



SAW Components

SAW filter

TD-SCDMA

Series/type:	B7853
Ordering code:	B39202B7853C710
Date:	March 01, 2006
Version:	2.1



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B7853

SAW filter

2017.5 MHz

Data sheet



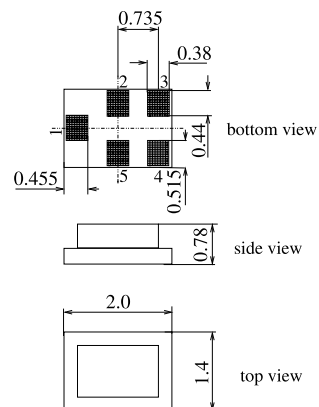
Application

- Low-loss RF filter for mobile telephone TD-SCDMA systems
- Unbalanced to unbalanced operation
- Low amplitude ripple
- No matching network required for operation at 50 Ω
- Usable passband 15 MHz



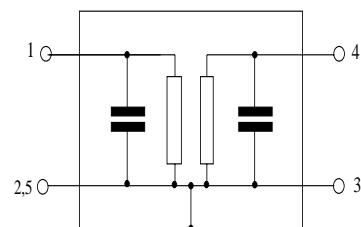
Features

- Package size 2.0 x 1.4 x 0.78 mm³
- Package code QCS5C
- RoHS compatible
- Approx. weight 0.009 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals



Pin configuration

- 1 Input, unbalanced
- 4 Output unbalanced
- 2,3,5 To be grounded





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Characteristics

Operating temperature range: $T = -35\text{ °C to }+85\text{ °C}$
Terminating source impedance: $Z_S = 50\ \Omega$
Terminating load impedance: $Z_L = 50\ \Omega$

		min.	typ. @ 25 °C	max.	
Center frequency	f_C	—	2017.5	—	MHz
Maximum insertion attenuation	α_{\max}				
2010.0 ... 2025.0 MHz		—	2.1	2.8 ¹⁾	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2010.0 ... 2025.0 MHz		—	0.2	0.9 ²⁾	dB
Input VSWR					
2010.0 ... 2025.0 MHz		—	1.8	2.1	
Output VSWR					
2010.0 ... 2025.0 MHz		—	1.9	2.2	
Group delay ripple (p-p)					
2010.0 ... 2025.0 MHz		—	3	10	ns
Attenuation	α				
0.0 ... 1840.0 MHz		43	48	—	dB
1840.0 ... 1950.0 MHz		35	44	—	dB
1950.0 ... 1980.0 MHz		14 ³⁾	19	—	dB
1980.0 ... 1990.0 MHz		4.5 ⁴⁾	12	—	dB
2045.0 ... 2050.0 MHz		7 ⁵⁾	16	—	dB
2050.0 ... 2085.0 MHz		17	25	—	dB
2085.0 ... 2120.0 MHz		26	30	—	dB
2120.0 ... 2160.0 MHz		33	37	—	dB
2160.0 ... 4000.0 MHz		38	42	—	dB
4000.0 ... 6000.0 MHz		25	33	—	dB

¹⁾ 2.5 dB at 25 °C

²⁾ 0.6 dB at 25 °C

³⁾ 17 dB attenuation at 25 °C

⁴⁾ 6 dB attenuation at 25 °C

⁵⁾ 8 dB attenuation at -25 °C ... +85 °C

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**Maximum ratings**

Operable temperature range	T	-40/+85	°C	machine model, 10 pulses
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	
Input power at				continuous wave, 2000 hours, 85 °C
2010.0...2025.0 MHz	P _{IN}	7	dBm	

