SAW Components

SAW filter

TD-SCDMA

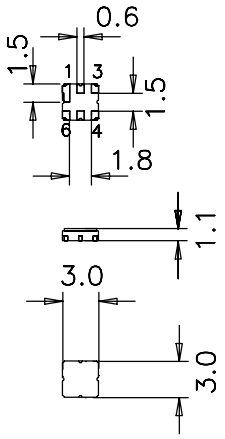
Series/type:	**B5140**
Ordering code:	**B39202B5140U410**
Date:	February 26, 2010
Version:	2.0

Application

- Low-loss RF ftiler for TD-SCDMA
- Low amplitude ripple
- Usable passband of 15 MHz
- Unbalanced to unbalanced operation
- No matching required for operation at 50 Ω

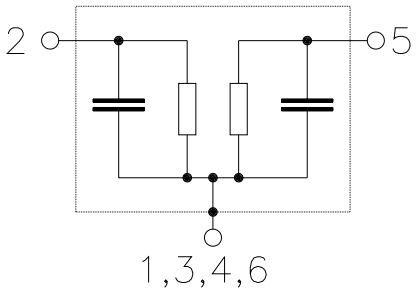
Features

- Package size 3.0 x 3.0 x 1.1 mm³
- Package code DCC6C
- RoHS compatible
- Approximate weight 0.037 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals
- Electrostatic Sensitive Device (ESD)



Pin configuration

- 2 Input
- 5 Output
- 1,3,4,6 Case grounded



Data sheet SMD

Characteristics

Temperature range for specification: T = -40 ˚C to +85 ˚C
Terminating source impedance: Z_S = 50 Ω
Terminating load impedance: Z_L = 50 Ω

		min.	typ. @ 25 ˚C	max.	
Center frequency	f_C	—	2017.5	—	MHz
Maximum insertion attenuation	α_{max}				
2010.0 ... 2025.0 MHz		—	4.2	5.3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
2010.0 ... 2025.0 MHz		—	0.6	1.7	dB
VSWR					
2010.0 ... 2025.0 MHz		—	1.7	1.9	
Attenuation	α				
1700.0 ... 1785.0 MHz		40	43	—	dB
1800.0 ... 1860.0 MHz		40	43	—	dB
1920.0 ... 1970.0 MHz		30	44	—	dB
1970.0 ... 1980.0 MHz		20	33	—	dB
1980.0 ... 2000.0 MHz		3	5	—	dB
2035.0 ... 2045.0 MHz		3	5	—	dB
2045.0 ... 2050.0 MHz		4	13	—	dB
2050.0 ... 2070.0 MHz		6	20	—	dB
2070.0 ... 2085.0 MHz		30	40	—	dB
2170.0 ... 4000.0 MHz		37	40	—	dB

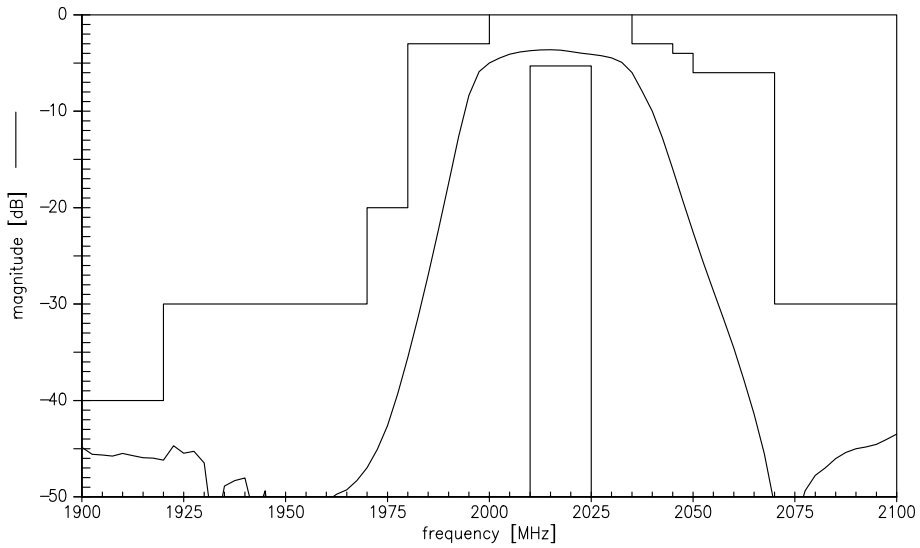
Maximum ratings

Operable temperature range	T	–40/+85	˚C	
Storage temperature range	T_{stg}	–40/+85	˚C	
DC voltage	V_{DC}	0	V	
ESD voltage	V_{ESD}	50[1)]	V	machine model, 1 pulse
Input power at				
2010.0 ... 2025.0	P_{IN}	23[2)]	dBm	CW, 24hours

