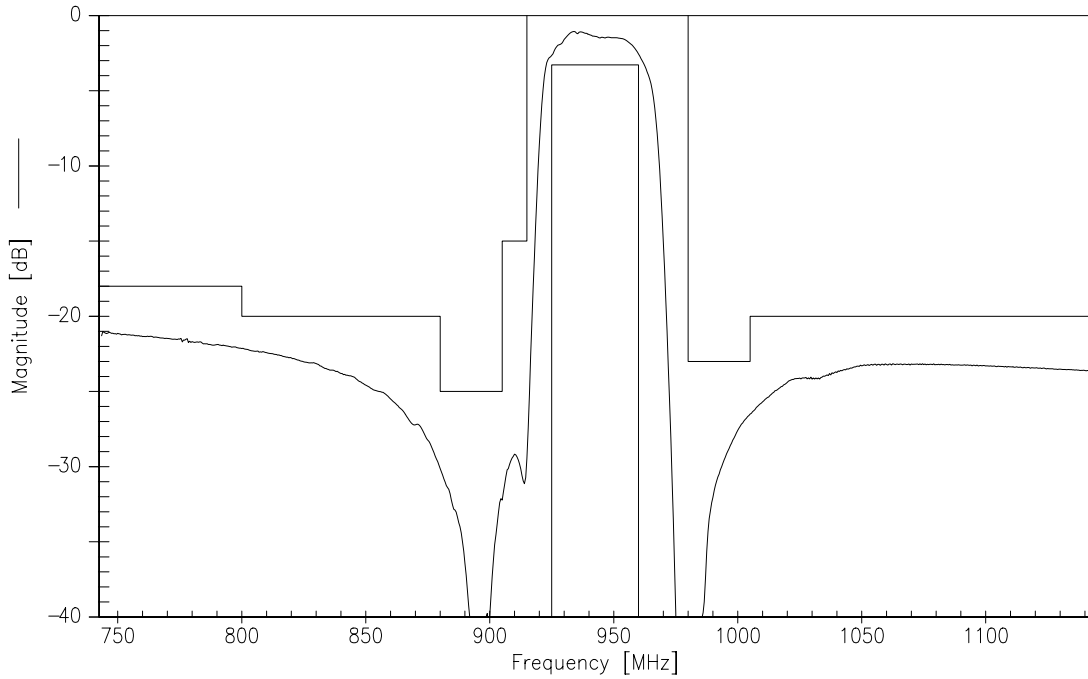
Characteristics Filter 2 (PCN)

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

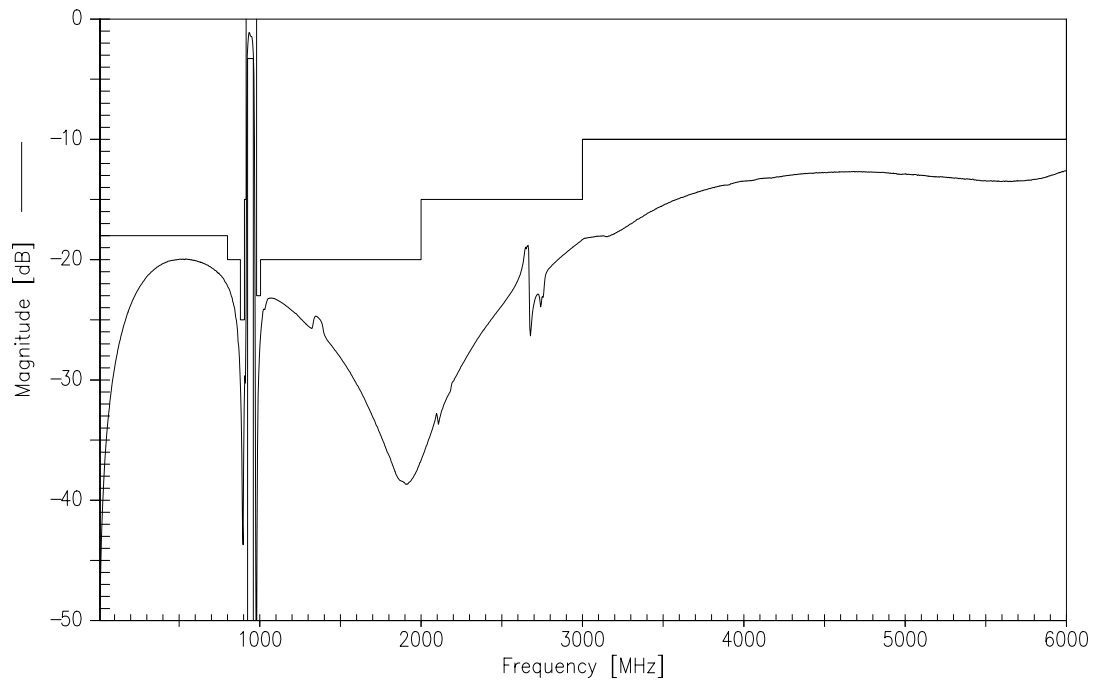
				min.	typ.	max.	
Center frequency		f_c		—	1842,5	—	MHz
Maximum insertion attenuation	1805,0 ... 1880,0	MHz	α_{\max}	—	3,0	3,5	dB
Amplitude ripple (p-p)	1805,0 ... 1880,0	MHz	$\Delta\alpha$	—	1,5	1,8	dB
Input VSWR	1805,0 ... 1880,0	MHz		—	2,1	2,3	
Output VSWR	1805,0 ... 1880,0	MHz		—	2,1	2,3	
Attenuation			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

