EPCOS

SAW Components

Preliminary Data B4236

Low-Loss '2 in 1' Filter for Mobile Communication 769,0/809,5 MHz

Preliminary Data

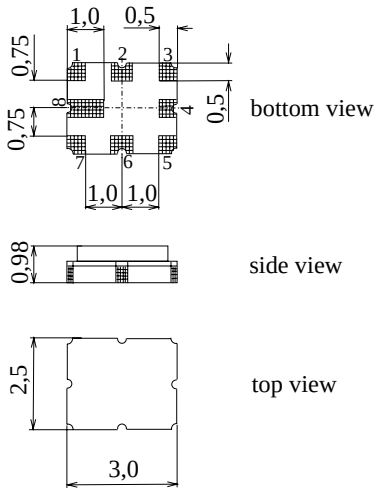
Ceramic package QCC8E

Features

- Low-loss '2 in 1' RF filter for Trunked Radio
- Device with two integrated Rx filters
- Low amplitude ripple
- Usable passband filter 1: 31,0 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**)
- RoHS Compliant

Terminals

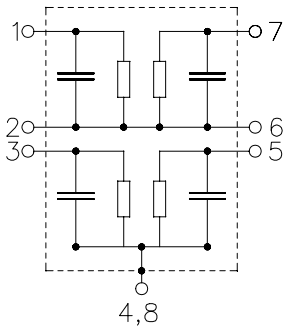
- Ni, gold-plated



Dimensions in mm, approx. weight 27mg

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
B4236	B39811-B4236-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

Preliminary Data

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	—	809,5	—	MHz
Maximum insertion attenuation	α_{max}				
794,0 ... 825,0 MHz		—	2,3	2,8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
794,0 ... 825,0 MHz		—	0,9	1,4	dB
Group delay ripple (p-p)	$\Delta\tau$				
794,0 ... 825,0 MHz		—	27,0	50,0	ns
Return loss (Input and Output)					
794,0 ... 825,0 MHz		8,0	9,0	—	dB
Absolute attenuation	α_{abs}				
0,0 ... 777,0 MHz		20	28	—	dB
851,0 ...1564,5 MHz		20	39	—	dB
1564,5 ...1594,5 MHz		30	43	—	dB
2326,5 ...2371,5 MHz		36	41	—	dB
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

