



SAW filters for mobile communications

Series/Type: B7745

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B39192B7745C810	B39202B9031E910	2008-03-14	2008-08-31	2008-10-15

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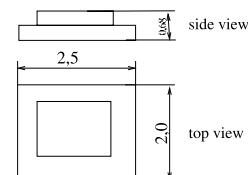
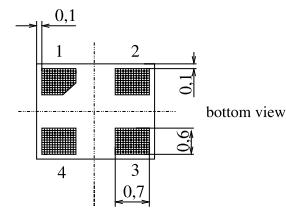
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B7745
SAW Tx filter
1950.0 MHz
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Application

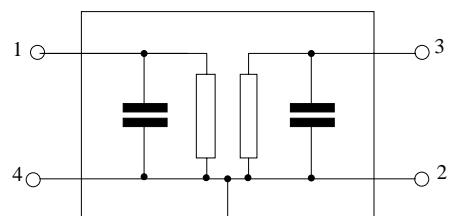
- Low-loss RF filter for mobile telephone UMTS systems, transmit path (TX)
- Filter impedance 50 Ω
- Unbalanced to unbalanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 60 MHz
- Suitable for GPRS class 1 to 12


Features

- Package size 2.5 x 2.0 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



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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. @ 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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Characteristics

 Operating temperature range: $T = -10^{\circ}\text{C}$ to $+85^{\circ}\text{C}$

 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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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

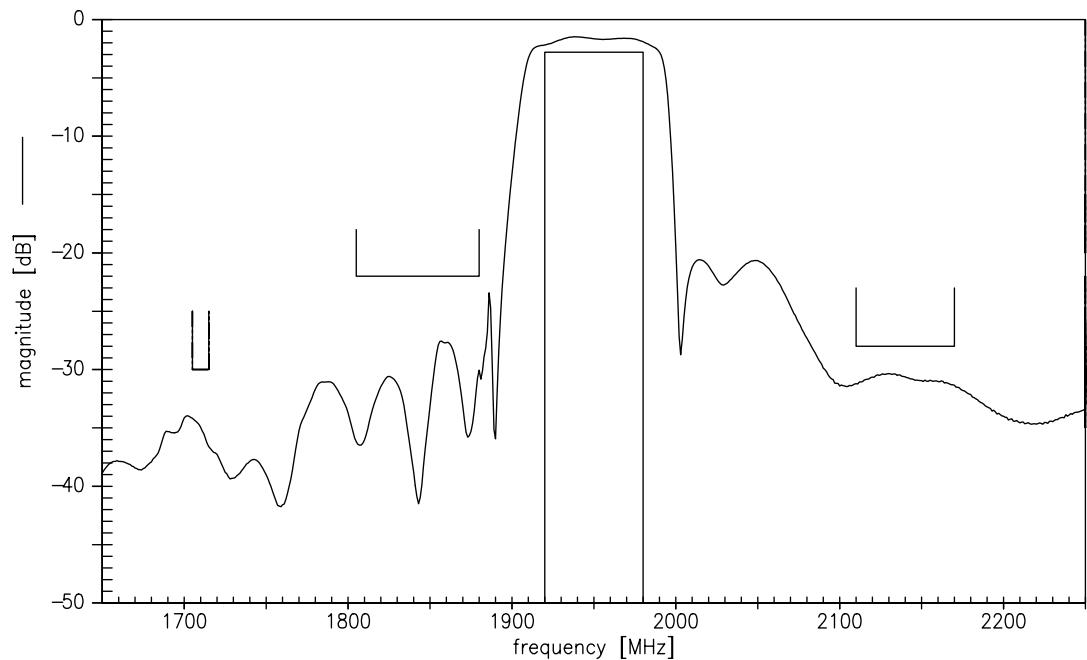
¹⁾ acc. to JESD22-A115A (machine model), 10 negative & 10 positive pulses.

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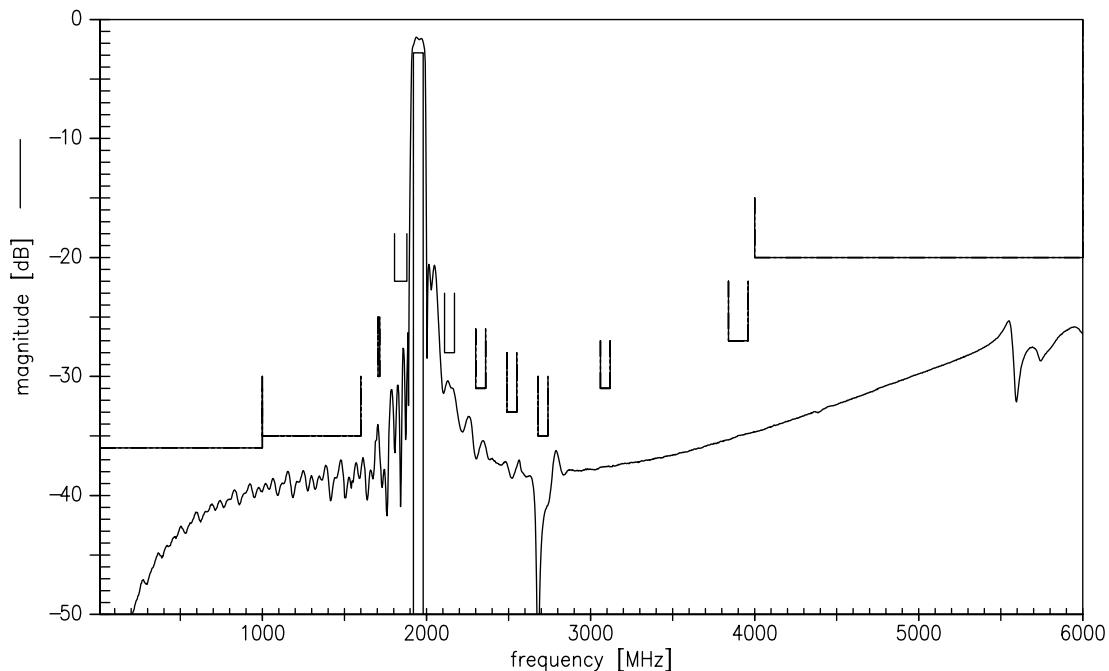
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Transfer function



Transfer function (wideband)



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

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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."

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