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RF Filters for Cellular Phones

Series/Type: B7749

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39182B7749C910	B39182B9402K610	2007-09-21	2007-12-31	2008-03-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.



B7749

Low-Loss Filter for Mobile Communication

1842,5 MHz

Data Sheet



Chip sized SAW package DCS6K

Features

- Low-loss RF filter for mobile telephone PCN systems, receive path
- Low amplitude ripple
- Usable passband 75 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50Ω to 200Ω
- Suitable for GPRS class 1 to 12
- Package for Surface Mounted Technology (SMT)

bottom view 2,5 ci top view

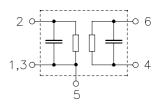
Terminals

■ Gold-plated Ni

Dimensions in mm, approx. weight 0,012 g

Pin configuration

2	Input, unbalanced
1, 3	Input ground
4, 6	Output, balanced
1, 3, 5	To be grounded



Туре	Ordering code	Marking and Package	Packing		
		according to	according to		
B7749	B39182-B7749-C910	C61157-A1-A97	F61074-V8153-Z000		

Electrostatic Sensitive Device (ESD)

Maximum ratings

Operable temperature range	Τ	- 30 / + 85	ů	
Storage temperature range	$T_{\rm stg}$	- 40 / + 85	°C	
DC voltage	$V_{\rm DC}$	3	V	
ESD voltage	V_{ESD}	50	V	
Input power at				
GSM850, GSM900	P_{IN}	15	dBm	peakpower of GSM signal
GSM1800, GSM1900	P_{IN}^{\cdots}	12	dBm	duty cycle 4:8
Tx bands				



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Characteristics

 $T = 25^{\circ}C \pm 2^{\circ}C$ Operating temperature range:

Terminating source impedance:

 $Z_{\rm S} = 50 \,\Omega$ $Z_{\rm L} = 200 \,\Omega$ (balanced) || 18 nH Terminating load impedance:

				min.	typ.	max.	
Center frequency			$f_{\mathbb{C}}$	_	1842,5	_	MHz
Maximum insertion attenuati			α_{max}				
1805,0	1880,0	MHz		_	2,7	3,2	dB
Amplitude ripple (p-p)			Δα				
	1880,0	MHz	Δα	_	1,2	1,7	dB
1000,0					.,_	.,,	
Input VSWR							
1805,0	1880,0	MHz		_	2,3	2,5	
Output VSWR	1000.0	N 41 1-			0.0	0.0	
1805,0	1880,0	MHz			2,0	2,2	
Diff. to common mode suppr	ession		S_{sc12}				
	1880,0	MHz	- 3012	_	22	_	dB
855,0	995,0	MHz		_ _ _	28	_	dB
1710,0	1990,0	MHz		_	22	_	dB
3420,0	3980,0	MHz		_	34	_	dB
Attenuation	1005.0	MHz	α	40	43		dB
0,0 1205,0	1205,0 1705,0	MHz		40 30	32	_	dВ
•	1705,0	MHz		14	16	_	dВ
1920,0		MHz		14	19		dB
1980,0	,	MHz		20	23		dB
2100,0	3000,0	MHz		30	36	_	dB
3000,0	6000,0	MHz		40	44	_	dB
	, -	_					



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Low-Loss Filter for Mobile Communication

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Characteristics

 $T = -10 \text{ to } +80 \,^{\circ}\text{C}$ Operating temperature range:

Terminating source impedance:

