

RF Solutions for 802.11a,b,g,n WLAN Applications

Fall 2008

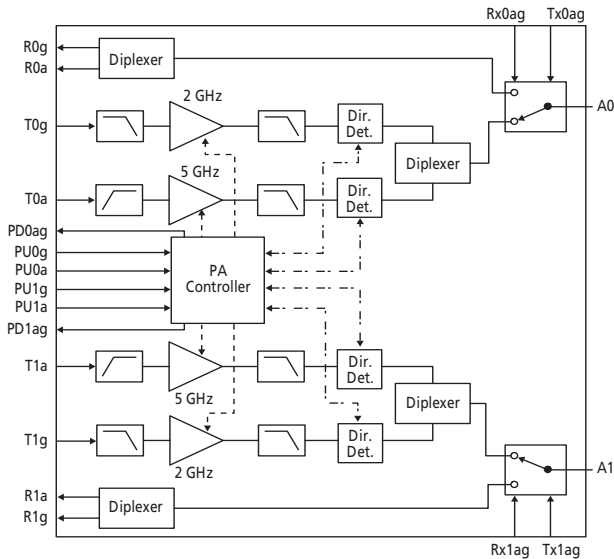
Skyworks — Leading Supplier of RF WLAN Semiconductor Solutions

Wireless Local Area Networks (WLANs) combine data connectivity with user portability, bringing benefits in productivity, convenience and cost compared to the traditional LAN. For these advantages to be realized, WLANs must deliver signal integrity and quality data transmission.

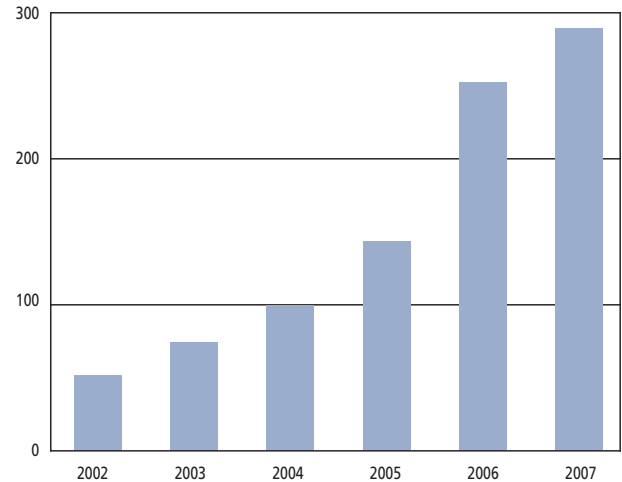
Skyworks' GaAs SPDT, diversity switches, power amplifiers (PAs) and other discrete components are market leaders. Our strong portfolio of PIN, Schottky and varactor diodes, BAW filters and power amplifiers enable the flexibility to design high-performance RF solutions for 802.11a,b,g,n applications.

Skyworks' Intera™ WLAN RF front-end module (FEM) solutions combine power amplifiers (PAs), switches, filters, diplexers, power detectors, and all biasing and matching circuitry into a single package. Our fully matched FEMs typically require single decoupling capacitors to complete the circuit, resulting in industry-leading advantages in terms of size, cost, performance, yield and time-to-market.

For complete product specifications and our latest product offering, please visit our Web site at www.skyworksinc.com



SKY65225-11 Wireless LAN Front-End Module Block Diagram



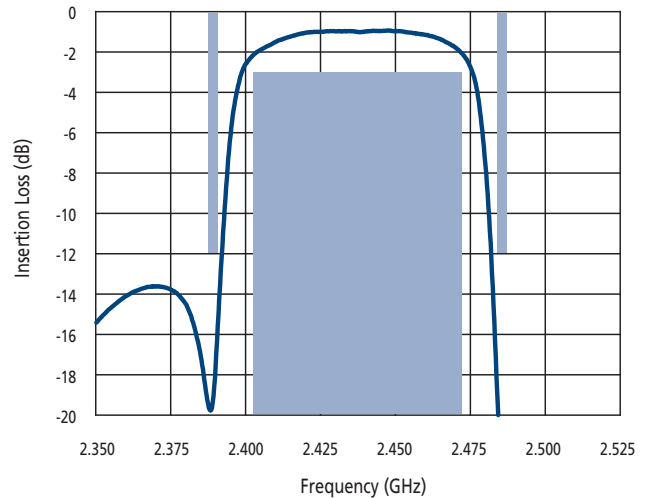
RF WLAN Component and Front-End Module Shipments (Millions)

Bulk Acoustic Wave (BAW) Interstage Filter SKY33100-360LF 802.11b,g,n

Skyworks has developed an innovative new process technology to produce high-performance BAW interstage filters for WLAN and cellular applications.

BAW technology makes use of very low loss electro-mechanical resonators to perform very highly selective RF filtering. The BAW filter has lower temperature drift, more stable operation and higher power handling capability as compared to SAW filters. BAW filters can be used as both discrete components and integrated as a part of a FEM. BAW technology plays a critical role in getting higher near-band rejection and reducing the footprint of the RF module.

- Excellent near-band rejection: 2.390 and 2.4835 GHz, enables PA to be run at full power on all channels
- 50 Ohm input and output impedance
- QFN 2 x 2 mm industry-standard package



Insertion Loss vs. Frequency – Narrow Band



Skyworks Sales Offices

U.S.A.

