



SAW Components

Data Sheet B7302





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B7302

Low-Loss Filter for Mobile Communication

360,0 MHz

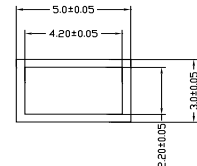
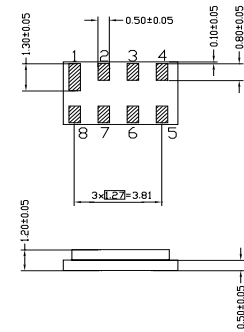
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Chip Sized SAW Package DCS8A

Features

- Low-loss IF filter for mobile telephone
- Channel selection in GSM, PCN systems
- Chip Sized SAW Package
- No expansion coil



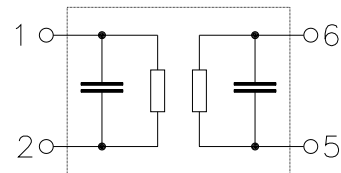
Dimensions in mm, approx. weight 0,05 g

Terminals

- Gold-plated Ni

Pin configuration

- 1 Input or input ground
- 2 Input or balanced input
- 5 Output or output ground
- 6 Output or balanced output
- 3, 4, 7, 8 Ground



Type	Ordering code	Marking and Package according to	Packing according to
B7302	B39361-B7302-A910	C61157-A7-A65	F61074-V8102-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operating temperature range	T	- 20/+ 80	°C	
Storage temperature range	T_{stg}	- 35/+ 85	°C	
DC voltage	V_{DC}	3	V	
Source power	P_s	10	dBm	


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Characteristics

Operating temperature range:	$T = -20$ to $+80$ °C
Terminating source impedance:	$Z_S = 800 \Omega \parallel 160$ nH
Terminating load impedance:	$Z_S = 800 \Omega \parallel 160$ nH

		min.	typ.	max.	
Nominal frequency	f_N	—	360,0	—	MHz
Minimum insertion attenuation					
(including losses in matching circuit)	α_{min}	—	5,4	6,1	dB
(excluding losses in matching circuit)		—	5,1	5,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
$f_N - 67,5$ kHz ... $f_N + 67,5$ kHz		—	0,3	2,0	dB
$f_N - 80,0$ kHz ... $f_N + 80,0$ kHz		—	0,4	3,0	dB
Group delay ripple (p-p)	$\Delta\tau$				
$f_N - 67,5$ kHz ... $f_N + 67,5$ kHz		—	0,4	1,5	μ s
$f_N - 80,0$ kHz ... $f_N + 80,0$ kHz		—	0,5	2,0	μ s
Relative attenuation (relative to α_{min})	α_{rel}				
$f_N - 15$ MHz ... $f_N + 3,0$ MHz		50	60	—	dB
$f_N - 3,0$ MHz ... $f_N - 1,6$ MHz		48 *)	50	—	dB
$f_N - 1,6$ MHz ... $f_N - 800$ kHz		40 †)	56	—	dB
$f_N - 800$ kHz ... $f_N - 600$ kHz		35	46	—	dB
$f_N - 600$ kHz ... $f_N - 400$ kHz		21	41	—	dB
$f_N - 400$ kHz ... $f_N - 300$ kHz		8	24	—	dB
$f_N + 300$ kHz ... $f_N + 400$ kHz		8	17	—	dB
$f_N + 400$ kHz ... $f_N + 600$ kHz		21	26	—	dB
$f_N + 600$ kHz ... $f_N + 800$ kHz		35	38	—	dB
$f_N + 800$ kHz ... $f_N + 1,6$ MHz		40	47	—	dB
$f_N + 1,6$ MHz ... $f_N + 3,0$ MHz		48	59	—	dB
$f_N + 3,0$ MHz ... $f_N + 15$ MHz		50	57	—	dB
Impedance within the pass band					
Input: $Z_{IN} = R_{IN} \parallel C_{IN}$		—	$800 \parallel 1,25$	—	$\Omega \parallel$ pF
Output: $Z_{OUT} = R_{OUT} \parallel C_{OUT}$		—	$800 \parallel 1,25$	—	$\Omega \parallel$ pF
Temperature coefficient of frequency 1)	TC_f	—	-0,036	—	ppm/K ²
Turnover temperature	T_0	—	40	—	°C

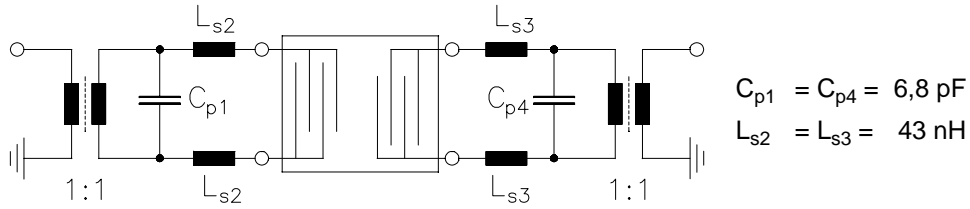
1) Temperature dependence of f_c : $f_c(T) = f_c(T_0)(1 + TC_f(T - T_0)^2)$

