EPCOS

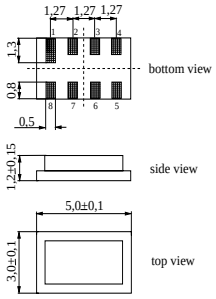
SAW Components

Data Sheet B7304

Chip **S**ized **S**AW **P**ackage **DCS8A**

Features

- Low-loss IF filter for mobile telephone
- Channel selection in GSM, PCN, PCS systems
- **C**hip **S**ized **S**AW **P**ackage
- expansion coil for minimum insertion attenuation and optimum bandwidth adjustment



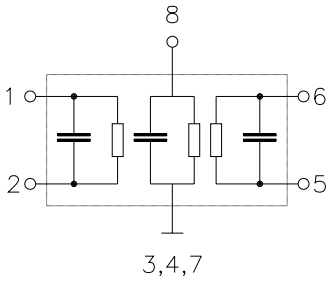
Terminals

- Gold-plated Ni

Dimensions in mm, approx. weight 0,05 g

Pin configuration

1, 2	Input balanced
5, 6	Output balanced
3, 4, 7	Ground
8	Expansion coil



Type	Ordering code	Marking and Package according to	Packing according to
B7304	B39231-B7304-A910	C61157-A7-A65	F61074-V8102-Z000

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

Maximum ratings

Operable temperature range	T_A	– 25/+ 80	˚C
Storage temperature range	T_{stg}	– 40/+ 85	˚C
DC voltage	V_{DC}	3	V
Source power	P_s	10	dBm

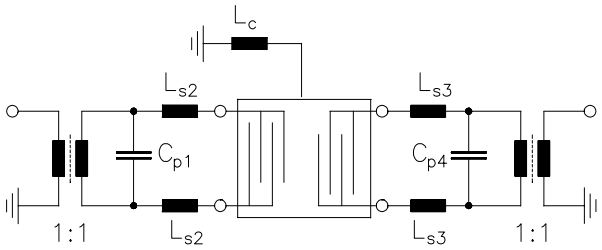
Characteristics

Operating temperature range: T = -25 ˚C ... +80 ˚C
Terminating source impedance: Z_S = 1000 Ω || -1,2 pF
Terminating load impedance: Z_L = 1000 Ω || -1,2 pF

		min.	typ.	max.	
Nominal frequency	f_N	—	225,00	—	MHz
Maximum insertion attenuation (Including losses in matching circuit)	α_{max}	—	5,5	6,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
f_N - 65.0 kHz ... f_N + 65.0 kHz		—	0,3	2,0	dB
f_N - 70.0 kHz ... f_N + 70.0 kHz		—	0,4	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
f_N - 70.0 kHz ... f_N + 70.0 kHz		—	0,8	2,5	µs
Relative attenuation (relative to α_{max})	α_{rel}				
f_N - 25,00 MHz ... f_N - 3,00 MHz		45	66	—	dB
f_N - 3,00 MHz ... f_N - 1,60 MHz		43	64	—	dB
f_N - 1,60 MHz ... f_N - 0,60 MHz		38	49	—	dB
f_N - 0,60 MHz ... f_N - 0,40 MHz		27	33	—	dB
f_N - 0,40 MHz ... f_N - 0,23 MHz		8	16	—	dB
f_N + 0,23 MHz ... f_N + 0,40 MHz		8	14	—	dB
f_N + 0,40 MHz ... f_N + 0,60 MHz		27	30	—	dB
f_N + 0,60 MHz ... f_N + 1,60 MHz		38	43	—	dB
f_N + 1,60 MHz ... f_N + 3,00 MHz		43	60	—	dB
f_N + 3,00 MHz ... f_N + 25,00 MHz		45	53	—	dB
Impedance within pass band					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	1000 ‖ 1,2	—	Ω || pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	1000 ‖ 1,2	—	Ω || pF
Temperature coefficient of frequency [1]	TC_f	—	-0,039	—	ppm/K²
Frequency inversion point	T_0	—	25	—	˚C

