



SAW Components

SAW Rx Filter

GSM 850

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



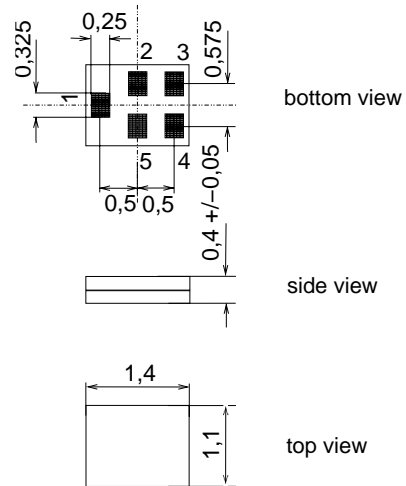
Application

- 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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Low-Loss Filter for Mobile Communication

881.50 MHz

Data Sheet



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	α_{max}				
869.0 ... 894.0	MHz	—	1.4	1.7	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869.0 ... 894.0	MHz	—	0.4	0.8	dB
Input VSWR					
869.0 ... 894.0	MHz	—	1.4	1.9	
Output VSWR					
869.0 ... 894.0	MHz	—	1.4	1.9	
Output amplitude balance (S_{31}/S_{21})					
869.0 ... 894.0	MHz	-1.0	-0.6/0.0	1.0	dB
Output phase balance ($\phi(S_{31})-\phi(S_{21})+180^\circ$)					
869.0 ... 894.0	MHz	-10	-3/+1.5	10	°
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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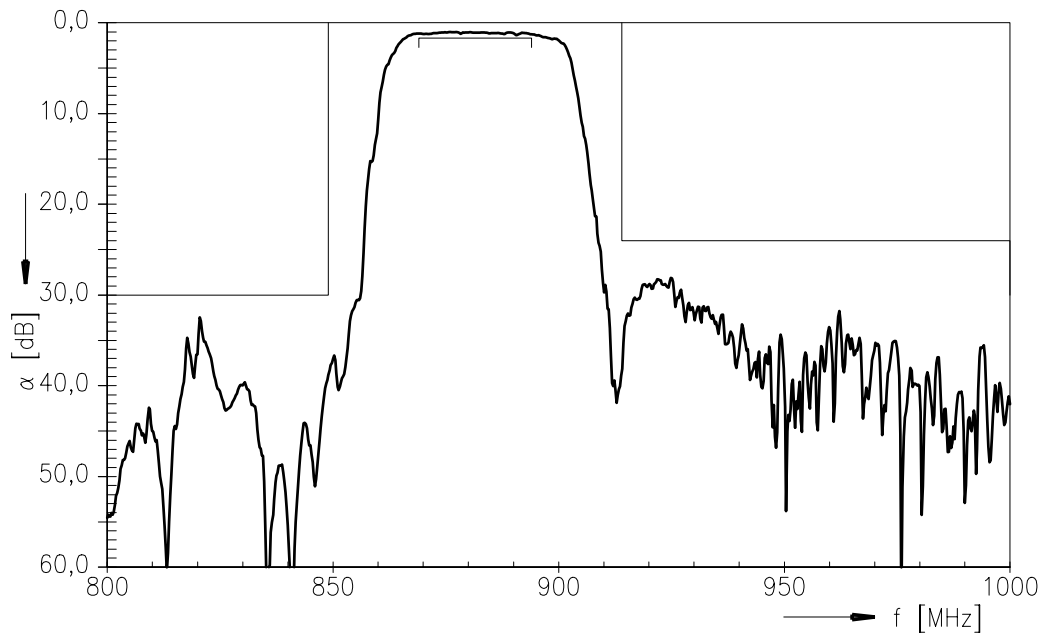
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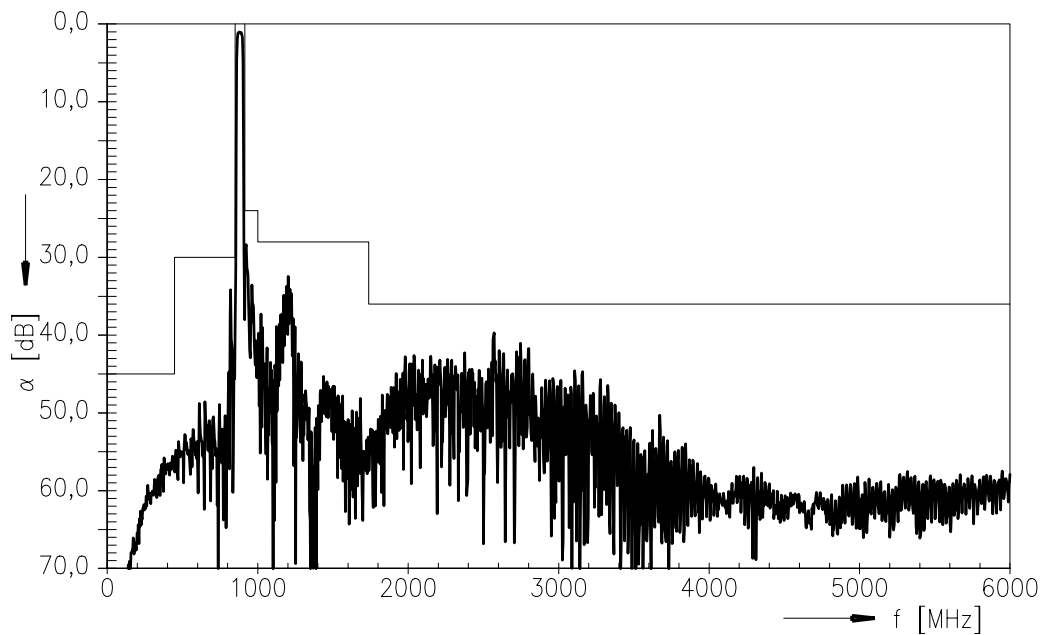
Data Sheet



