



SAW Components

Data Sheet B4230

Data Sheet

An abstract graphic featuring the word "EPCOS" in large, glowing, 3D letters. The letters are white with a blue glow and are positioned diagonally across the frame. In the background, there is a faint, stylized globe with circuitry patterns overlaid on it, all set against a dark, textured background.



SAW Components

B4230

Low-Loss Dual Band Filter for Mobile Communication

942,5 / 1842,5 MHz

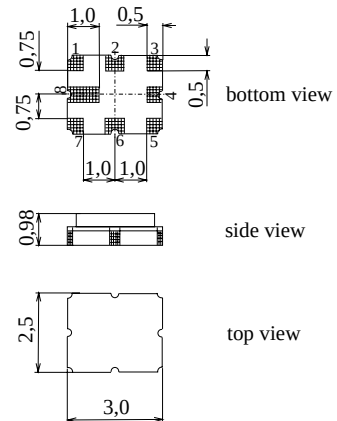
Data Sheet



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)

Ceramic package QCC8E



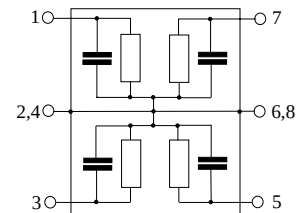
Terminals

- 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	



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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	$\alpha_{\max}$				
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	$\alpha_{\min}$				
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	°



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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	$\alpha_{\max}$				
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	$\alpha_{\min}$				
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	$^{\circ}$



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Low-Loss Dual Band Filter for Mobile Communication

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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	$\alpha_{\max}$					
	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	$\alpha_{\min}$					
	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	°



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B4230

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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	$\alpha_{\max}$					
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	$\alpha_{\min}$					
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	°



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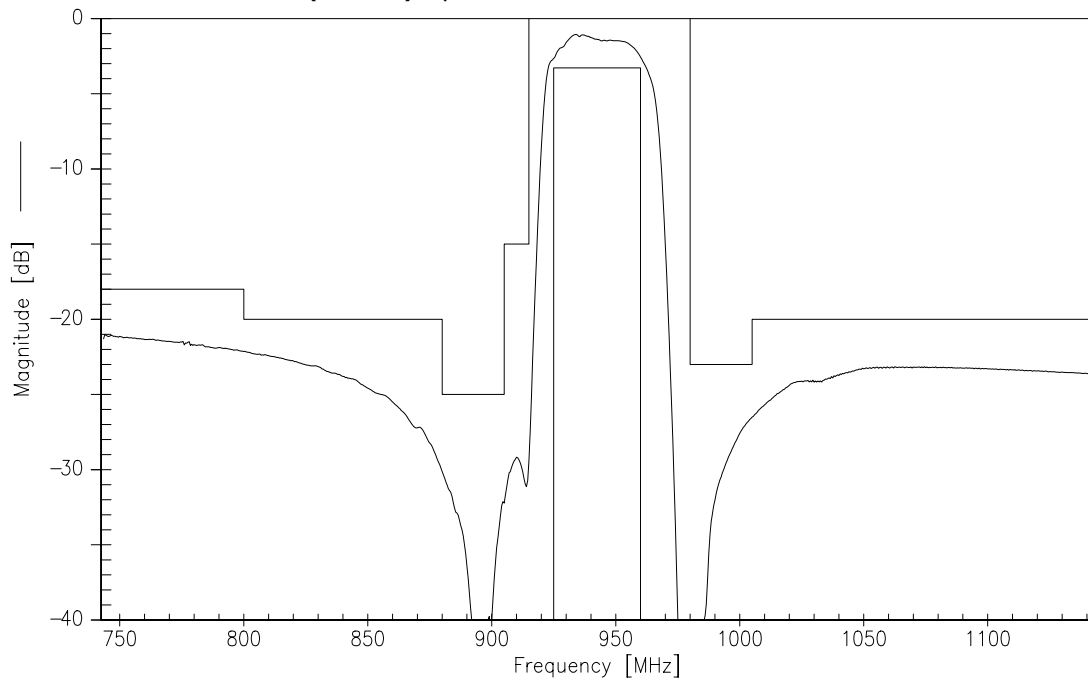
Low-Loss Dual Band Filter for Mobile Communication