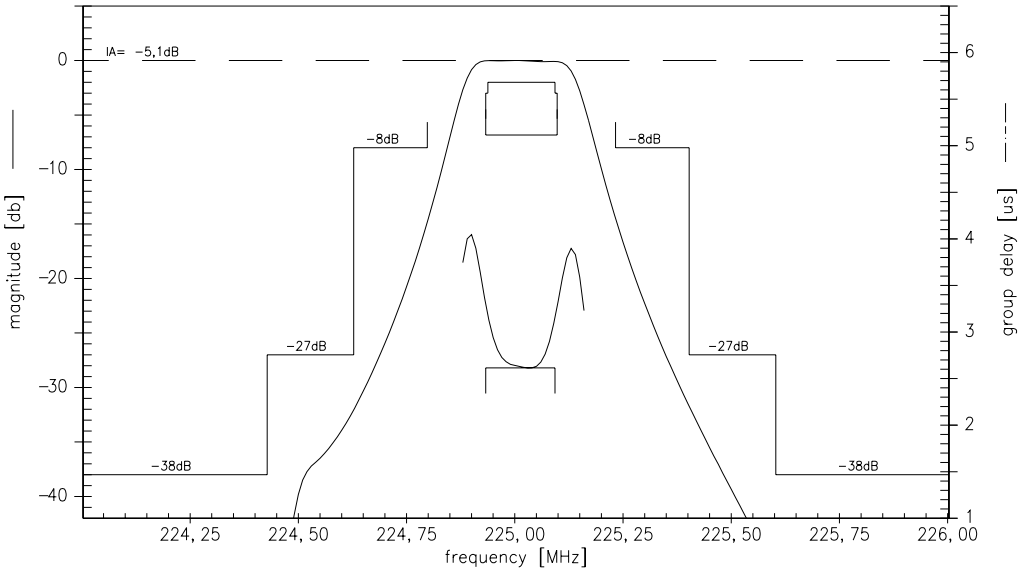
[1] Temperature dependence of f_c: $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2$

Test matching network to 50Ω, low pass example (actual element values depend on PCB layout. S-parameters of transformers TOKO B5FL available on request):

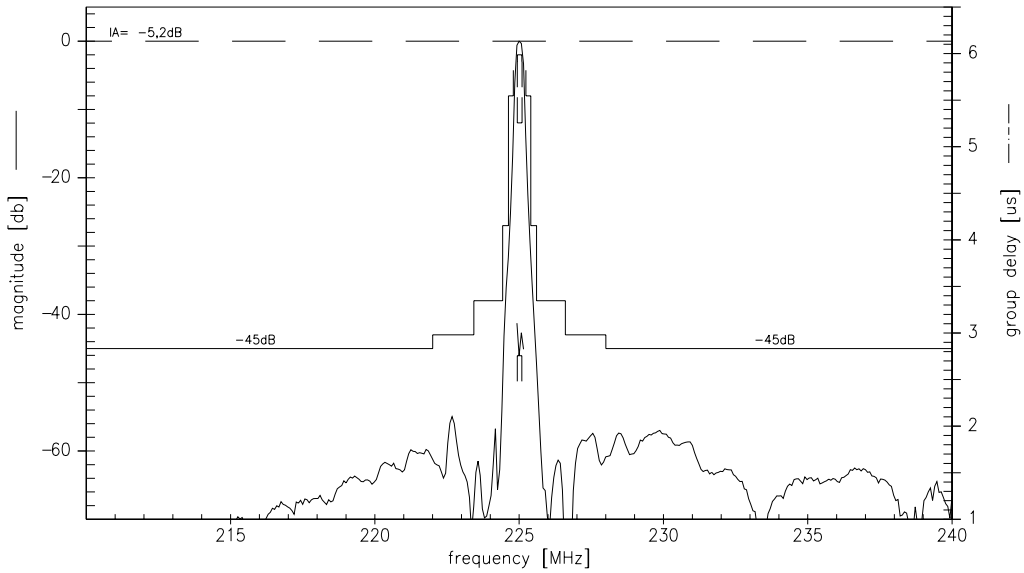


L_c = 82 nH || 1,8 pF
C_{p1} = C_{p4} = 2,2 pF
L_{s2} = L_{s3} = 39 nH

Transfer function (pass band**):**



Transfer function (wide band**):**



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This brochure replaces the previous edition.

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