EPCOS

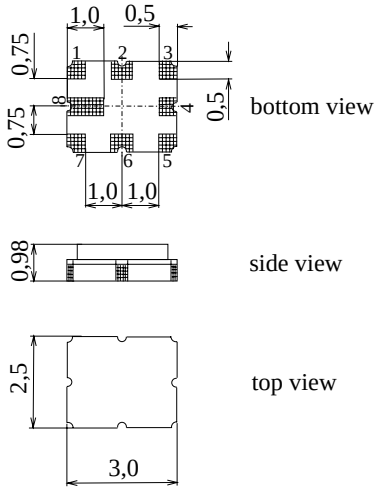
SAW Components

Data Sheet B4232

Ceramic package QCC8E

Features

- Low-loss '2 in 1' RF filter for Trunked Radio
- Device with two integrated Rx filters
- Low amplitude ripple
- Usable passband filter 1: 19,0 MHz
- Usable passband filter 2: 14,0 MHz
- No matching network required for operation at 50 Ω
- Package for **S**urface **M**ounted **T**echnology (**SMT**)



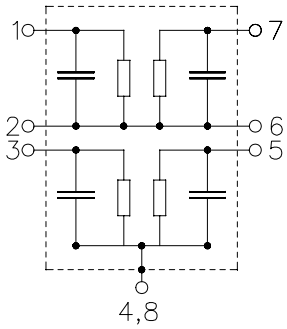
Terminals

- Ni, gold-plated

Dimensions in mm, approx. weight 0,027g

Pin configuration

1	Input (filter 1)
7	Output (filter 1)
3	Input (filter 2)
5	Output (filter 2)
2,6	Ground
4,8	Case ground



Type	Ordering code	Marking and Package according to	Packing according to
B4232	B39861-B4232-H410	C61157-A7-A92	F61074-V8174-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 40 / + 85	˚C	
Storage temperature range	T_{stg}	– 40 / + 85	˚C	
DC voltage	V_{DC}	5	V	
ESD voltage	V^*_{ESD}	100	V	Machine Model, 10 pulses
Source power (cw)	P_S	15	dBm	source and load impedance 50 Ω

*-acc. to JESD22-A115A (Machine Model), 10 negative & 10 positive pulses

Characteristics filter 1

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

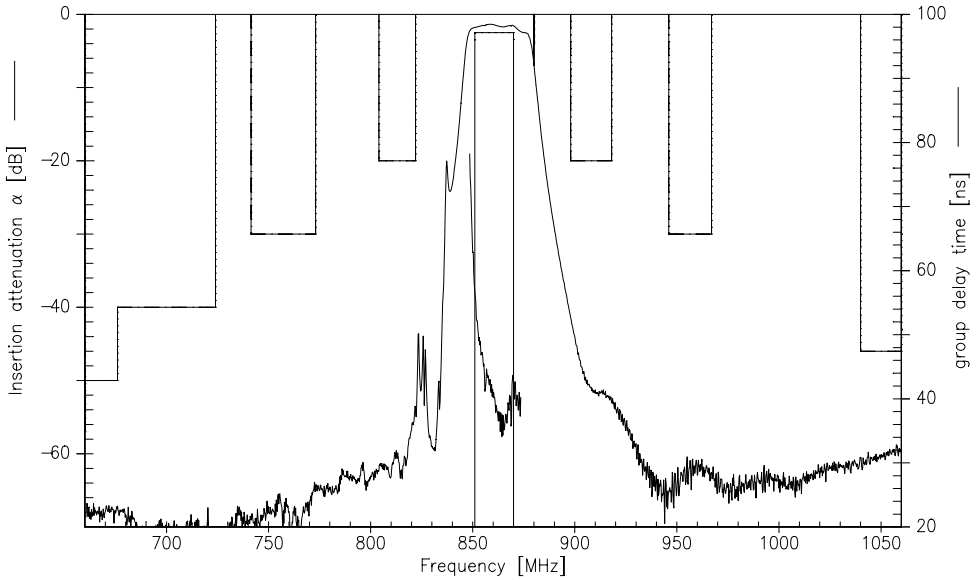
		min.	typ.	max.	
Nominal frequency	f_N	—	860,5	—	MHz
Maximum insertion attenuation	α_{max}				
851,0 ... 870,0 MHz		—	2,1	2,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
851,0 ... 870,0 MHz		—	0,7	1,1	dB
Group delay ripple (p-p)	$\Delta\tau$				
851,0 ... 870,0 MHz		—	20,0	50,0	ns
Return loss (Input and Output)					
851,0 ... 870,0 MHz		10,0	11,5	—	dB
Absolute attenuation	α_{abs}				
0,1 ... 483,0 MHz		57	60	—	dB
483,0 ... 676,0 MHz		50	60	—	dB
676,0 ... 724,0 MHz		40	64	—	dB
741,4 ... 773,0 MHz		30	59	—	dB
804,0 ... 822,0 MHz		20	42	—	dB
880,0 MHz		7	11	—	dB
898,0 ... 918,0 MHz		20	40	—	dB
946,0 ... 967,0 MHz		30	59	—	dB
1040,0 ... 1070,0 MHz		46	54	—	dB
1070,0 ... 1256,0 MHz		43	50	—	dB
1256,0 ... 2000,0 MHz		30	40	—	dB
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

