



SAW Components

SAW RF Filter for base stations

UMTS Band VII RF Tx

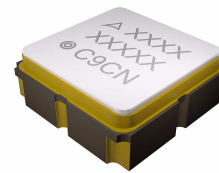
Series/type: B5122
Ordering code: B39272B5122U410

Date: April 22, 2013
Version: 2.1



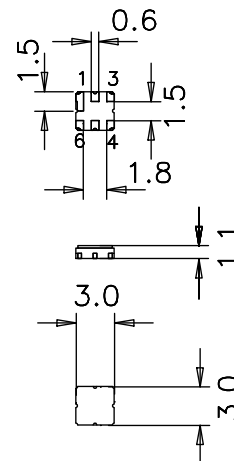
Application

- Low-loss base-station UMTS band VII RF Tx filter
- Low amplitude ripple
- No matching required for operation at 50Ω
- Usable passband 70 MHz
- Unbalanced to unbalanced operation



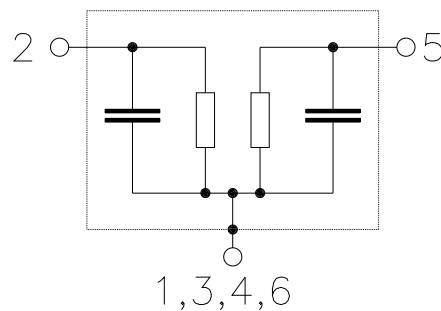
Features

- 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)**
- Moisture Sensitivity Level 1
- Filter Surface Passivated



Pin configuration

- 2 Input
- 5 Output
- 1,3,4,6 To be grounded





SAW Components	B5122
SAW RF Filter	2655.00 MHz

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	—	2655.00	—	MHz
Maximum insertion attenuation	α _{max}	—	2.1	3.5	dB
2620 ... 2690 MHz					
Passband width	α _{rel} ≤ 1.8 dB	70	99	—	MHz
	B _{1.8dB}				
Amplitude ripple (p-p)	Δα	—	0.7	1.8	dB
2620 ... 2690 MHz					
Group delay ripple (p-p)	Δτ	—	4	20	ns
2620 ... 2690 MHz					
Mean value of absolute group delay	$\bar{\tau}$	—	7.6	—	ns
2620 ... 2690 MHz					
VSWR					
Input	2620 ... 2690 MHz	—	1.8:1	2.5:1	
Output	2620 ... 2690 MHz	—	1.8:1	2.5:1	
Attenuation	α				
10 ... 2350 MHz		20	39	—	dB
2350 ... 2500 MHz		25	35	—	
2500 ... 2570 MHz		16	31	—	
2570 ... 2593 MHz		2.5	8	—	
2725 ... 2750 MHz		6	24	—	
2750 ... 3000 MHz		23	28	—	
3000 ... 3830 MHz		20	28	—	



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Maximum ratings

Operable temperature range	T	-40/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	6	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 10 pulses
	V _{ESD}	100 ²⁾	V	human body model, 1 pulse
Input power				
	2620 ... 2690 MHz	P _{IN}	10	dBm

1) acc. to JESD22-A115B (machine model), 10 negative & 10 positive pulses.

2) acc. to JESD22-A114B (human body model), 1 negative & 1 positive pulse.