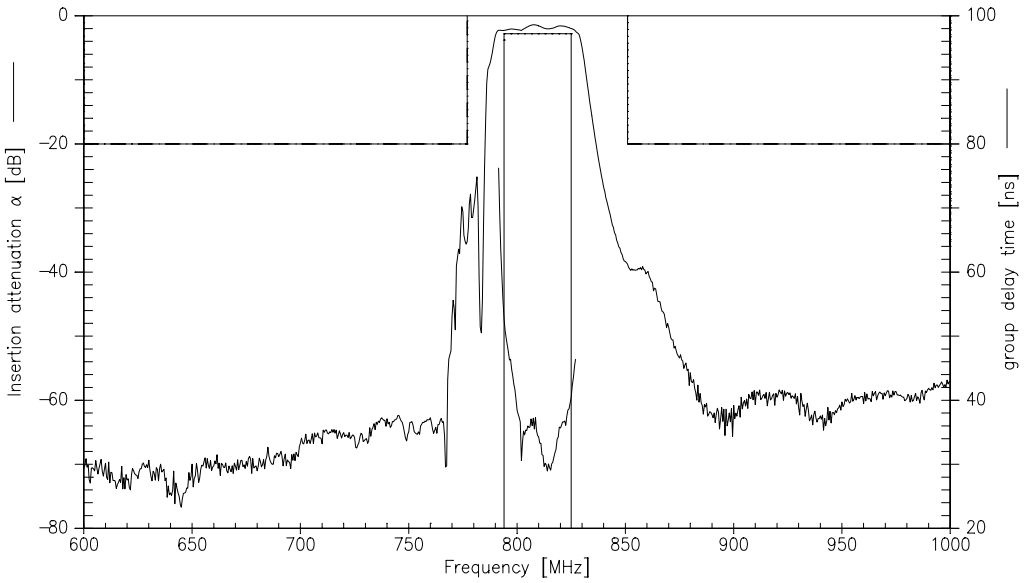
Preliminary Data

Characteristics filter 1

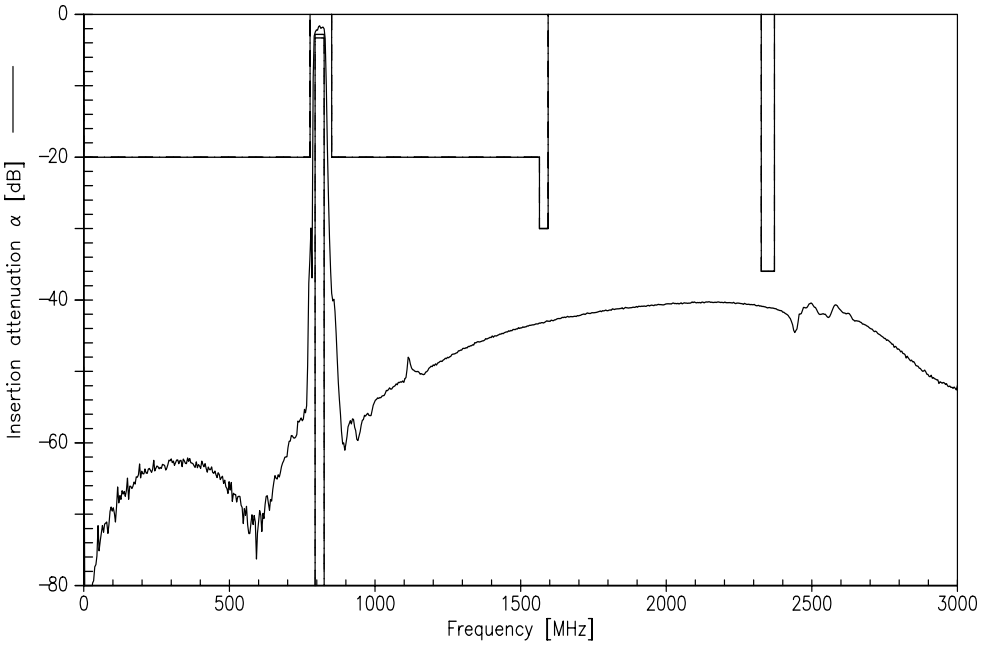
Operating temperature range: T = -30 .. +70 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ.	max.	
Nominal frequency	f_N	—	809,5	—	MHz
Maximum insertion attenuation	α_{max}				
794,0 ... 825,0 MHz		—	2,3	3,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
794,0 ... 825,0 MHz		—	0,9	1,9	dB
Group delay ripple (p-p)	$\Delta\tau$				
794,0 ... 825,0 MHz		—	40,0	75,0	ns
Return loss (Input and Output)					
794,0 ... 825,0 MHz		8,0	9,0	—	dB
Absolute attenuation	α_{abs}				
0,0 ... 777,0 MHz		20	27	—	dB
851,0 ...1564,5 MHz		20	37	—	dB
1564,5 ...1594,5 MHz		30	43	—	dB
2326,5 ...2371,5 MHz		36	41	—	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

