



SAW Components

SAW Tx filter

UMTS

Series/type:	B7745
Ordering code:	B39192B7745C810
Date:	March 02, 2006
Version:	2.0



Data Sheet



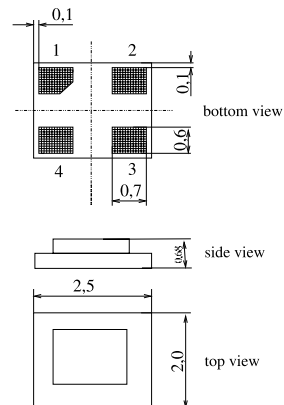
Application

- Low-loss RF filter for mobile telephone UMTS systems, transmit path (TX)
- Filter impedance 50 Ω
- Unbalanced to unbalanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 60 MHz
- Suitable for GPRS class 1 to 12



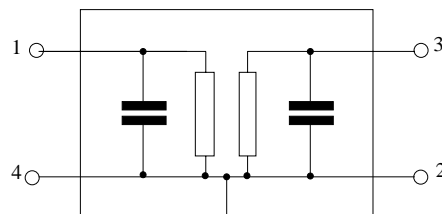
Features

- Package size 2.5 x2.0 x 0.8 mm³
- Package code DCS4D
- RoHS compatible
- Approximate weight 0.015 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**



Pin configuration

- 1 Input unbalanced
- 3 Output unbalanced
- 2,4 To be grounded





Data Sheet



Characteristics

Operating temperature range: $T = -20\text{ °C to }+75\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1950.0	—	MHz
Maximum insertion attenuation	α_{max}				
1920.0 ... 1980.0	MHz	—	2.4	2.8	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1920.0 ... 1980.0	MHz	—	1.0	1.4	dB
Input VSWR					
1920.0 ... 1980.0	MHz	—	1.6	1.8	
Output VSWR					
1920.0 ... 1980.0	MHz	—	1.8	2.0	
Attenuation	α				
0.0 ... 1000.0	MHz	36	40	—	dB
1000.0 ... 1600.0	MHz	35	38	—	dB
1705.0 ... 1715.0	MHz	30	34	—	dB
1805.0 ... 1880.0	MHz	22	27	—	dB
2110.0 ... 2170.0	MHz	28	31	—	dB
2300.0 ... 2360.0	MHz	31	34	—	dB
2490.0 ... 2550.0	MHz	33	37	—	dB
2680.0 ... 2740.0	MHz	35	40	—	dB
2360.0 ... 3120.0	MHz	31	35	—	dB
3840.0 ... 3960.0	MHz	27	33	—	dB
4000.0 ... 6000.0	MHz	20	27	—	dB



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1950.0 MHz

Data Sheet



Characteristics

Operating temperature range: $T = -10\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$
 Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	1950.0	—	MHz
Maximum insertion attenuation	α_{max}				
1920.0 ... 1980.0	MHz	—	2.4	2.9	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
1920.0 ... 1980.0	MHz	—	1.0	1.5	dB
Input VSWR					
1920.0 ... 1980.0	MHz	—	1.6	1.8	
Output VSWR					
1920.0 ... 1980.0	MHz	—	1.8	2.0	
Attenuation	α				
0.0 ... 1000.0	MHz	36	40	—	dB
1000.0 ... 1600.0	MHz	35	38	—	dB
1705.0 ... 1715.0	MHz	30	34	—	dB
1805.0 ... 1880.0	MHz	22	27	—	dB
2110.0 ... 2170.0	MHz	28	31	—	dB
2300.0 ... 2360.0	MHz	31	34	—	dB
2490.0 ... 2550.0	MHz	33	37	—	dB
2680.0 ... 2740.0	MHz	35	40	—	dB
2360.0 ... 3120.0	MHz	31	35	—	dB
3840.0 ... 3960.0	MHz	27	33	—	dB
4000.0 ... 6000.0	MHz	20	27	—	dB



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1950.0 MHz

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Maximum ratings

Operable temperature range	T	-20/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	3	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
Input power at GSM850, GSM900	P _{IN}	10	dBm	effective power in the on-state

¹⁾ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.



