



SAW Components

Data Sheet B7707, Pb-Free

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	B7707
Low-Loss Filter for Mobile Communication	942,50 MHz
Data Sheet	SMD

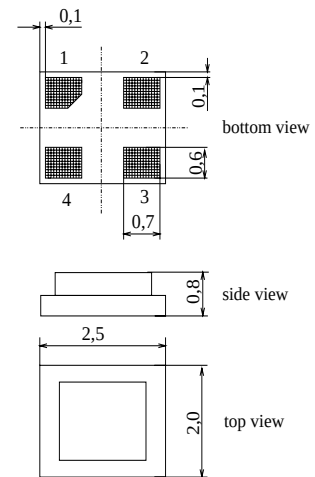
Chip Sized SAW Package DCS4H

Features

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- No matching network required for operation at 50 Ω
- Suitable for GPRS class 1 to 12
- Package for **Surface Mounted Technology (SMT)**
- Pb-Free

Terminals

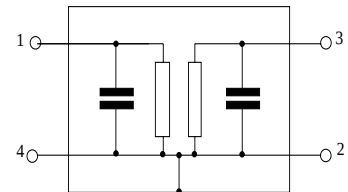
- Ni, gold-plated



Dimensions in mm, approx. weight 0,015g

Pin configuration

1	Input
3	Output
2,4	Ground



Type	Ordering code	Marking and Package according to	Packing according to
B7707	B39941-B7707-K710	C61157-A7-A136	F61074-V8189-Z000

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	T	- 40 / + 85	$^{\circ}\text{C}$	Machine Model, 10 pulses peak power of GSM signal, duty cycle 4:8
Storage temperature range	T_{stg}	- 40 / + 85	$^{\circ}\text{C}$	
DC voltage	V_{DC}	3	V	
ESD voltage	V_{ESD}^{*}	100*	V	
Input power at	P_{IN}	15	dBm	
GSM850, GSM900, GSM1800 and GSM1900 Tx bands				

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



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Characteristics

Operating temperature range: $T = 25 \pm 2 \text{ }^{\circ}\text{C}$
Terminating source impedance: $Z_S = 50 \text{ }\Omega$
Terminating load impedance: $Z_L = 50 \text{ }\Omega$

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$				
925,0 ... 960,0 MHz		—	2,8	3,3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
925,0 ... 960,0 MHz		—	1,0	1,6	dB
Input VSWR					
925,0 ... 960,0 MHz		—	2,0	2,3	
Output VSWR					
925,0 ... 960,0 MHz		—	2,0	2,2	
Input return loss					
925,0 ... 960,0 MHz		8,0	9,0	—	dB
Input return loss phase					
1842,5 MHz		-150,0	-140,0	-130,0	°
Attenuation	α				
0,0 ... 750,0 MHz		50	66	—	dB
750,0 ... 800,0 MHz		46	69	—	dB
800,0 ... 880,0 MHz		45	54	—	dB
880,0 ... 905,0 MHz		31	60	—	dB
905,0 ... 915,0 MHz		17	33	—	dB
980,0 ... 982,0 MHz		23	26	—	dB
982,0 ... 1005,0 MHz		23	29	—	dB
1005,0 ... 1025,0 MHz		30	52	—	dB
1025,0 ... 1035,0 MHz		35	54	—	dB
1035,0 ... 1760,0 MHz		40	55	—	dB
1760,0 ... 3120,0 MHz		34	38	—	dB
3120,0 ... 4000,0 MHz		18	26	—	dB
4000,0 ... 6000,0 MHz		8	18	—	dB