Transfer function



Transfer function



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



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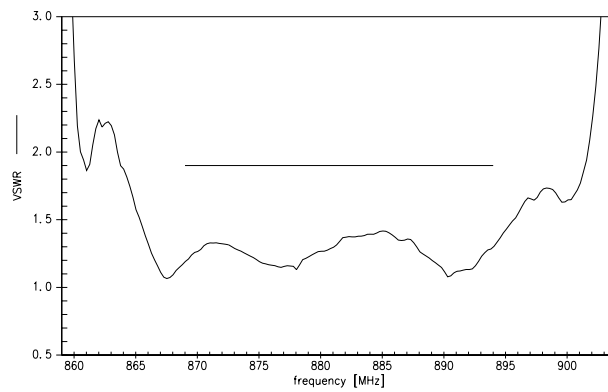
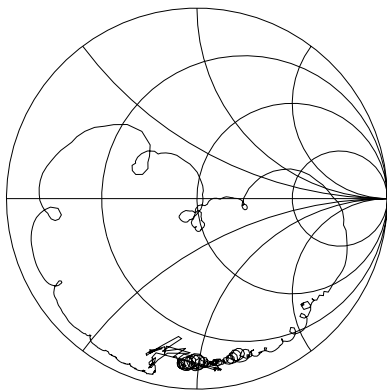
881.50 MHz

Data Sheet

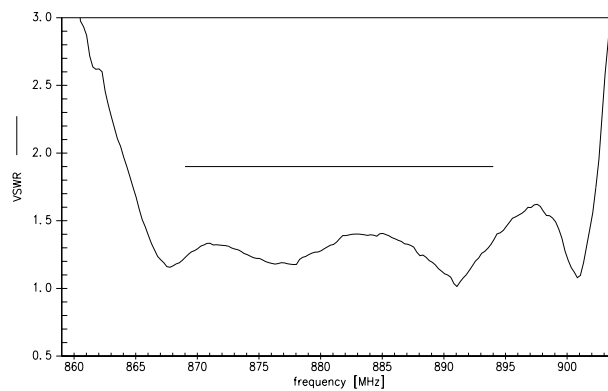
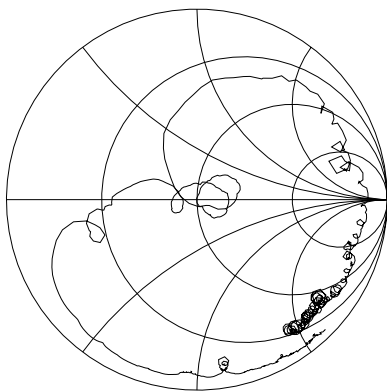


Smith chart / VSWR

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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