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



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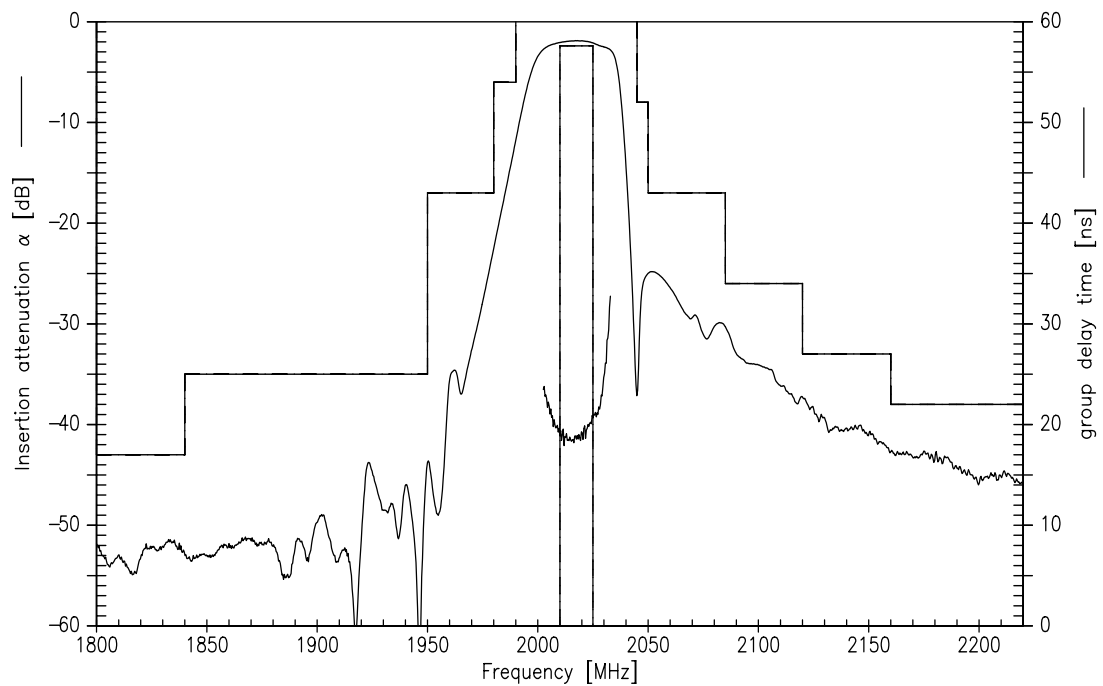
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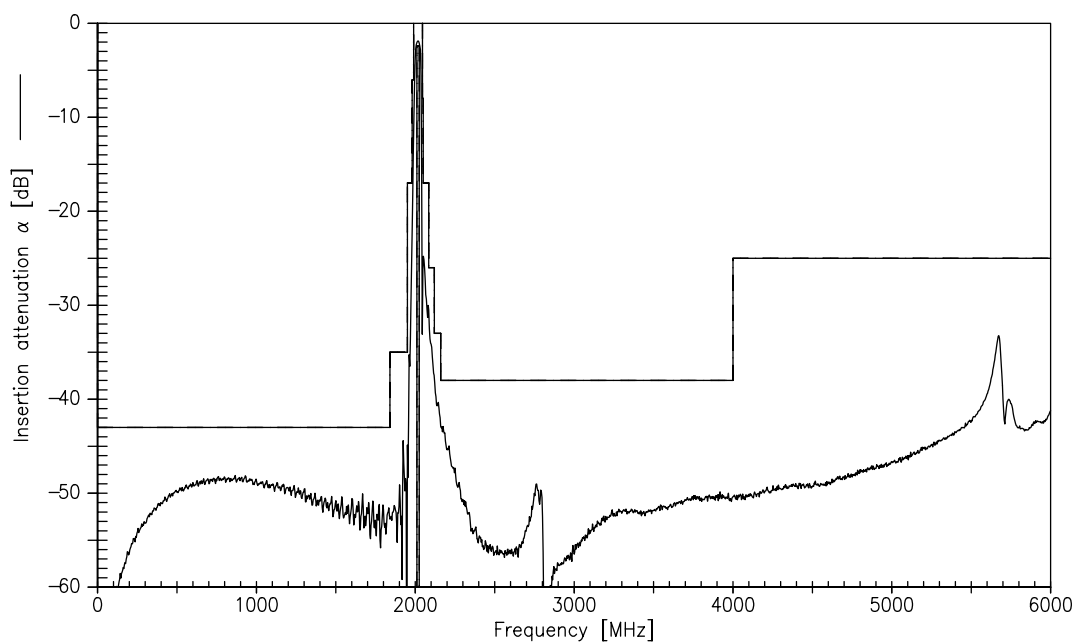
Data sheet