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Characteristics

Operating temperature range: $T = -20^{\circ}\text{C}$ to $+75^{\circ}\text{C}$

Terminating source impedance: $Z_S = 50\ \Omega$

Terminating load impedance: $Z_L = 50\ \Omega$

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$					
	925,0 ... 960,0	MHz	—	3,0	3,5	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
	925,0 ... 960,0	MHz	—	1,2	1,8	dB
Input VSWR						
	925,0 ... 960,0	MHz	—	2,0	2,3	
Output VSWR						
	925,0 ... 960,0	MHz	—	2,0	2,2	
Input return loss						
	925,0 ... 960,0	MHz	8,0	9,0	—	dB
Input return loss phase						
	1842,5	MHz	-150,0	-140,0	-130,0	°
Attenuation	α					
	0,0 ... 750,0	MHz	50	66	—	dB
	750,0 ... 800,0	MHz	46	69	—	dB
	800,0 ... 880,0	MHz	45	54	—	dB
	880,0 ... 905,0	MHz	31	60	—	dB
	905,0 ... 915,0	MHz	17	24	—	dB
	980,0 ... 982,0	MHz	22	25	—	dB
	982,0 ... 1005,0	MHz	23	27	—	dB
	1005,0 ... 1025,0	MHz	30	52	—	dB
	1025,0 ... 1035,0	MHz	35	54	—	dB
	1035,0 ... 1760,0	MHz	40	55	—	dB
	1760,0 ... 3120,0	MHz	34	38	—	dB
	3120,0 ... 4000,0	MHz	18	26	—	dB
	4000,0 ... 6000,0	MHz	8	18	—	dB



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Low-Loss Filter for Mobile Communication

942,50 MHz

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Characteristics

Operating temperature range: $T = -30^{\circ}\text{C}$ to $+80^{\circ}\text{C}$

Terminating source impedance: $Z_S = 50\ \Omega$

Terminating load impedance: $Z_L = 50\ \Omega$

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$					
	925,0 ... 960,0 MHz		—	3,0	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
	925,0 ... 960,0 MHz		—	1,2	2,3	dB
Input VSWR						
	925,0 ... 960,0 MHz		—	2,0	2,3	
Output VSWR						
	925,0 ... 960,0 MHz		—	2,0	2,2	
Input return loss						
	925,0 ... 960,0 MHz		8,0	9,0	—	dB
Input return loss phase						
	1842,5 MHz		-150,0	-140,0	-130,0	°
Attenuation	α					
	0,0 ... 750,0 MHz		50	66	—	dB
	750,0 ... 800,0 MHz		46	69	—	dB
	800,0 ... 880,0 MHz		45	54	—	dB
	880,0 ... 905,0 MHz		31	60	—	dB
	905,0 ... 915,0 MHz		15	23	—	dB
	980,0 ... 982,0 MHz		21	24	—	dB
	982,0 ... 1005,0 MHz		23	27	—	dB
	1005,0 ... 1025,0 MHz		30	52	—	dB
	1025,0 ... 1035,0 MHz		35	54	—	dB
	1035,0 ... 1760,0 MHz		40	55	—	dB
	1760,0 ... 3120,0 MHz		34	38	—	dB
	3120,0 ... 4000,0 MHz		18	26	—	dB
	4000,0 ... 6000,0 MHz		8	18	—	dB



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Low-Loss Filter for Mobile Communication

942,50 MHz

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Characteristics

Operating temperature range: $T = -30^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

Terminating source impedance: $Z_S = 50\ \Omega$

Terminating load impedance: $Z_L = 50\ \Omega$

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$					
	925,0 ... 960,0 MHz		—	3,0	4,0	dB
Amplitude ripple (p-p)	$\Delta\alpha$					
	925,0 ... 960,0 MHz		—	1,2	2,3	dB
Input VSWR						
	925,0 ... 960,0 MHz		—	2,0	2,3	
Output VSWR						
	925,0 ... 960,0 MHz		—	2,0	2,2	
Input return loss						
	925,0 ... 960,0 MHz		8,0	9,0	—	dB
Input return loss phase						
	1842,5 MHz		-150,0	-140,0	-130,0	°
Attenuation	α					
	0,0 ... 750,0 MHz		50	66	—	dB
	750,0 ... 800,0 MHz		46	69	—	dB
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	880,0 ... 905,0 MHz		31	60	—	dB
	905,0 ... 915,0 MHz		12	22	—	dB
	980,0 ... 982,0 MHz		21	24	—	dB
	982,0 ... 1005,0 MHz		23	27	—	dB
	1005,0 ... 1025,0 MHz		30	52	—	dB
	1025,0 ... 1035,0 MHz		35	54	—	dB
	1035,0 ... 1760,0 MHz		40	55	—	dB
	1760,0 ... 3120,0 MHz		34	38	—	dB
	3120,0 ... 4000,0 MHz		18	26	—	dB
	4000,0 ... 6000,0 MHz		8	18	—	dB



