



SAW Components

SAW Rx Filter

WCDMA Band VII

Series/Type:	B9478
Ordering code:	B39272B9478P810
Date:	November 04, 2010
Version:	2.0



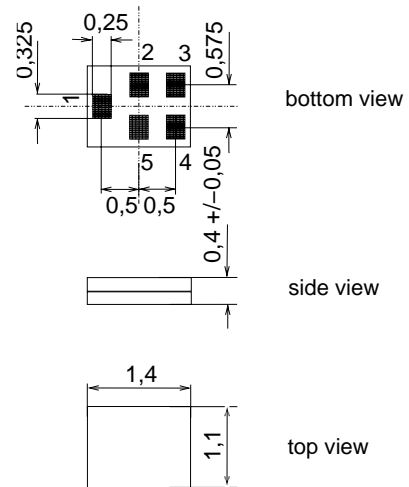
Application

- Low-loss RF filter for mobile telephone WCDMA band VII systems, receive path (RX)
- Useable for antenna diversity systems
- Impedance transform from 50 Ω to 100 Ω
- Unbalanced to balanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 70 MHz



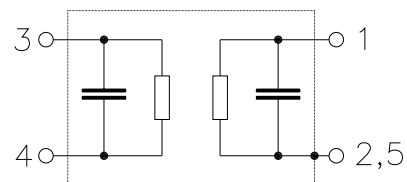
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compatible
- Approx. weight 0.003 g
- Package for **Surface Mount Technology (SMT)**
- Ni, gold-plated terminals
- **Electrostatic Sensitive Device (ESD)**
- **Moisture Sensitive Level 3**



Pin configuration

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





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2655.0 MHz

Data sheet



Characteristics

Operating temperature range: $T = -20\text{ °C to }+85\text{ °C}$
 Terminating source impedance: $Z_S = 50\ \Omega$ (unbalanced)
 Terminating load impedance: $Z_L = 100\ \Omega \parallel 18.0\text{nH}$ (balanced)

		min.	typ. @ 25 °C	max.	
Center frequency	f_c	—	2655.0	—	MHz
Maximum insertion attenuation					
	2620.0 ... 2690.0MHz α_{\max}	—	2.8	3.3	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
	2620.0 ... 2690.0MHz	—	1.4	2.0	dB
Input VSWR					
	2620.0 ... 2690.0MHz	—	1.8	2.2	
Output VSWR					
	2620.0 ... 2690.0MHz	—	1.8	2.2	
Input amplitude balance (S_{31}/S_{21})					
	2620.0 ... 2690.0MHz	—	+/-0.5	+/-1.3	dB
Input phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)					
	2620.0 ... 2690.0MHz	—	+/-8.0	+/-14	°
Attenuation	α				
	0.0 ... 2500.0MHz	40	51	—	dB
	2500.0 ... 2570.0MHz	46	53	—	dB
	2750.0 ... 6000.0MHz	40	44	—	dB