Headquarters

Skyworks Solutions, Inc.
20 Sylvan Road
Woburn, MA 01801
Telephone: (781) 376 3000
Fax: (781) 376 3100
sales@skyworksinc.com

Skyworks Solutions, Inc.
5221 California Avenue
Irvine, CA 92617
Telephone: (949) 231 3000
Fax: (949) 231 3206
kirat.hatzfeld@skyworksinc.com

Skyworks Solutions, Inc.
5520 Adamstown Road
Adamstown, MD 21710
Telephone: (301) 695 9400
Fax: (301) 695 7065
transtech@skyworksinc.com

EUROPE

Skyworks Solutions, Inc.
Parallelvej 10
Lyngby 2800, Denmark
Telephone: +45 45267945
Fax: +45 45267710
jan.thoning@skyworksinc.com

Skyworks Solutions, Inc.
34 Avenue Franklin Roosevelt
Suresnes 92150, France
Telephone: +00 33 1 41443663
Fax: +00 33 1 41443661
sophie.petard@skyworksinc.com

Skyworks Solutions, Ltd.
Abbey Manor Business Centre
The Abbey
Preston Road,
Yeovil, Somerset BA20 2EN
UK
Telephone: +44 1935 848546
Fax: +44 1935 431269
mike.carroll@skyworksinc.com

ASIA • PACIFIC

China

Skyworks Solutions, Inc.
Room 2506-07 LT Square
500 Chengdu North Road
Shanghai, 200003, China
Telephone: +862 133134590
ext. 60167
Fax: +862 163607147
elaine.zhao@skyworksinc.com

Skyworks Solutions, Inc.
Room 1912-1913
19/F, International Chamber of
Commerce Building Phase B
Fuhua Yi Road, Futian District
Shenzhen 518048 PRC
Telephone: +86 755 8293 1833
ext. 60016
Fax: +86 755 8293 1633
jesse.li@skyworksinc.com

Skyworks Solutions, Inc.
Suite 1212, COFCO, No. 8
Jianguomennei Avenue
Dongcheng District
Beijing, 100005 PRC
Telephone: +861 31334590-61608
Fax: +861 065261358
david.qi@skyworksinc.com

Japan

Skyworks Solutions, Inc.
Opera City Tower
36 Floor, 3-20-2
Nishi-Shinjuku, Shinjuku-Ku
Tokyo 163-1436 Japan
Telephone: +81 3 5308 5188
Fax: +81 3 5308 5190
satomi.tsukamoto@skyworksinc.com

Korea

Skyworks Solutions, Inc.
Sam Hee Bldg.
559-10, 13F
Bumeo-1 Dong, Soosung-Gu
Daegu 706-011 Korea
Telephone: +825 3746 7141
Fax: +825 3745 1440
hannah.kim@skyworksinc.com

Skyworks Solutions, Inc.
18F, Posteel Tower
753-3, Yeoksam-Dong
Seoul, Korea 135-923
Telephone: +822 3457 8813
Fax: +822 553 5459
kj.lee@skyworksinc.com

Singapore

Skyworks Solutions, Inc.
Singapore Representative Office
NSC Executive Centre
Suite 40
Level 28 Gateway East
152 Beach Road
Singapore 189721
Telephone: 65-68275647
Fax: 65-63968340
peter.gan@skyworksinc.com

Taiwan

Skyworks Solutions, Inc.
4 F, #198, Section 2
Tun Hwa. S. Road
Taipei 106, Taiwan ROC
Telephone: +8862 5559 8990
Fax: +8662 2735 6508
diana.wang@skyworksinc.com

intera™ WLAN FEMs — Innovative Design, Simplified Assembly



SKY65225-11

802.11a,b,g,n 2 x 2 MIMO FEM,
With 2 Antenna Ports



SKY65230-11

802.11a,b,g,n 2 x 2 MIMO FEM,
With 3 Antenna Ports



SKY65227-11

802.11b,g,n 2 x 2 MIMO FEM,
With 2 Antenna Ports



SKY65243-11

802.11a,b,g,n 1 x 1 FEM,
With 2 Antenna Ports



SKY65228-11

802.11a,n 2 x 2 MIMO FEM,
With 2 Antenna Ports



SKY65241-11

802.11a,b,g,n 1 x 1 FEM,
With 1 Antenna Port



SKY65249-11

801.11b,g,n 1 x 1 FEM,
With 2 Antenna Ports



SKY65256-11

802.11a,b,g,n 1 x 1 FEM,
With 1 Antenna Port



WLAN Discrete Components — Flexible Design Solutions



Switches

Excellent linearity, low insertion loss and high isolation

SKY13306-313LF (a,b,g) High power, high linearity SPDT

SKY13276-334 (a,b,g) High linearity SPDT

SKY13299-321LF (b,g) High isolation, high power SPDT

SKY13268-344LF (b,g) Medium power, small thin package SPDT

SKY13309-370LF (b,g) High isolation, high linearity, SP3T

SKY13267-321LF (a,b,g) Broadband T/R diversity DPDT



Power Amplifiers

High output power, linearity and efficiency

SKY65135-21 (b,g) P_{OUT} 28 dBm, gain 33 dB

SKY65138 (b,g) P_{OUT} 27 dBm @ 2.5% EVM, gain 31 dB



PIN Diodes

High linearity, small form factor

SMP1345-079LF (a,b,g) Very low capacitance

SMP1345-518 (b,g) Fast switching

SMP1340-079LF (b,g) Low capacitance, low resistance

SMP1320-079LF (b,g) Low capacitance



Schottky Diodes

Tight parameter distribution, minimal performance variability

SMS7621-079LF (a,b,g) Excellent sensitivity, low capacitance

SMS7630-079LF (a,b,g) Zero bias detector



Detectors

Directional, low insertion loss and superb directivity

DD02-999LF (b,g) Small form factor, temperature compensated