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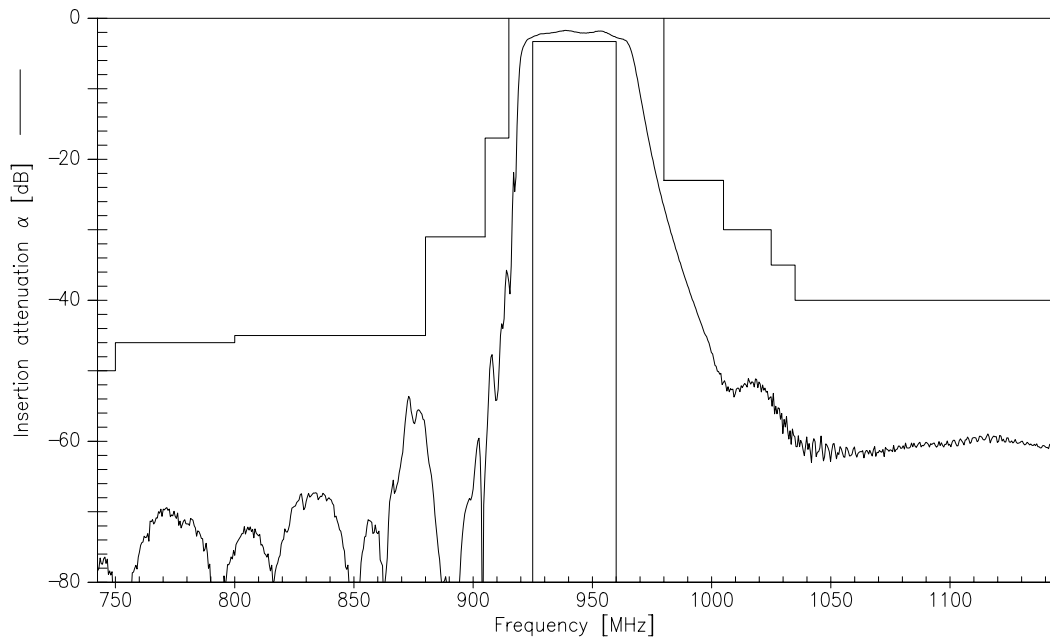
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942,50 MHz

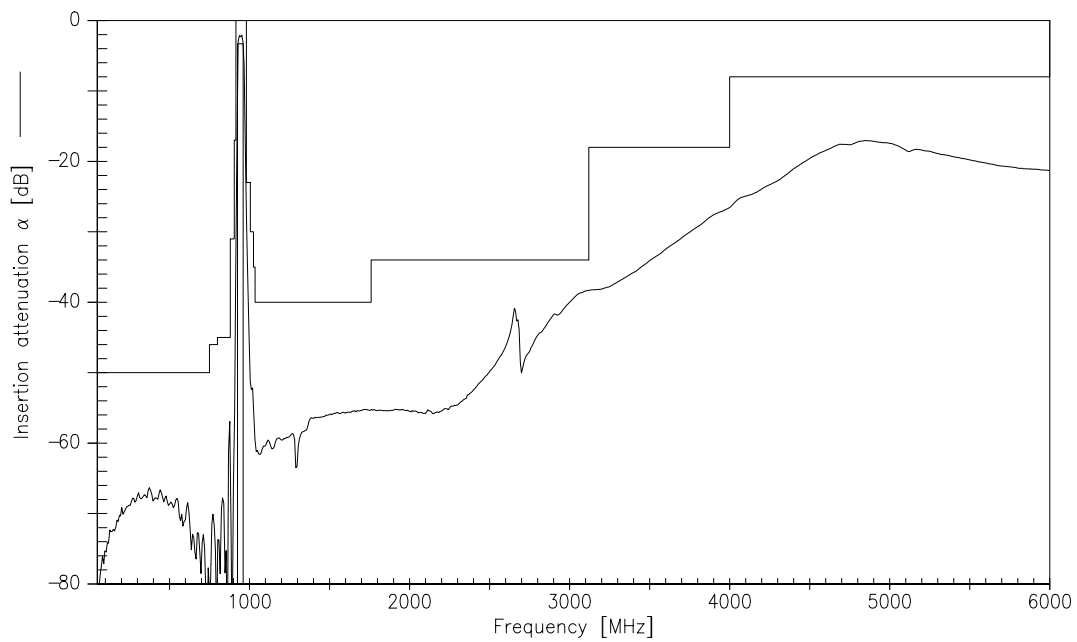
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Transfer function (+25 C specification)



Transfer function (wideband)





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