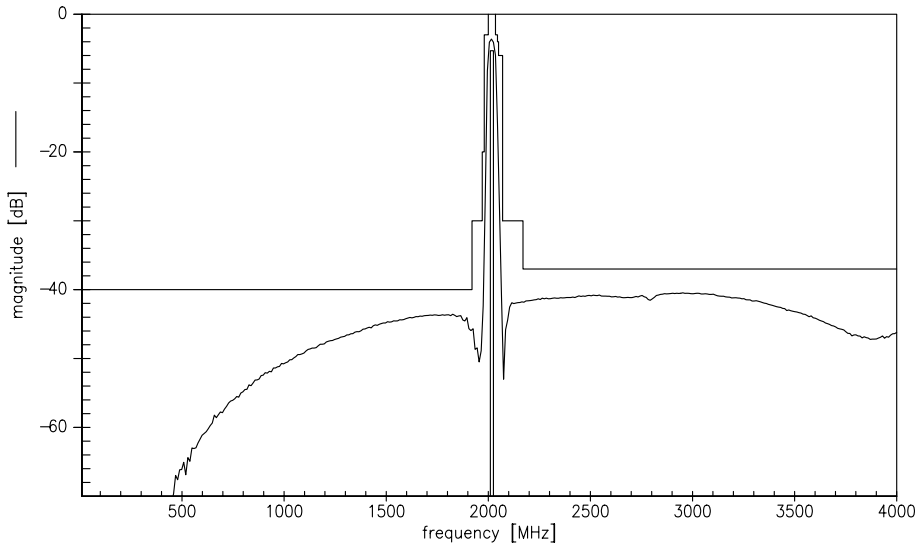
1) acc. to JESD22-A115A (machine model), 1 negative & 1 positive pulse.

2) Preliminary value, actual value wil be updated after power durability test.

Transfer function

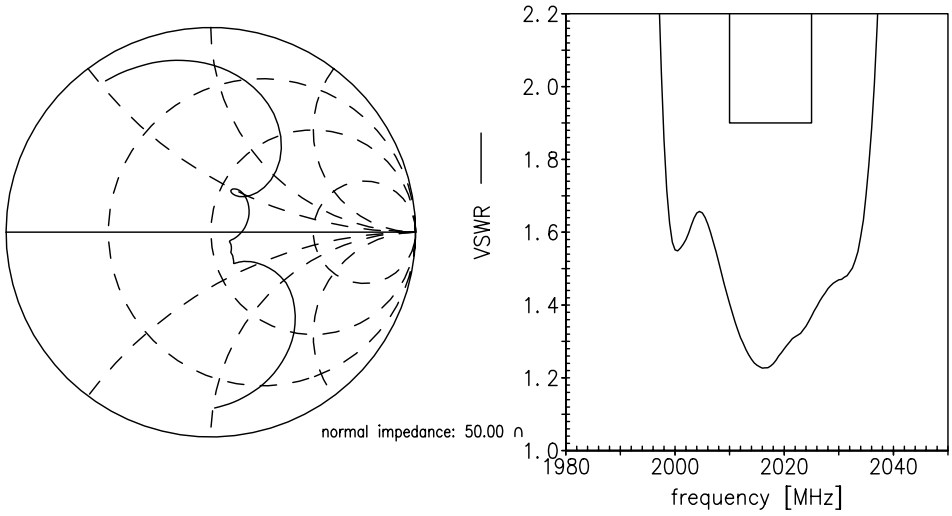


Transfer function (wideband)

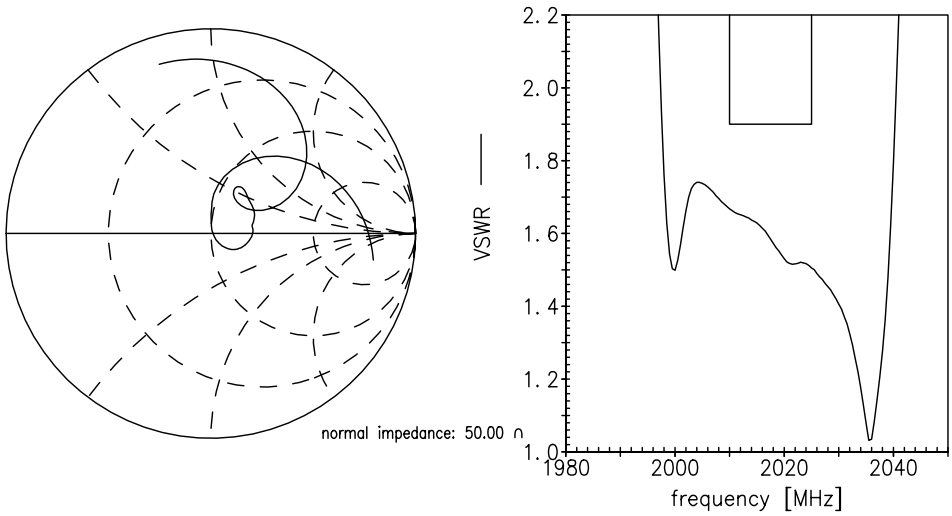


Smith charts

S_{11} function



S_{22} function



References

Type	B5140
Ordering code	B39202B5140U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5140_NB.s2p B5140_WB.s2p See file header for port/pin assignment table
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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