942,5 / 1842,5 MHz

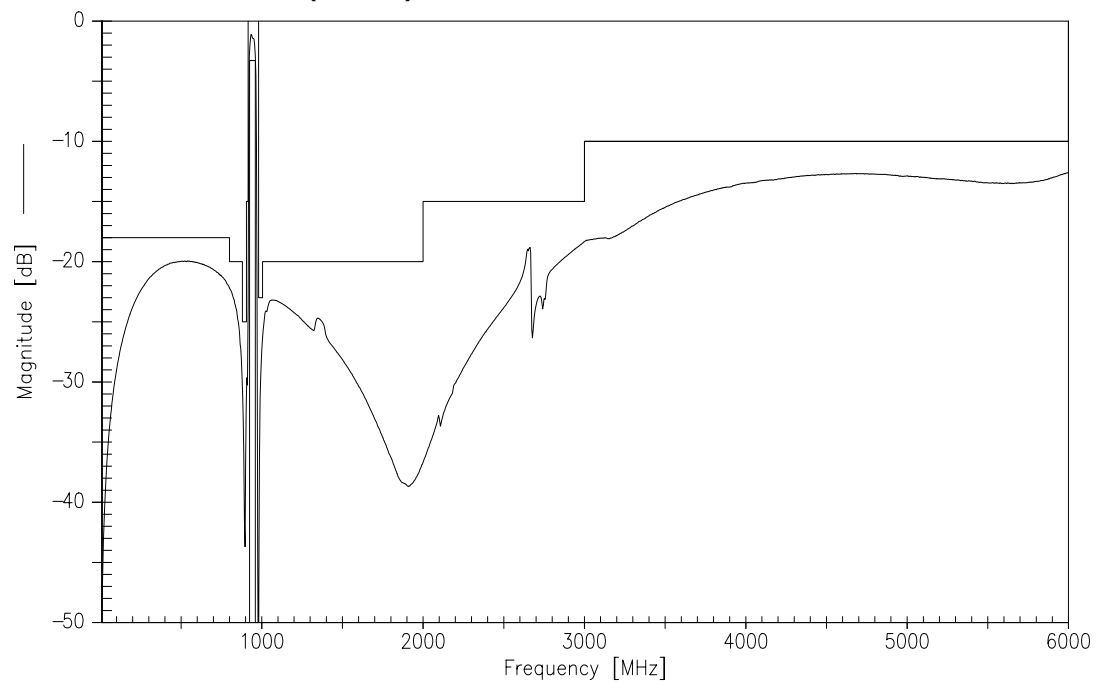
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Transfer function Filter 1 (EGSM)- spec at 25 °C