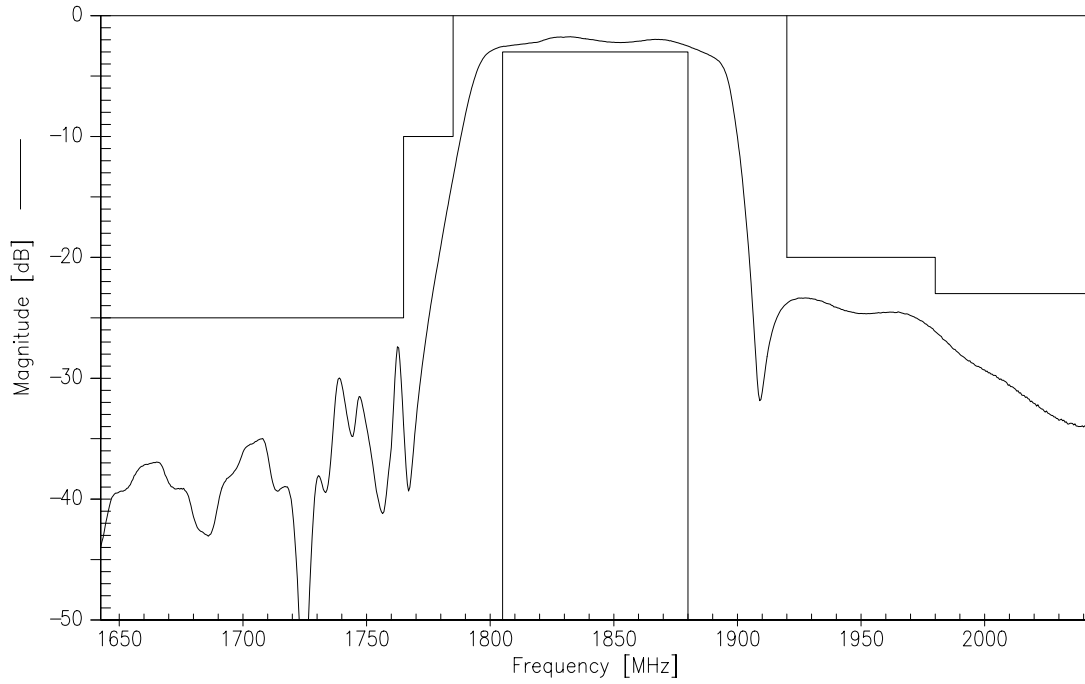


Transfer function Filter 1 (EGSM) - wideband

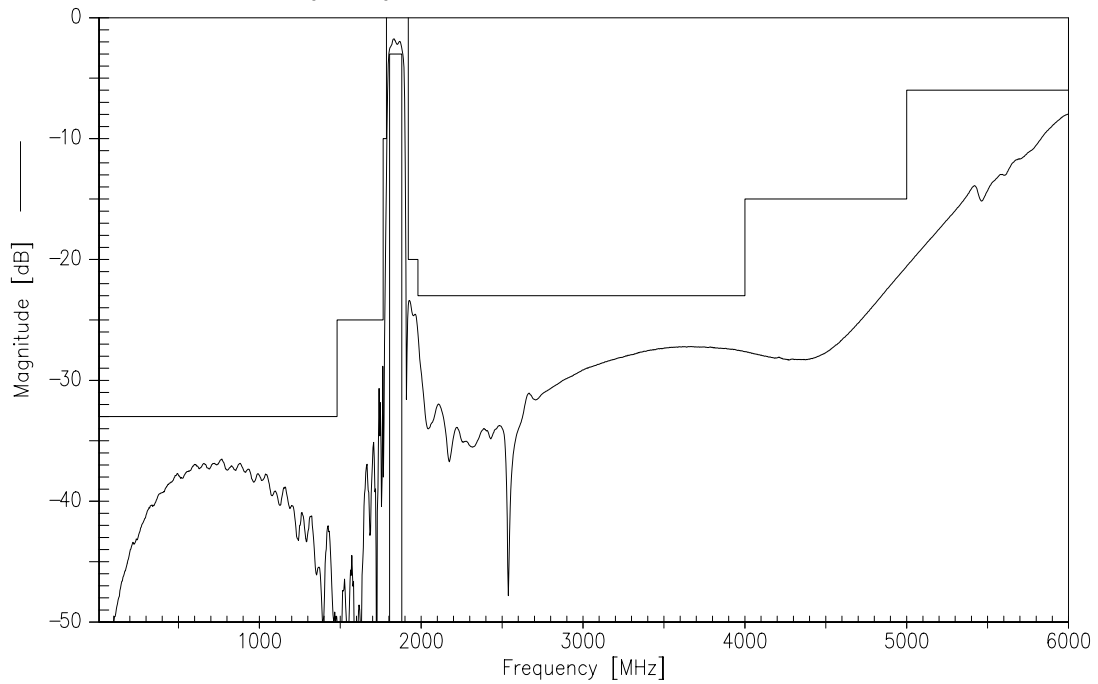




Transfer function Filter 2 (PCN) - spec at 25 °C



Transfer function Filter 2 (PCN) - wideband





SAW Components

B4230

Low-Loss Dual Band Filter for Mobile Communication

942,5 / 1842,5 MHz

Data Sheet



Published by EPCOS AG

Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

TEL ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2002. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

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.