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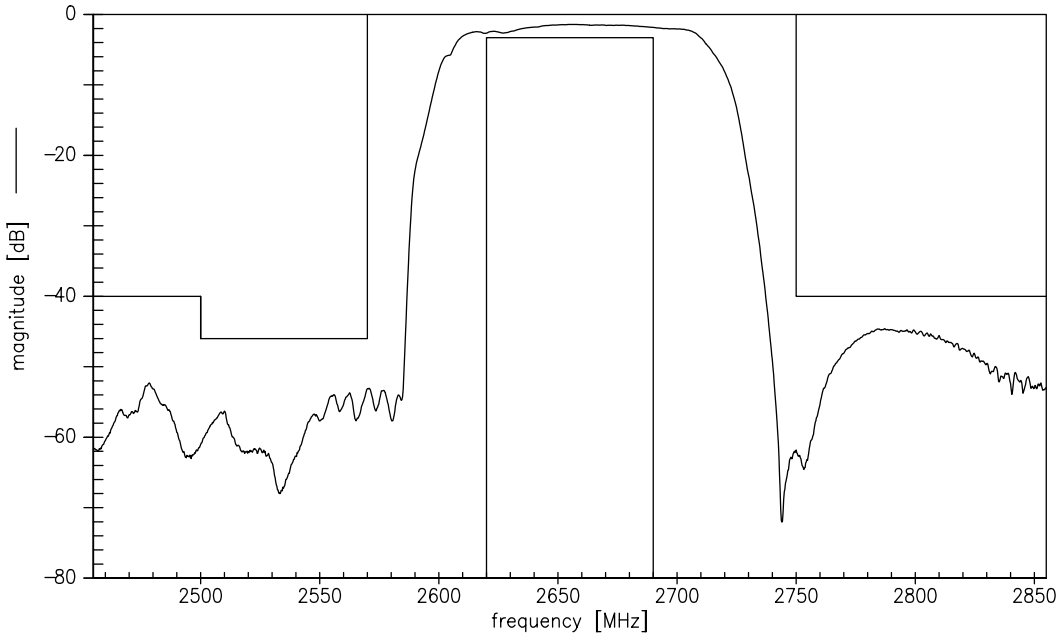
Maximum ratings

Operable temperature range	T	-30/+85	°C	
Storage temperature range	T _{stg}	-40/+85	°C	
DC voltage	V _{DC}	5	V	
ESD voltage	V _{ESD}	50 ¹⁾	V	machine model, 1 pulse
Source Power				
Input Power at Band 7 Tx Band	P _S	15	dBm	cw signal @ 50°C, 2000Hrs

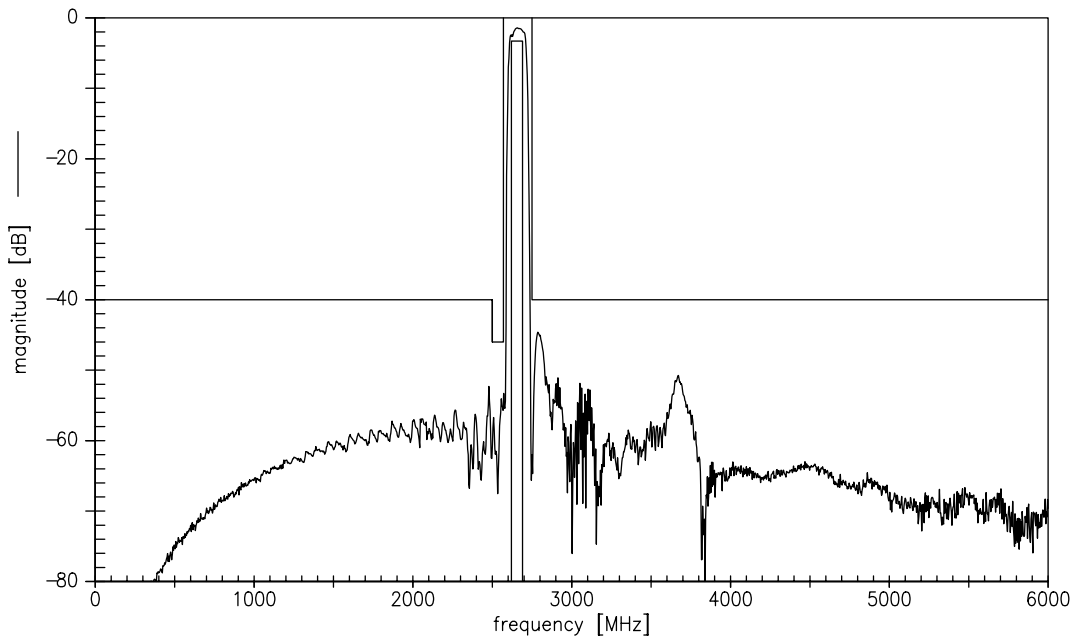
¹⁾ acc. to JEDEC22-A115A (machine model), 1 negative & 1 positive pulse.



