EPCOS

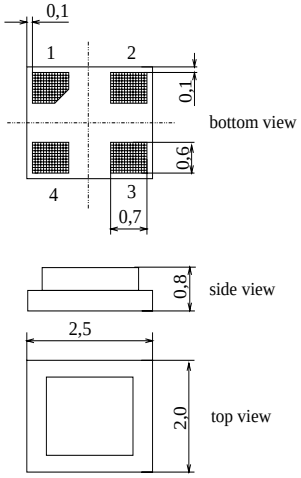
SAW Components

Data Sheet B7707, Pb-Free

Chip **S**ized **S**AW **P**ackage **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 **S**urface **M**ounted **T**echnology (**SMT**)
- Pb-Free



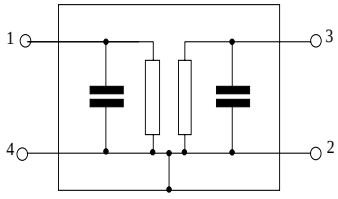
Terminals

- 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 **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}	3	V	
ESD voltage	V^*_{ESD}	100*	V	Machine Model, 10 pulses
Input power at GSM850, GSM900, GSM1800 and GSM1900 Tx bands	P_{IN}	15	dBm	peak power of GSM signal, duty cycle 4:8

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

Characteristics

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

		min.	typ.	max.	
Center frequency	f_C	—	942,5	—	MHz
Maximum insertion attenuation	α_{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

Characteristics

Operating temperature range: T = -20˚C to +75˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	α_{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

Characteristics

Operating temperature range: T = -30˚C to +80˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	α_{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

Characteristics

Operating temperature range: T = -30˚C to +85˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

			min.	typ.	max.	
Center frequency	f_C		—	942,5	—	MHz
Maximum insertion attenuation	α_{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						
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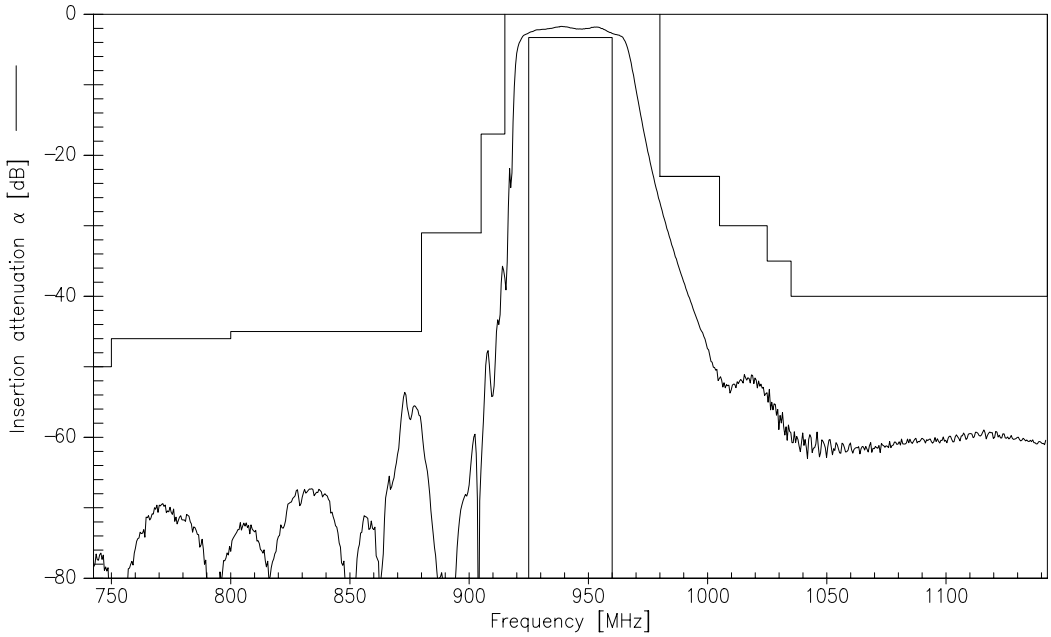
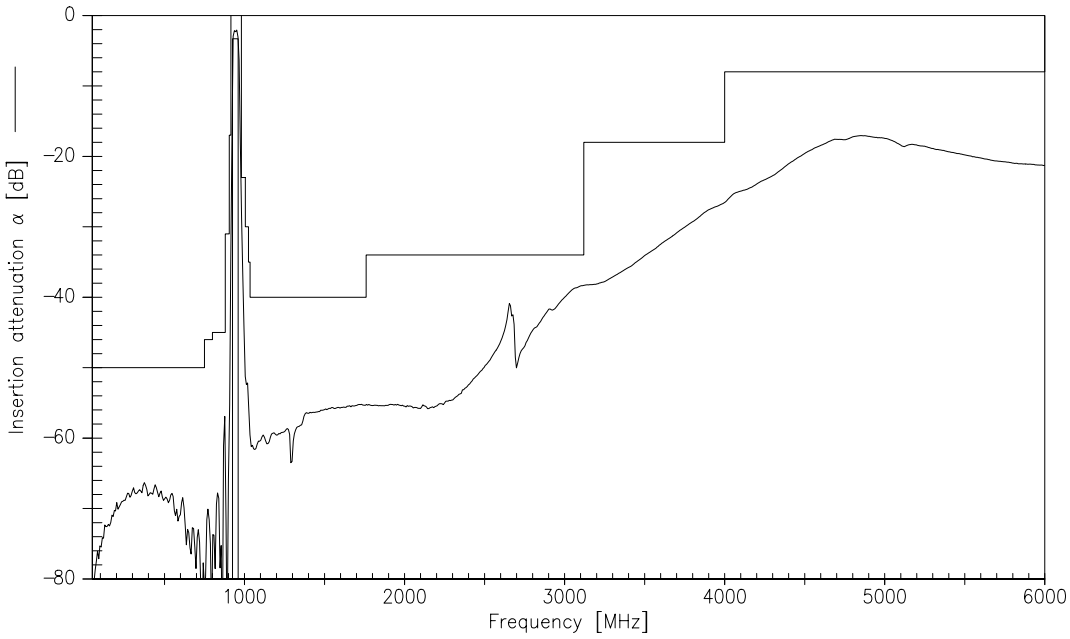
0,0 ... 750,0	MHz		50	66	—	dB
750,0 ... 800,0	MHz		46	69	—	dB
800,0 ... 880,0	MHz		45	54	—	dB
880,0 ... 905,0	MHz		31	60	—	dB
905,0 ... 915,0	MHz		12	22	—	dB
980,0 ... 982,0	MHz		21	24	—	dB
982,0 ...1005,0	MHz		23	27	—	dB
1005,0 ...1025,0	MHz		30	52	—	dB
1025,0 ...1035,0	MHz		35	54	—	dB
1035,0 ...1760,0	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

Transfer function (+25 C specification)



Transfer function (wideband)



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