Characteristics filter 1

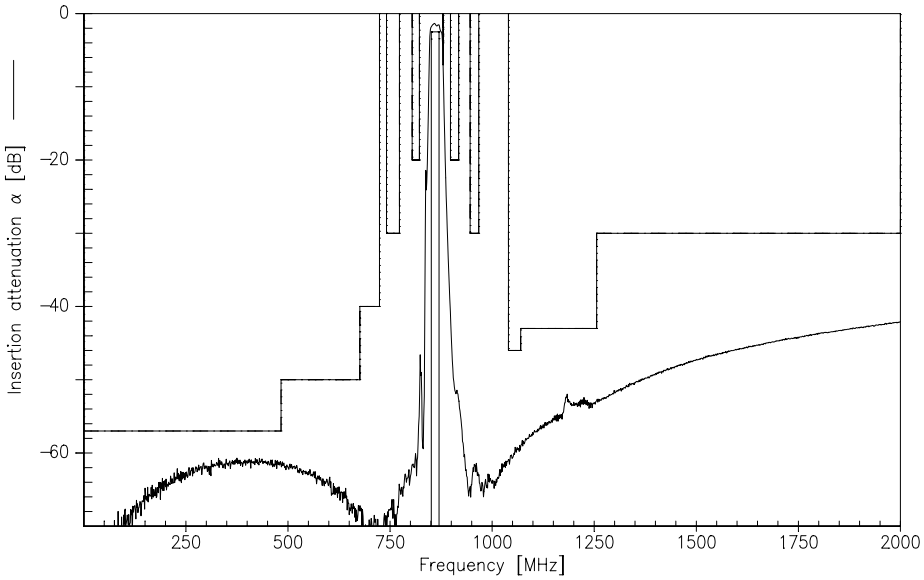
Operating temperature range: T = -30 .. +70 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Nominal frequency	f_N	—	860,5	—	MHz
Maximum insertion attenuation	α_{max}				
851,0 ... 870,0 MHz		—	2,4	2,7	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
851,0 ... 870,0 MHz		—	1,0	1,3	dB
Group delay ripple (p-p)	$\Delta\tau$				
851,0 ... 870,0 MHz		—	30,0	50,0	ns
Return loss (Input and Output)					
851,0 ... 870,0 MHz		10,0	11,0	—	dB
Absolute attenuation	α_{abs}				
0,1 ... 483,0 MHz		57	60	—	dB
483,0 ... 676,0 MHz		50	60	—	dB
676,0 ... 724,0 MHz		40	64	—	dB
741,4 ... 773,0 MHz		30	59	—	dB
804,0 ... 822,0 MHz		20	42	—	dB
880,0 MHz		4	7	—	dB
898,0 ... 918,0 MHz		20	38	—	dB
946,0 ... 967,0 MHz		30	59	—	dB
1040,0 ... 1070,0 MHz		46	54	—	dB
1070,0 ... 1256,0 MHz		43	50	—	dB
1256,0 ... 2000,0 MHz		30	40	—	dB
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

Transfer function filter 1 (narrow band)



Transfer function filter 1 (wide band)