SAW Components

B5122

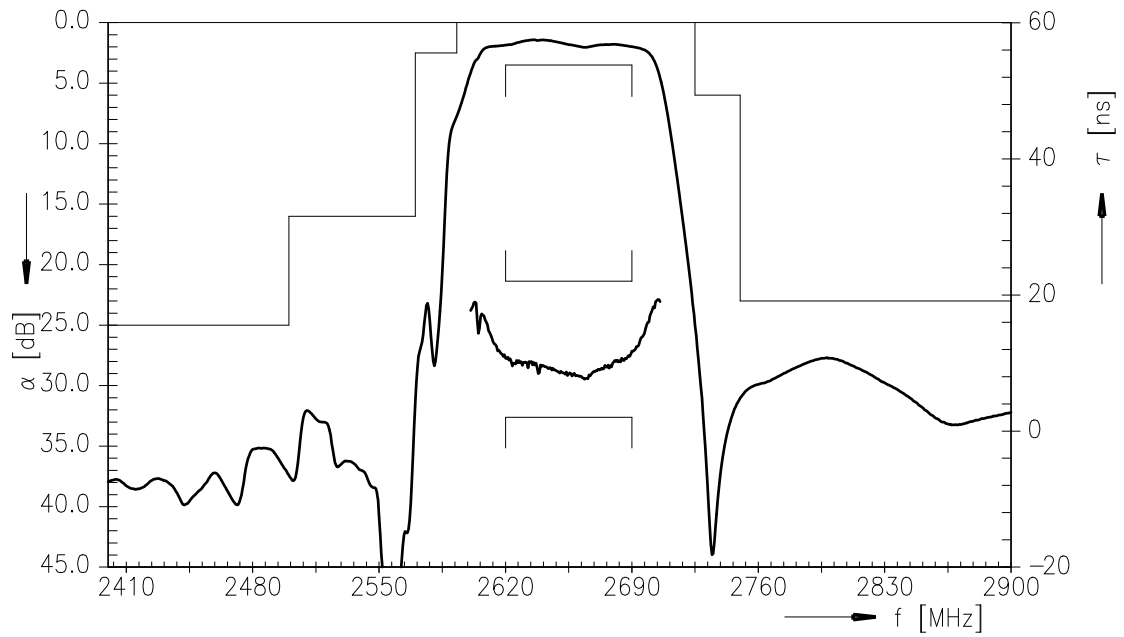
SAW RF Filter

2655.00 MHz

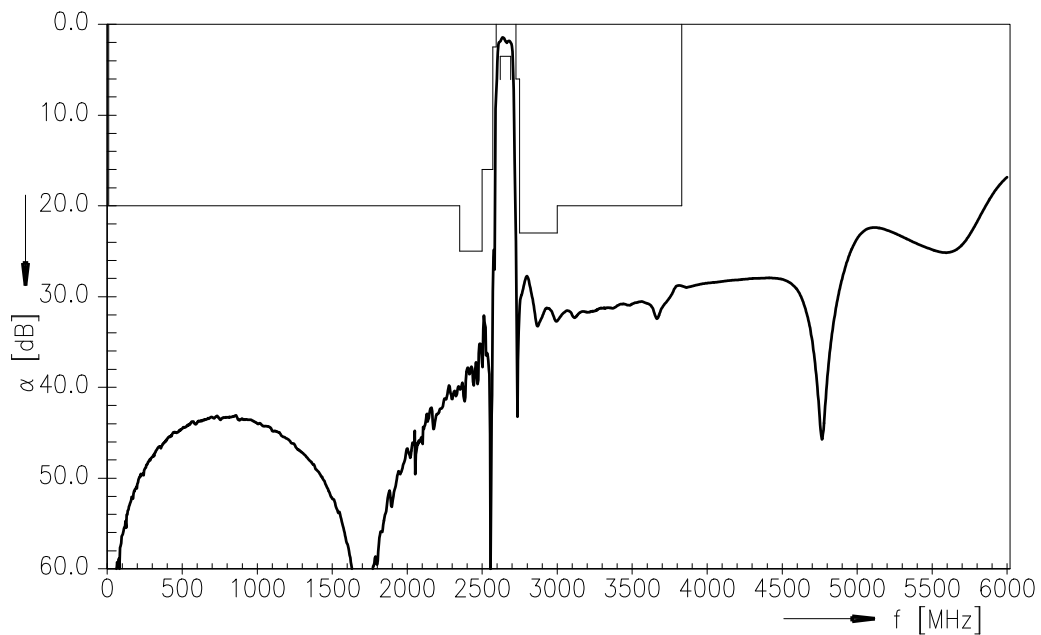
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Transfer function



Transfer function (wideband)



