

Data Sheet B7707, Pb-Free





B7707

Low-Loss Filter for Mobile Communication

942,50 MHz

Data Sheet



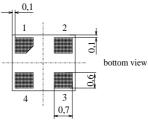
Chip Sized SAW Package DCS4H

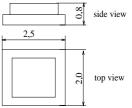
Features

- Low-loss RF filter for mobile telephone EGSM systems, receive path
- Low amplitude ripple
- Usable passband 35 MHz
- \blacksquare 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

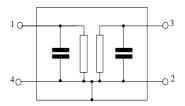




Dimensions in mm, approx. weight 0,015g

Pin configuration

1	Input
3	Output
2,4	Ground



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

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



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Characteristics

Operating temperature range: $T=25\pm2\,^{\circ}\mathrm{C}$ Terminating source impedance: $Z_{\mathrm{S}}=50\,\Omega$ Terminating load impedance: $Z_{\mathrm{L}}=50\,\Omega$

			min.	typ.	max.	
Center frequency	f _C	2	_	942,5	_	MHz
Maximum insertion attenuation 925,0 960,0		max	_	2,8	3,3	dB
Amplitude ripple (p-p) 925,0 960,0		ια	_	1,0	1,6	dB
Input VSWR 925,0 960,0	MHz		_	2,0	2,3	
Output VSWR 925,0 960,0 Input return loss			_	2,0	2,2	
925,0 960,0 Input return loss phase 1842,5			8,0	9,0	-130,0	dB 。
Attenuation	α		100,0	110,0	100,0	
0,0 750,0 750,0 800,0			50 46	66 69	_	dB dB
800,0 880,0 880,0 905,0	MHz		45 31	54 60	<u> </u>	dB dB
905,0 915,0 980,0 982,0	MHz		17 23	33 26	_ _	dB dB
982,01005,0 1005,01025,0 1025,01035,0	MHz		23 30 35	29 52 54	_ _ _	dB dB dB
1025,01035,0 1035,01760,0 1760,0 3120,0	MHz		40 34	55 38		dB dB
3120,0 4000,0 4000,0 6000,0) MHz		18 8	26 18	<u> </u>	dB dB



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Characteristics

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

Terminating source impedance: $Z_{\rm S} = 50~\Omega$ Terminating load impedance: $Z_{\rm L} = 50~\Omega$

			min.	typ.	max.	
Center frequency		$f_{\mathbb{C}}$	_	942,5	_	MHz
Maximum insertion attenuation	C/					
925,0 96	0,0 MHz	α_{max}		3,0	3,5	dB
020,0 00	0,0 11112			0,0	0,0	uB
Amplitude ripple (p-p)		$\Delta \alpha$				
925,0 96	0,0 MHz		_	1,2	1,8	dB
Input VSWR 925,0 96	0,0 MHz			2,0	2,3	
Output VSWR	O,O IVIDZ			2,0	2,3	
925,0 96	0,0 MHz			2,0	2,2	
Input return loss				,	,	
925,0 96	0,0 MHz		8,0	9,0	_	dB
Input return loss phase						•
184	2,5 MHz		-150,0	-140,0	-130,0	
Attenuation		α				
7		~				
0,0 75	0,0 MHz		50	66	_	dB
750,0 80	•		46	69	_	dB
800,0 88			45	54	_	dB
880,0 90	•		31	60	_	dB
905,0 91	•		17	24	_	dB
980,0 98			22	25	_	dB
982,0100	•		23	27	_	dB
1005,0102	5,0 MHz		30	52	_	dB
1025,0103	5,0 MHz		35	54	_	dB
1035,0176	0,0 MHz		40	55	_	dB
1760,0 312	20,0 MHz		34	38	_	dB
3120,0 400	00,0 MHz		18	26	_	dB
4000,0 600	00,0 MHz		8	18	_	dB



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Characteristics

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

Terminating source impedance: $Z_{\rm S} = 50~\Omega$ Terminating load impedance: $Z_{\rm L} = 50~\Omega$

				min.	typ.	max.	
Center frequency			$f_{\mathbb{C}}$	_	942,5	_	MHz
Maximum insertion attenuation			α				
	960,0	MHz	α_{max}	_	3,0	4,0	dB
,-	,.				-,-		
Amplitude ripple (p-p)			$\Delta \alpha$				
925,0	960,0	MHz		_	1,2	2,3	dB
Input VSWR							
-	960,0	MHz		_	2,0	2,3	
Output VSWR							
925,0	960,0	MHz		_	2,0	2,2	
Input return loss	000.0	N 41 1-		0.0	0.0		٦D
Input return loss phase	960,0	MHz		8,0	9,0	_	dB
input return 1005 phase	1842,5	MHz		-150,0	-140,0	-130,0	۰
Attenuation			α				
0,0	750,0	MHz		50	66		dB
750,0		MHz		46	69	_	dB
•	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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Characteristics

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

 $Z_{\rm S} = 50 \,\Omega$ $Z_{\rm L} = 50 \,\Omega$ Terminating source impedance: Terminating load impedance:

			min.	typ.	max.	
Center frequency	i	$f_{\mathbb{C}}$	_	942,5	_	MHz
Maximum insertion attenuation						
925,0 960,0		α_{max}	_	3,0	4,0	dB
Amplitude ripple (p-p) 925,0 960,0		Δα		1,2	2,3	dB
923,0 900,0	IVII IZ		_	1,2	2,3	ub
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	1411 12			2,0	_,_	
925,0 960,0	MHz		8,0	9,0	_	dB
Input return loss phase	N 41 1-		450.0	440.0	400.0	•
1842,5	MHz		-150,0	-140,0	-130,0	
Attenuation		α				
0,0 750,0			50	66	_	dB
750,0 800,0			46	69	_	dB
800,0 880,0			45	54	_	dB
880,0 905,0 905,0 915,0			31 12	60 22	_	dB dB
980,0 982,0			21	24		dB
982,01005,0			23	27	_	dB
1005,01025,0			30	52	_	dB
1025,01035,0			35	54	_	dB
1035,01760,0			40	55	_	dB
1760,0 3120,0			34	38	_	dB
3120,0 4000,0			18	26	_	dB
4000,0 6000,0			8	18	_	dB



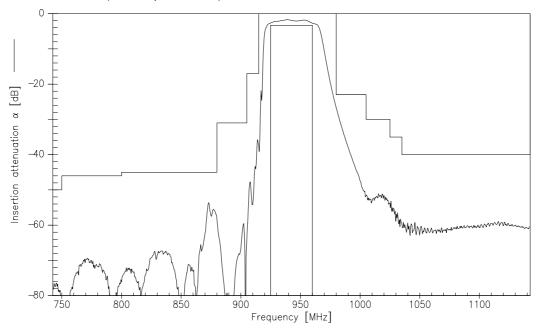
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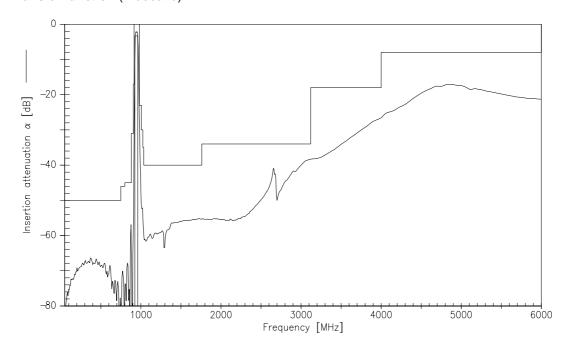
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Transfer function (+25 C specification)



Transfer function (wideband)





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