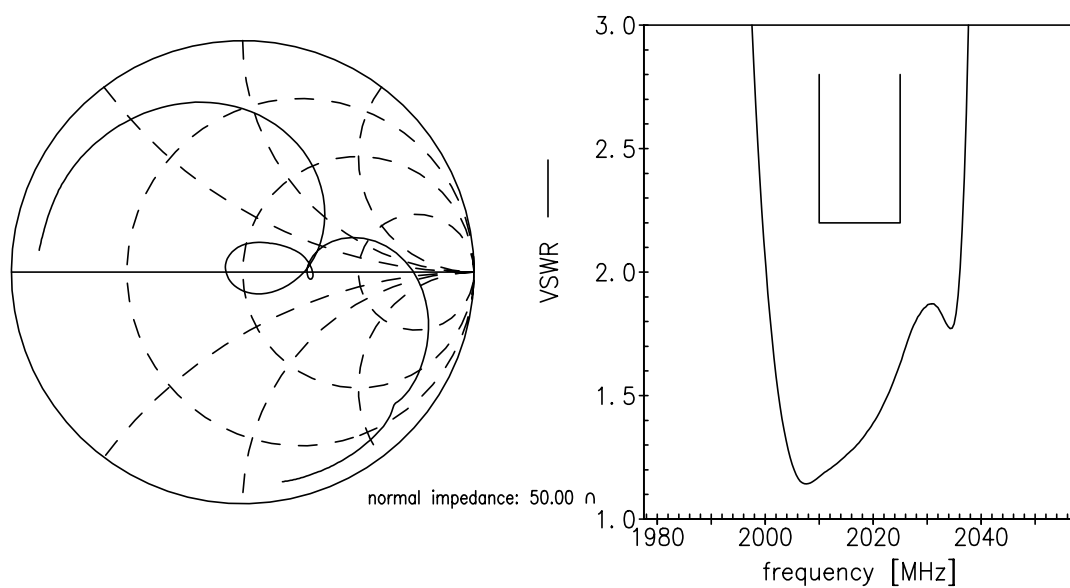
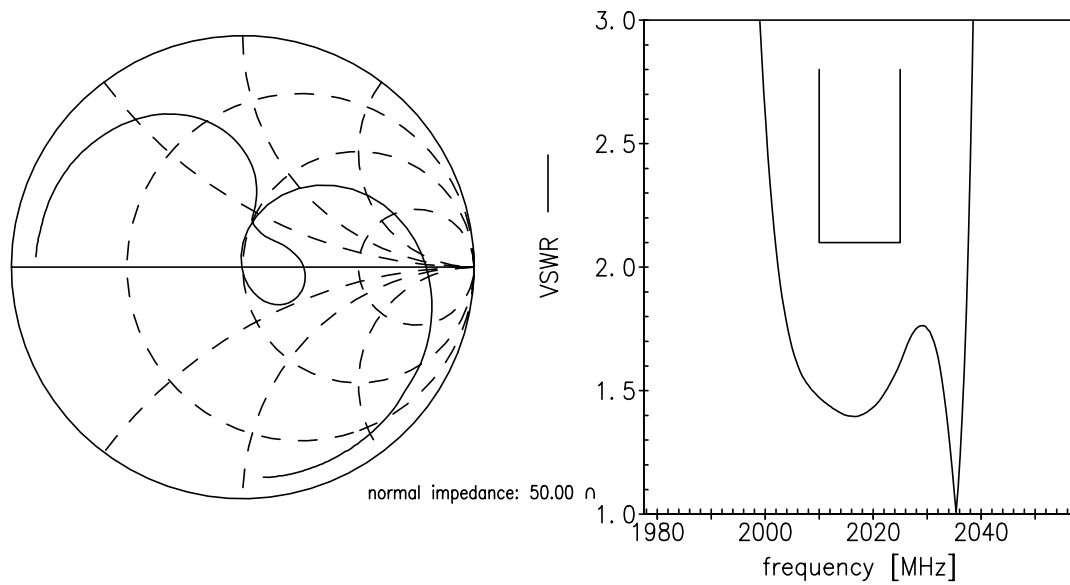
Transfer function



Transfer function (wideband)



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



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Data sheet

**References**

Type	B7853
Ordering code	B39202B7853C710
Marking and package	C61157-A7-A111
Packaging	F61074-V8151-Z000
Date codes	L_1126
S-parameters	B7853_NB.s2p B7853_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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