*) 358,0 MHz < f < 358,3 MHz: spurious response, $B_{3dB} < 150$ kHz, $\alpha_{rel} > 45$ dB

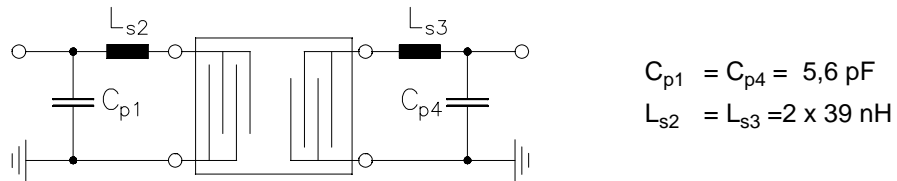
†) 358,9 MHz < f < 359,2 MHz: spurious response, $B_{3dB} < 100$ kHz, $\alpha_{rel} > 37$ dB



Test matching network to 50Ω, balanced low pass matching circuit (actual element values depend on PCB layout. Serial inductance values by combination of 39nH / 47nH. S-parameters of transformers TOKO B5FL available on request):

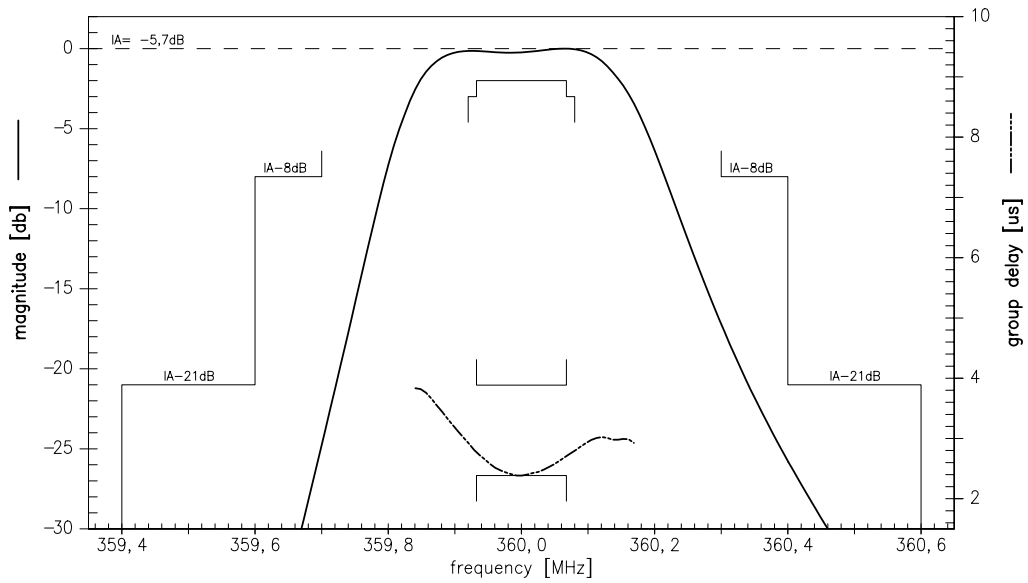


Test matching network to 50Ω, single-ended or pseudo-balanced (serial inductances splitted up into both signal paths, improved ultimate rejection) low pass matching circuit (actual element values depend on PCB layout):

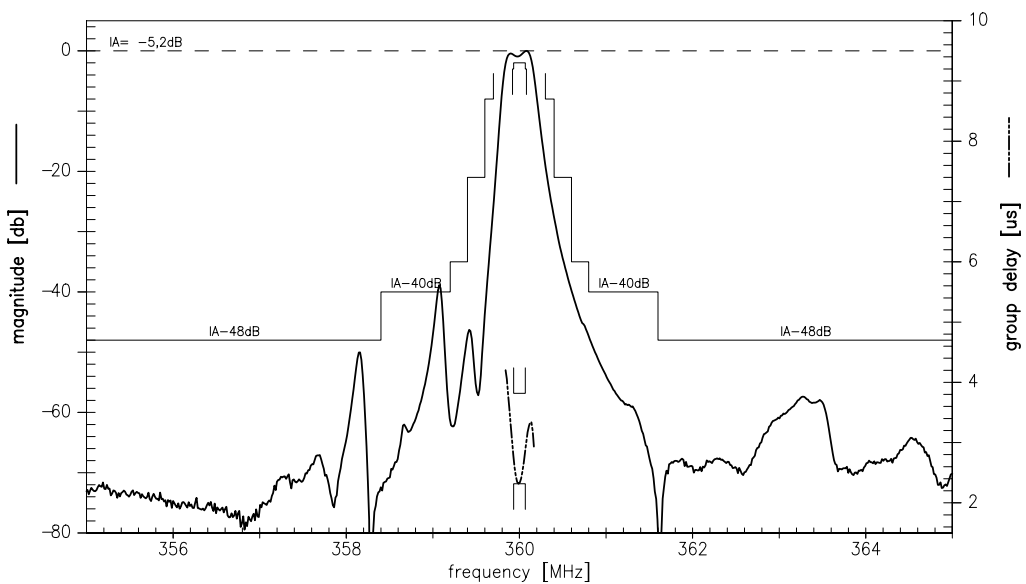




Transfer function (pass band):



Transfer function (wide band):





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