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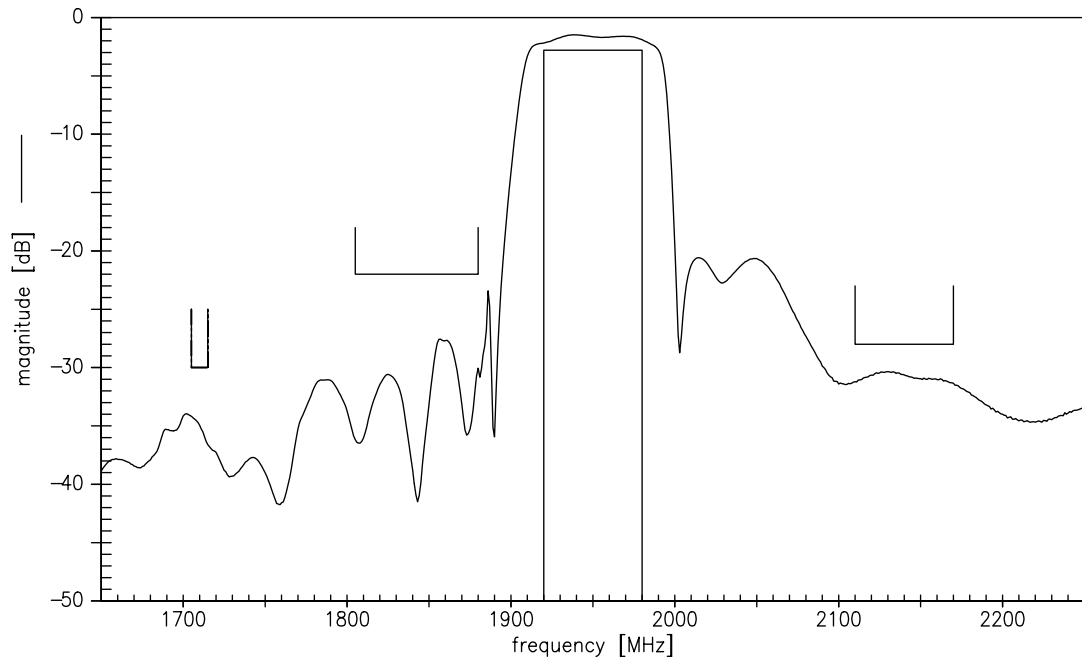
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1950.0 MHz

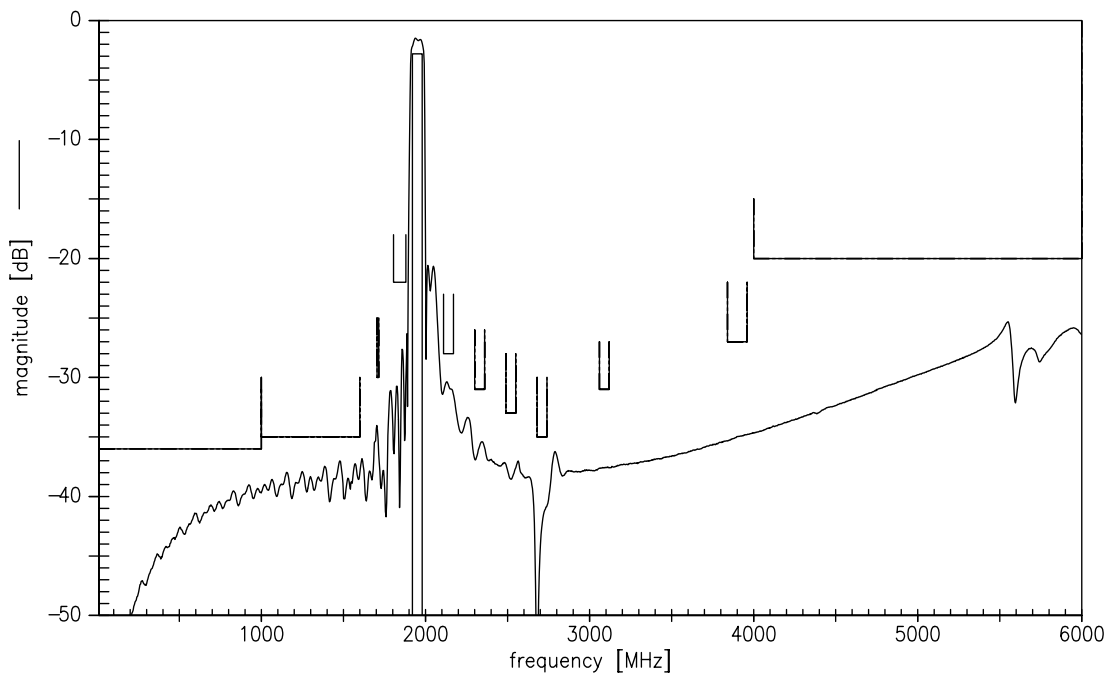
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Transfer function



Transfer function (wideband)



Please read *cautions and warnings* and *important notes* at the end of this document.



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1950.0 MHz

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References

Type	B7745
Ordering code	B39192B7745C810
Marking and package	C61157-A7-A89
Packaging	F61074-V8125-Z000
Date codes	L_1126
S-parameters	B7745_NB.s2p B7745_WB.s2p
Soldering profile	S_6001
RoHS compatible	defined as compatible with the following documents: "DIRECTIVE 2002/95/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment. 2005/618/EC from April 18th, 2005, amending Directive 2002/95/EC of the European Parliament and of the Council for the purposes of establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment."

For further information please contact your local EPCOS sales office or visit our webpage at www.epcos.com.

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