Transfer function

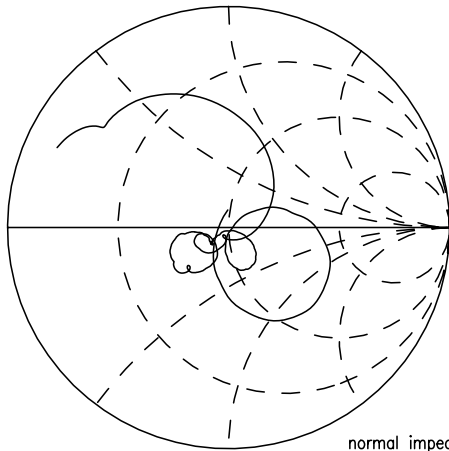


Transfer function (wideband)

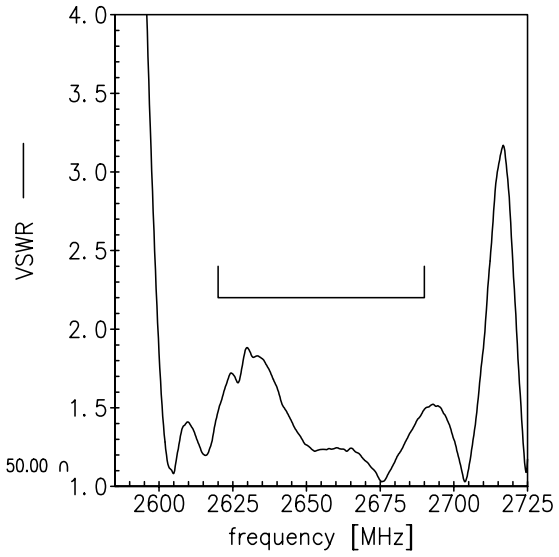


Smith charts

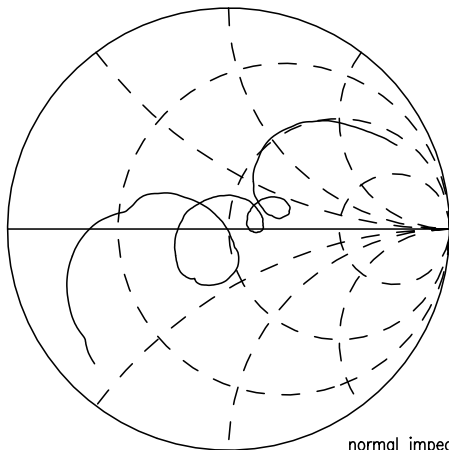
S₁₁ function



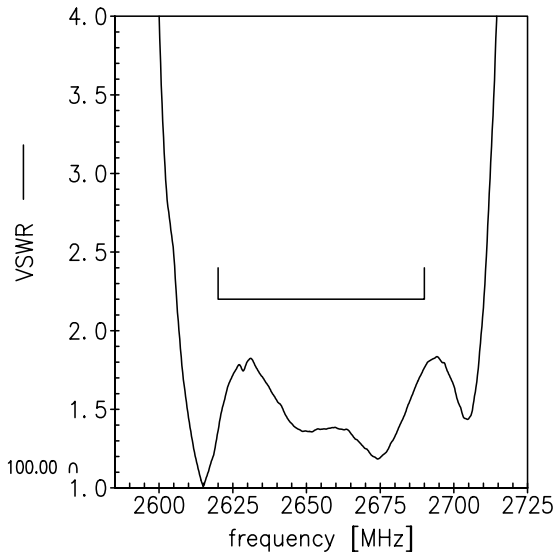
normal impedance: 50.00 Ω



S₂₂ function



normal impedance: 100.00 Ω





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References

Type	B9478
Ordering code	B39272B9478P810
Marking and package	C61157-A8-A3
Packaging	F61074-V8237-Z000
Date codes	L_1126
S-parameters	LT45F_NB.s3p, LT45F_WB.s3p 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."
Moldability	Before using in overmolding environment, please contact your EPCOS sales office.
Matching coils	See http://www.tdk.co.jp/tefe02/coil.htm#aname1 http://www.tdk.co.jp/etvcl/index.htm for a large variety of matching coils.

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

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