Characteristics filter 2

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

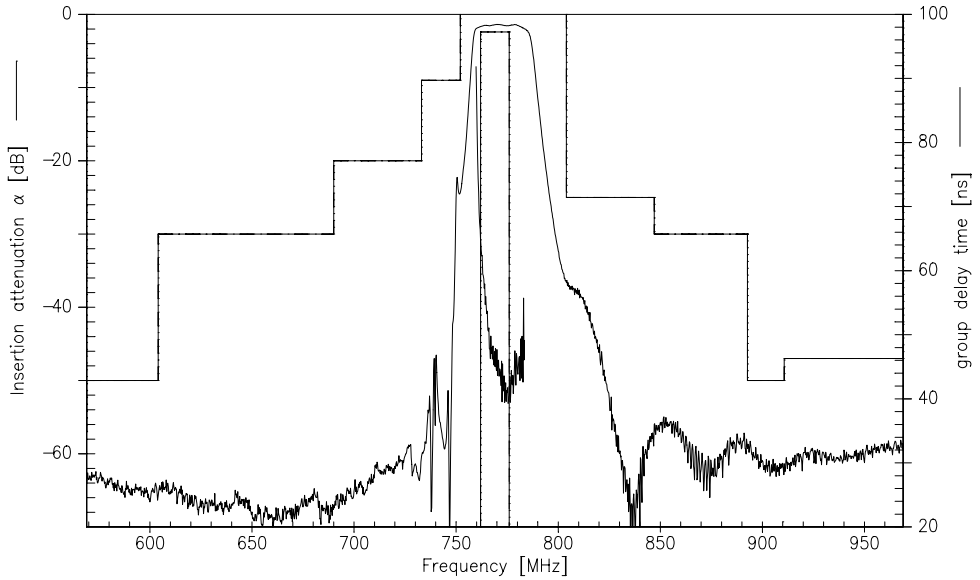
		min.	typ.	max.	
Nominal frequency	f_N	—	769,0	—	MHz
Maximum insertion attenuation	α_{max}				
762,0 ... 776,0 MHz		—	1,7	2,4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
762,0 ... 776,0 MHz		—	0,4	1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
762,0 ... 776,0 MHz		—	22,0	50,0	ns
Return loss (Input and Output)					
762,0 ... 776,0 MHz		12,0	13,0	—	dB
Absolute attenuation	α_{abs}				
0,0 ... 431,0 MHz		57	60	—	dB
431,0 ... 604,0 MHz		50	60	—	dB
604,0 ... 690,0 MHz		30	62	—	dB
690,0 ... 733,0 MHz		20	56	—	dB
733,0 ... 752,0 MHz		9	18	—	dB
804,0 ... 847,0 MHz		25	36	—	dB
847,0 ... 892,7 MHz		30	54	—	dB
892,7 ... 910,7 MHz		50	56	—	dB
910,7 ... 995,3 MHz		47	54	—	dB
995,3 ...1121,0 MHz		42	52	—	dB
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

Characteristics filter 2

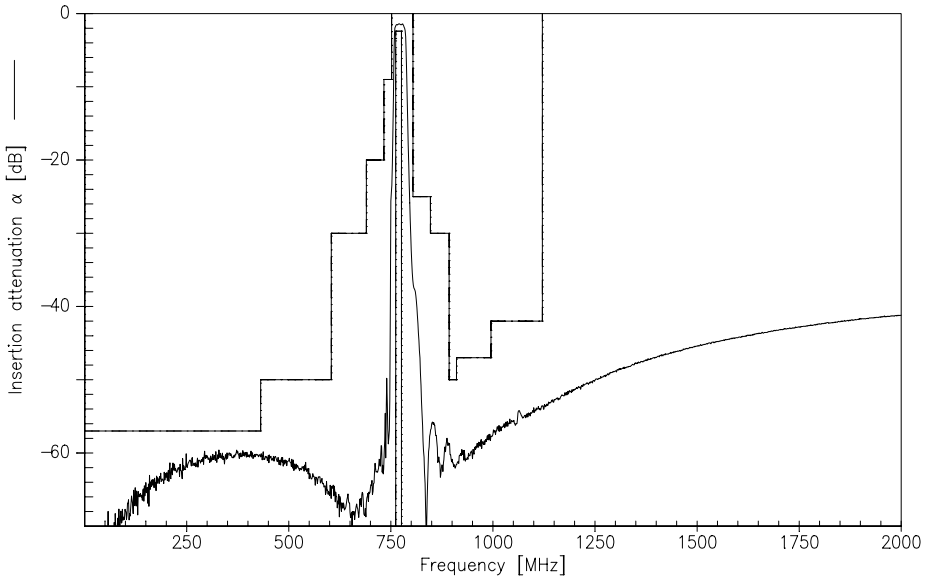
Operating temperature range: T = -30 .. +70 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Nominal frequency	f_N	—	769,0	—	MHz
Maximum insertion attenuation	α_{max}				
762,0 ... 776,0 MHz		—	1,8	2,6	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
762,0 ... 776,0 MHz		—	0,5	1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
762,0 ... 776,0 MHz		—	30,0	50,0	ns
Return loss (Input and Output)					
762,0 ... 776,0 MHz		12,0	13,0	—	dB
Absolute attenuation	α_{abs}				
0,0 ... 431,0 MHz		57	60	—	dB
431,0 ... 604,0 MHz		50	60	—	dB
604,0 ... 690,0 MHz		30	62	—	dB
690,0 ... 733,0 MHz		20	56	—	dB
733,0 ... 752,0 MHz		9	16	—	dB
804,0 ... 847,0 MHz		25	34	—	dB
847,0 ... 892,7 MHz		30	54	—	dB
892,7 ... 910,7 MHz		50	56	—	dB
910,7 ... 995,3 MHz		47	54	—	dB
995,3 ...1121,0 MHz		42	52	—	dB
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

Transfer function filter 2 (narrow band)



Transfer function filter 2 (wide band)



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC PD
P.O. Box 80 17 09, D-81617 München

The information contained in this brochure describes the type of component and shall not be considered as guaranteed characteristics. 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.