 $Z_{\rm S} = 50 \, \Omega$ $Z_{\rm L} = 200 \, \Omega$ (balanced) || 18 nH Terminating load impedance:

				min.	typ.	max.	
Center frequency			$f_{\mathbb{C}}$	_	1842,5	_	MHz
Maximum insertion attenuati			α_{max}				
1805,0	1880,0	MHz			3,0	3,5	dB
Amplitude ripple (p-p)			Δα				
	1880,0	MHz	Δα.	_	1,5	2,0	dB
					,,,	_,,,	
Input VSWR							
1805,0	1880,0	MHz		_	2,3	2,5	
Output VSWR							
1805,0	1880,0	MHz		_	2,0	2,2	
Diff. to common mode suppl	ession		S_{sc12}				
1805,0		MHz	O _{SC12}	_	22	_	dB
· ·	995,0	MHz		_	28	_	dB
· ·	1990,0	MHz		_	22	_	dB
3420,0	3980,0	MHz		_	34	_	dB
Attenuation			α				
0,0	•	MHz		40	43	_	dB
1205,0	,	MHz		30	32	_	dB
·	1785,0	MHz		10	12	_	dB
· ·	1980,0	MHz		10	19	_	dB
· ·	2100,0	MHz		20 30	23 36	_	dB dB
2100,0 3000,0	3000,0	MHz MHz		40	36 44	_	dB
3000,0	0000,0	ıvı⊓∠		40	44		ub



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Characteristics

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

Terminating source impedance:

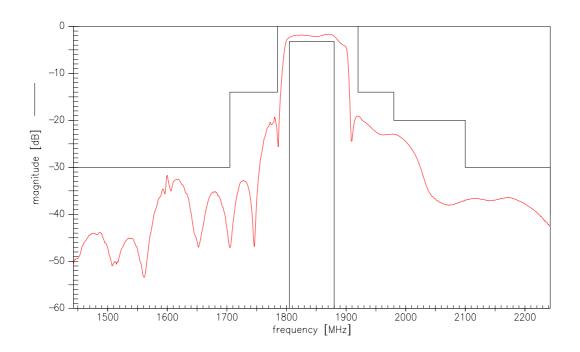
 $Z_{\rm S} = 50 \,\Omega$ $Z_{\rm L} = 200 \,\Omega$ (balanced) || 18 nH Terminating load impedance:

				min.	typ.	max.	
Center frequency			$f_{\mathbb{C}}$	_	1842,5	_	MHz
Maximum insertion attenuati			α_{max}				
1805,0	1880,0	MHz		_	3,5	4,0	dB
Amplitude ripple (p-p)			Δα				
	1880,0	MHz	Δи	_	2,0	2,5	dB
. 555,5					_,0	_,,	
Input VSWR							
1805,0	1880,0	MHz		_	2,4	2,6	
Output VSWR	1000.0	N 41 1-			0.4	0.0	
1805,0	1880,0	MHz			2,1	2,3	
Diff. to common mode suppr	ession		S _{sc12}				
	1880,0	MHz	- 3012	_	22	_	dB
855,0	995,0	MHz		_ _ _	28	_	dB
1710,0	1990,0	MHz		_	22	_	dB
3420,0	3980,0	MHz		_	34	_	dB
Attenuation	100E 0	MHz	α	40	43		dB
0,0 1205,0	1205,0 1705,0	MHz		40 30	32	_	dВ
•	1705,0	MHz		9	11	_	dВ
	1785,0	MHz		10	19		dB
1980,0		MHz		20	23		dB
2100,0	3000,0	MHz		30	36	_	dB
3000,0	6000,0	MHz		40	44	_	dB
	, -	_					

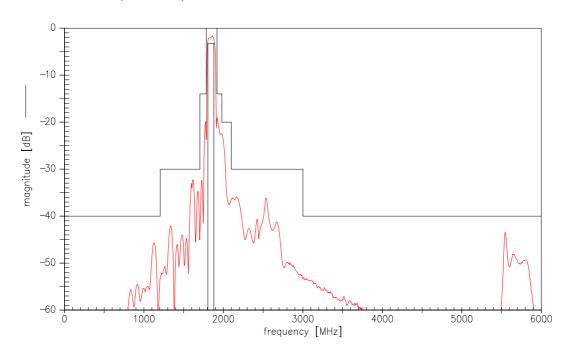




Transfer function



Transfer function (wide band)





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