



SAW Components

SAW Rx Filter

GSM 850

Series/Type:	B9400
Ordering code:	B39881-B9400-K610
Date:	Dec 21, 2005
Version:	2.0



SAW Components

B9400

Low-Loss Filter for Mobile Communication

881.50 MHz

Data Sheet



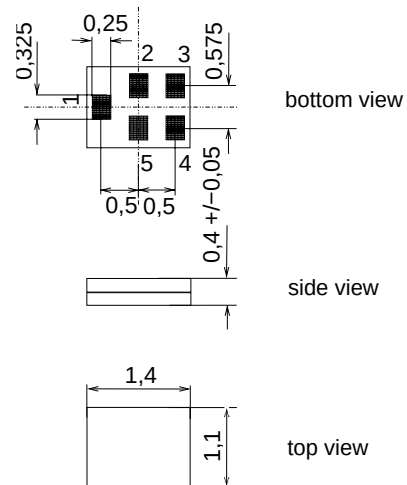
Application

- Low-loss RF filter for mobile telephone GSM850 systems, receive path (RX)
- Impedance transform from 50 Ω to 150 Ω
- Unbalanced to balanced operation
- Very low insertion attenuation
- Low amplitude ripple
- Usable passband 25 MHz
- Suitable for GPRS class 1 to 12



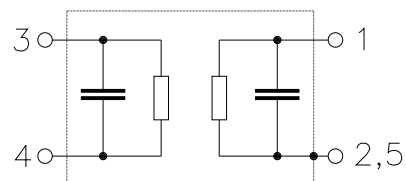
Features

- Package size 1.4 x 1.1 x 0.4 mm³
- RoHS compliant
- Approx. weight 0.003 g
- Package for Surface Mount Technology (SMT)
- Ni, gold-plated terminals



Pin configuration

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





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Characteristics

Operating temperature range: $T = -20$ to $+75$ °C
 Terminating source impedance: $Z_S = 50\Omega$
 Terminating load impedance: $Z_L = 150\Omega \parallel 82$ nH (balanced)

				B9400			
				min.	typ. @ 25°C	max.	
Center frequency	f_C			—	881.5	—	MHz
Maximum insertion attenuation	$\alpha_{\max}$			—	1.4	1.7	dB
869.0 ... 894.0 MHz							
Amplitude ripple (p-p)	$\Delta\alpha$			—	0.4	0.8	dB
869.0 ... 894.0 MHz							
Input VSWR				—	1.4	1.9	
869.0 ... 894.0 MHz							
Output VSWR				—	1.4	1.9	
869.0 ... 894.0 MHz							
Output amplitude balance (S_{31} / S_{21})				—1.0	-0.6/0.0	1.0	dB
869.0 ... 894.0 MHz							
Output phase balance ($\phi(S_{31}) - \phi(S_{21}) + 180^\circ$)				-10	-3/+1.5	10	°
869.0 ... 894.0 MHz							
Attenuation	α						
0.0 ... 434.0 MHz				45	54	—	dB
434.0 ... 447.0 MHz				45	52	—	dB
447.0 ... 849.0 MHz				30	33	—	dB
914.0 ... 1000.0 MHz				24	28	—	dB
1000.0 ... 1738.0 MHz				28	32	—	dB
1738.0 ... 6000.0 MHz				36	40	—	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}	100 ¹⁾	V	machine model, 10 pulses
Input Power at				
GSM850, GSM900	P _{IN}	15	dBm	effective power in the on-state, duty cycle 4:8
GSM1800, GSM1900	P _{IN}	15	dBm	
Tx bands				