Transfer function Filter 1 (EGSM) - wideband





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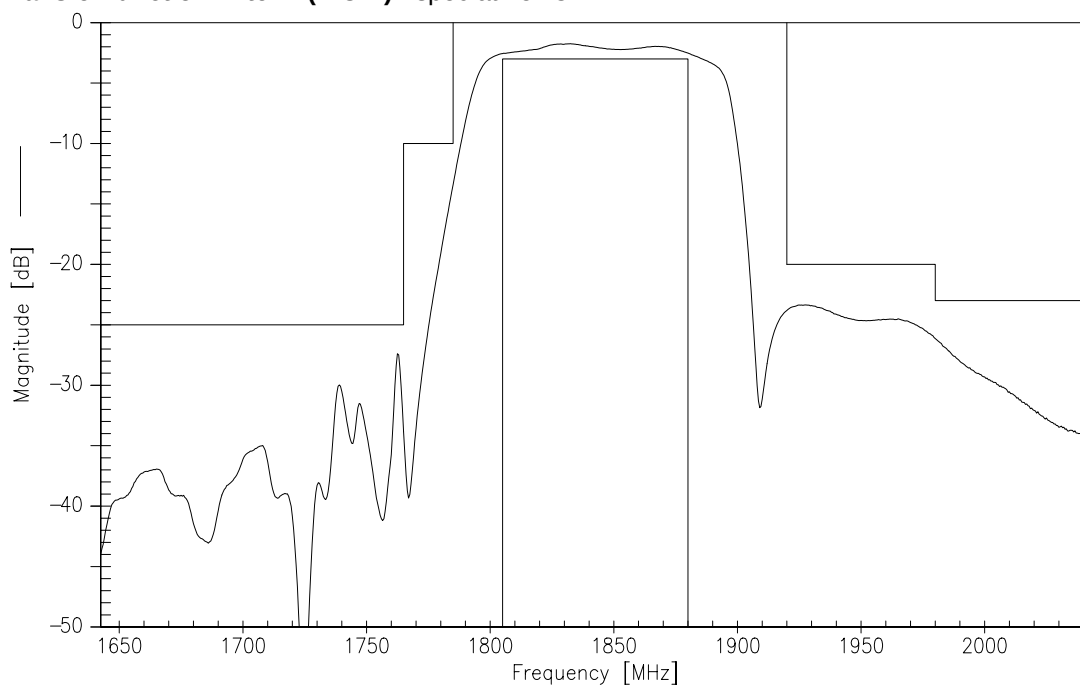
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942,5 / 1842,5 MHz

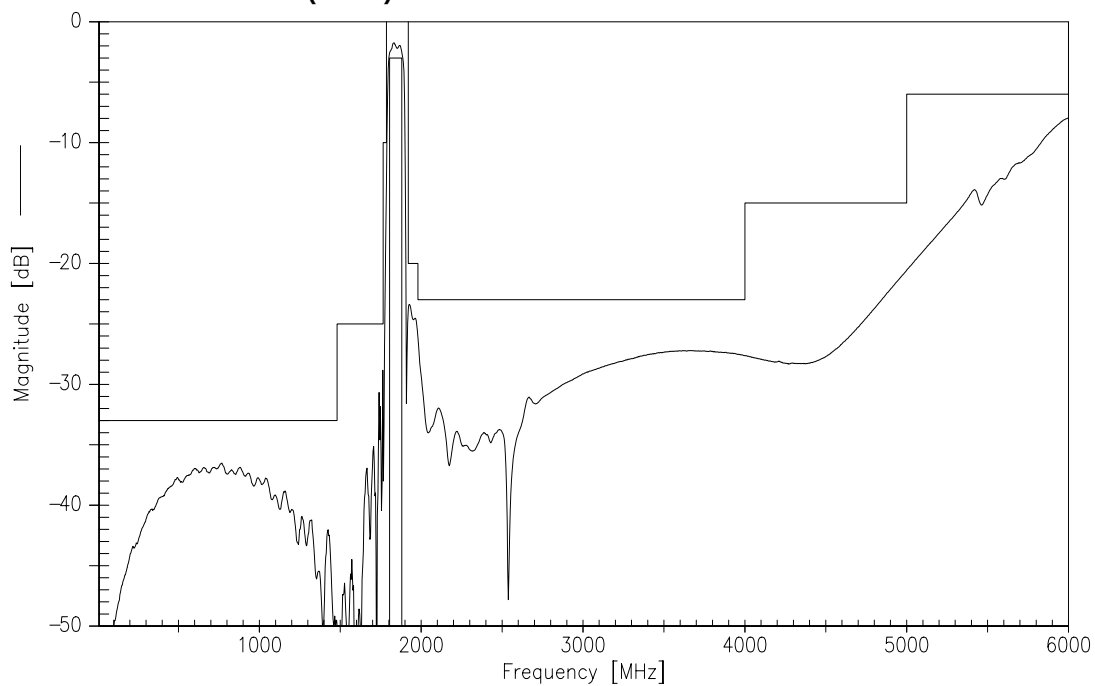
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Transfer function Filter 2 (PCN) - spec at 25 °C



Transfer function Filter 2 (PCN) - wideband





SAW Components	B4230
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Data Sheet	SMD

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