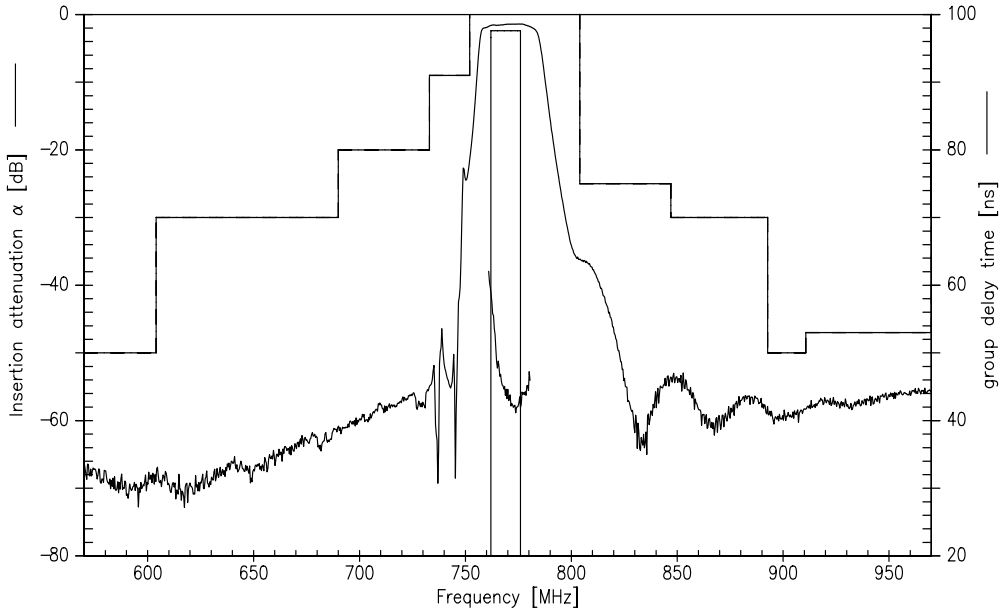
		min.	typ.	max.	
Nominal frequency	f_N	—	769,0	—	MHz
Maximum insertion attenuation	α_{max}				
762,0 ... 776,0 MHz		—	1,7	2,4	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
762,0 ... 776,0 MHz		—	0,4	1,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
762,0 ... 776,0 MHz		—	22,0	50,0	ns
Return loss (Input and Output)					
762,0 ... 776,0 MHz		12,0	13,5	—	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	58	—	dB
690,0 ... 733,0 MHz		20	52	—	dB
733,0 ... 752,0 MHz		9	22	—	dB
804,0 ... 847,0 MHz		25	36	—	dB
847,0 ... 892,7 MHz		30	52	—	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
1524,0 ...1554,0 MHz		30	42	—	dB
2286,0 ...2331,0 MHz		30	39	—	dB
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

Characteristics filter 2

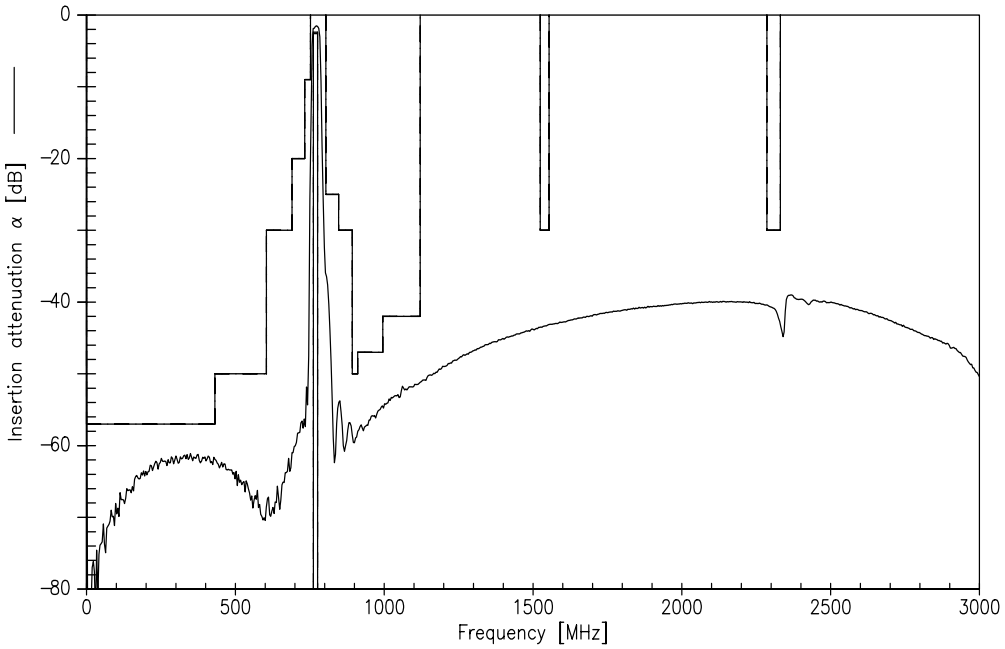
Operating temperature range: T = -30 .. +70 °C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		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	13,5	—	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	58	—	dB
690,0 ... 733,0 MHz		20	52	—	dB
733,0 ... 752,0 MHz		9	18	—	dB
804,0 ... 847,0 MHz		25	36	—	dB
847,0 ... 892,7 MHz		30	52	—	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
1524,0 ...1554,0 MHz		30	42	—	dB
2286,0 ...2331,0 MHz		30	39	—	dB
Temperature coefficient of frequency	TC_f	—	– 36	—	ppm/K

Transfer function filter 2 (narrow band)



Transfer function filter 2 (wide band)



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