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



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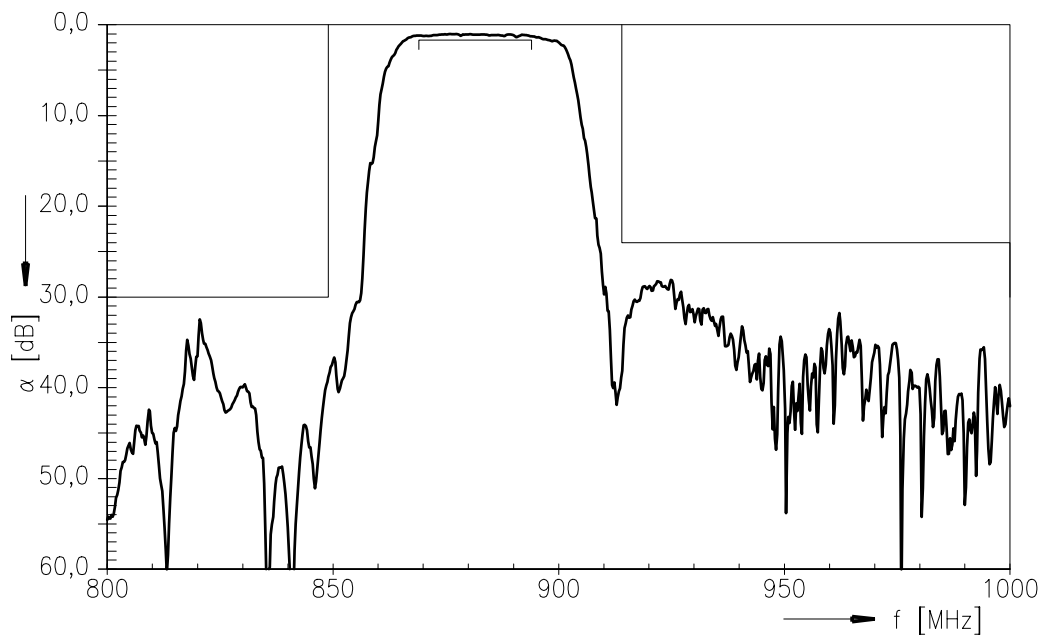
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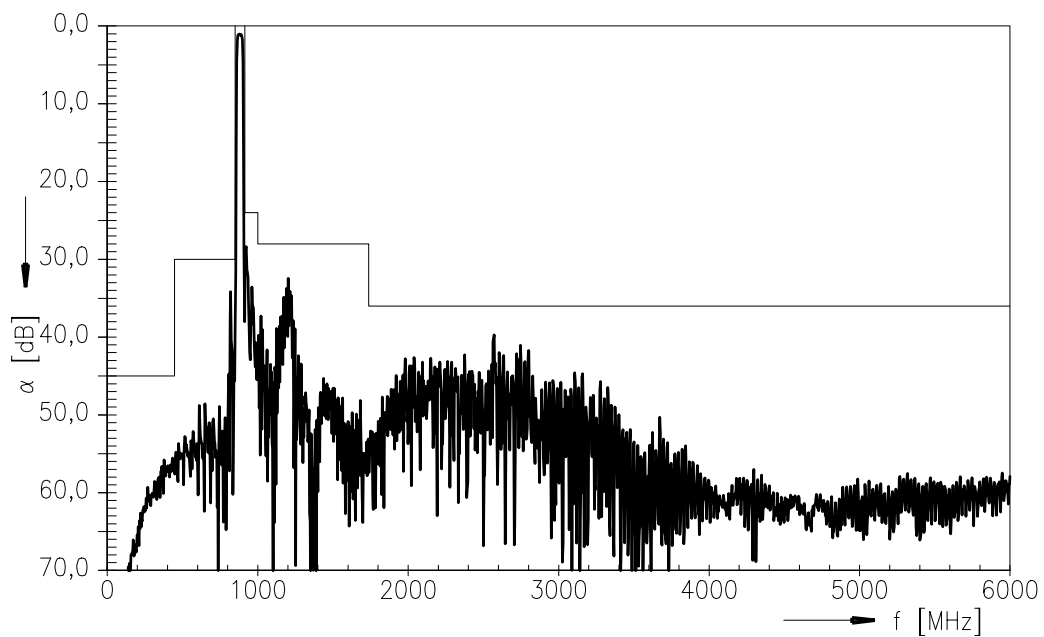
Data Sheet



Transfer function



Transfer function



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



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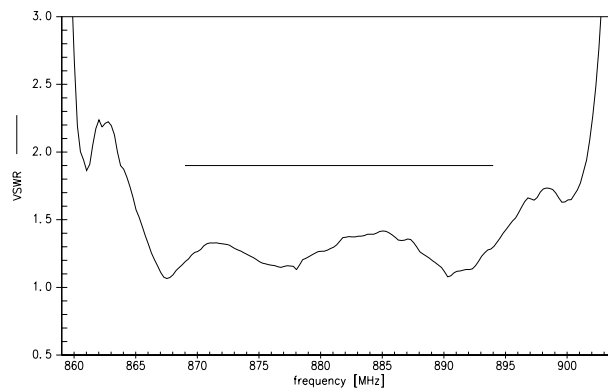
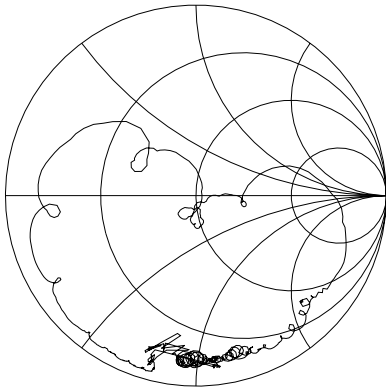
881.50 MHz

Data Sheet

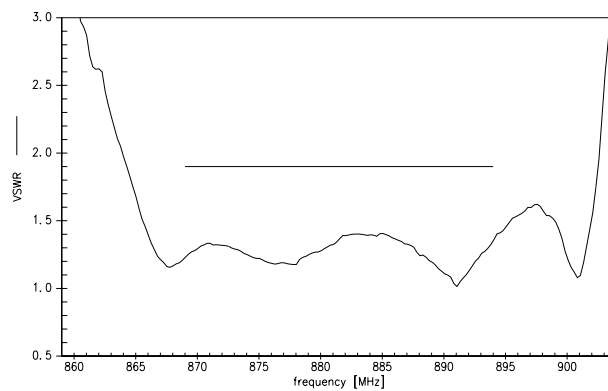
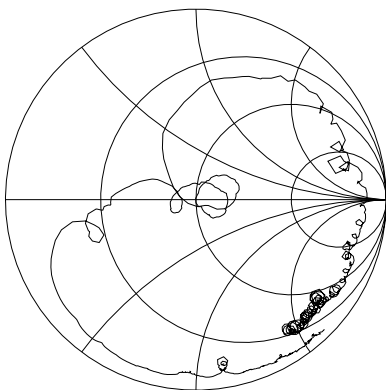


Smith chart / VSWR

S_{11} function



S_{22} function



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Type	B9400	
Ordering code	B39881-B9400-K610	
Marking and Package	C61157-A8-A1	
Packaging	F61074-V8212-Z000	
Date Codes	L_1126	
S-Parameters	B9400_NB.s3p B9400_WB.s3p	
Soldering profile	S_6001	

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

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