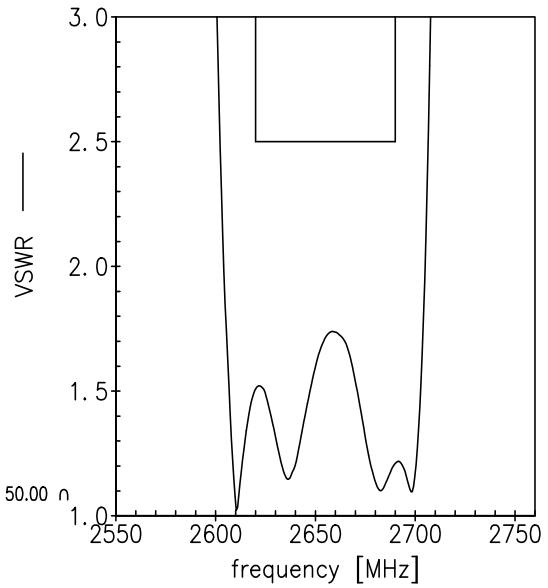
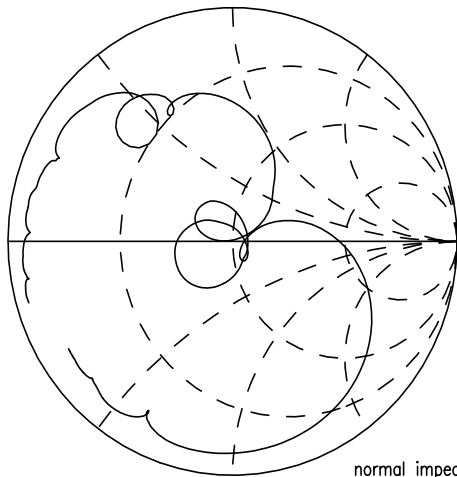
Please read *cautions and warnings* and *important notes* at the end of this document.

Data sheet

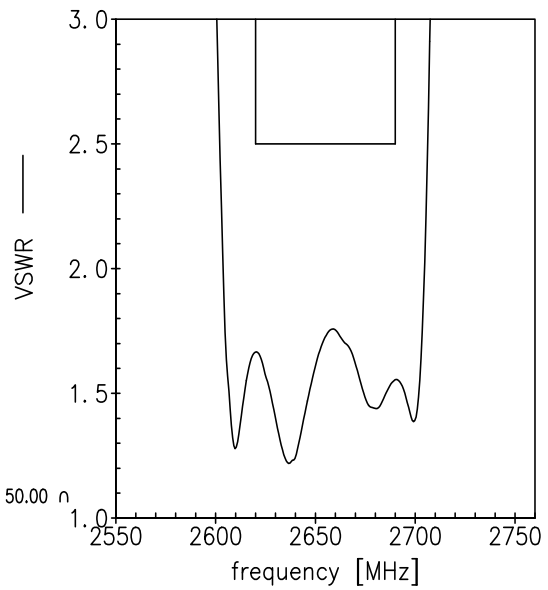
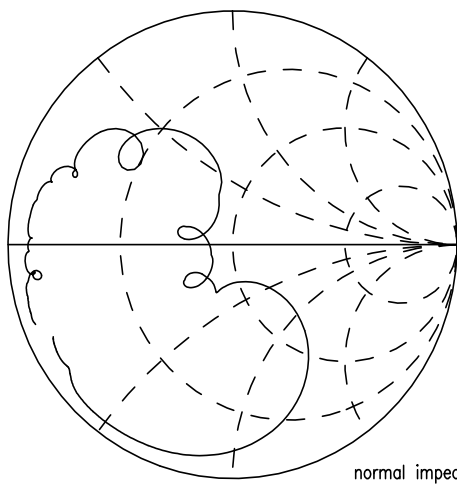
SMD

Smith charts

S₁₁ function



S₂₂ function





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SAW RF Filter	2655.00 MHz
Data sheet	SMD

References

Type	B5122
Ordering code	B39272B5122U410
Marking and package	C61157-A7-A67
Packaging	F61074-V8168-Z000
Date codes	L_1126
S-parameters	B5122_NB.s2p,B5122_WB.s2p See file header for port/pin assignment table
Soldering profile	S_6001
RoHS compatible	RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011, on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("Directive") with due regard to the application of exemptions as per Annex III of the Directive in certain cases.
Matching coils	See Inductor pdf-catalog http://www.tdk.co.jp/tefe02/coil.htm#aname1 and Data Library for circuit simulation http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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