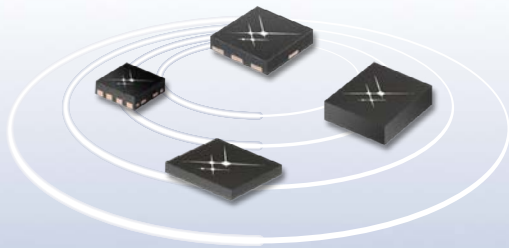




SKYWORKS[®]
BREAKTHROUGH SIMPLICITY



Smart Energy Solutions

Table of Contents

- Smart Energy Product Overview 3
- Block Diagrams
 - Short Range Radio 3
 - Smart Meter Communication Module (Simplified) 4
 - Thermostat Block Diagram 4
- Custom Front-end Modules 5
- Product Specifications
 - Front-end Modules (FEMs) 5
 - Amplifiers 6
 - Power Management 7
 - Switches 10
 - Synthesizers 10
 - Voltage Controlled Oscillators (VCOs) 10
 - Diodes 11
- Skyworks Sales Offices 14

Smart Energy Solutions

Applications

- ZigBee® (IEEE 802.15.4)
- Industrial and Control Unlicensed Band Radios
- Plug-in Hybrid Electric Vehicles (PHEVs)
- 802.15.4g
- Home Security and Automation

Products

- Front-end Modules (FEMs)
- Power Amplifiers (PAs) and Drivers
- Low Noise Amplifiers (LNAs)
- Power Management
- Switches
- Synthesizers
- Voltage Control Oscillators (VCOs)
- Diodes

Join Our Customer Email Program Today

Skyworks is continually releasing new products. Join our customer email program instantly by scanning the QR code with your smartphone.



Innovation to Go™

Select products and sample/designer kits available for purchase online. www.skyworksinc.com



Skyworks lead (Pb)-free products are compliant to all applicable materials legislation. For additional information, please refer to *Skyworks Definition of Lead (Pb)-Free*, document number SQ04-0073. Tin/lead (SnPb) packaging is not recommended for new designs.

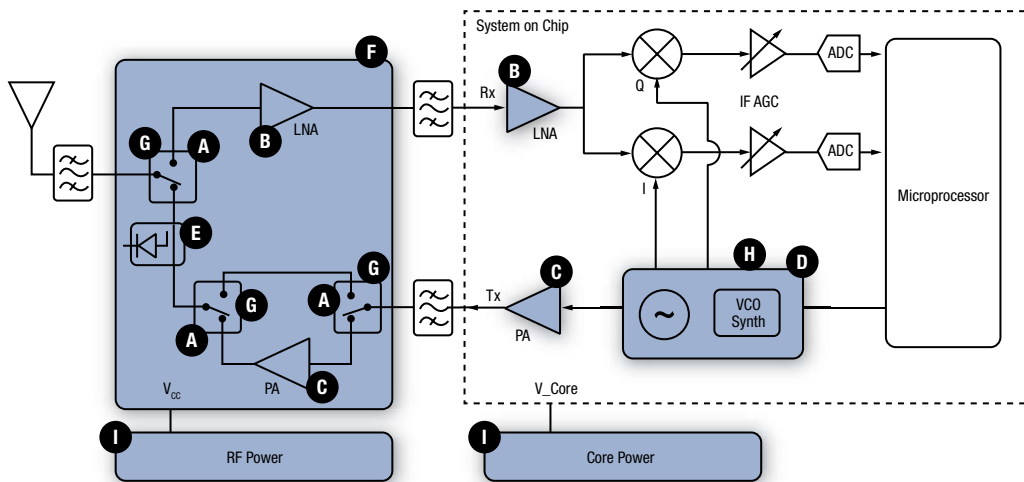


Skyworks Green™ products are compliant to all applicable materials legislation and are halogen-free. For additional information, please refer to *Skyworks Definition of Green™*, document number SQ04-0074.

Smart Energy Solutions

The Right Products for Your System Applications

Skyworks is committed to developing leading edge products for designs targeted at < 170, 410–470, 868–930, and 2400–2500 MHz radios. These solutions are ideal for wireless local area networks (WLAN), automated metering infrastructure (AMI), automated meter reading (AMR), professional mobile radio (PMR), and other ISM band applications. Figures 1 through 3 show short range radio, simplified smart communication module, and thermostat block diagrams.



Switches

- A** AS179-92LF
- AS193-73LF
- SKY13270-92LF
- SKY13299-321LF
- SKY13309-370LF
- SKY13318-321LF
- SKY13348-374LF
- SKY13370-374LF

PIN Diodes

- G** SMP1302-040LF
- SMP1302-079LF
- SMP1320-040LF
- SMP1320-079LF
- SMP1340-040LF
- SMP1340-079LF
- SMP1345-518

LNAs

- B** SKY65045-70LF
- SKY65047-360LF
- SKY67013-396LF

Power Drivers/Amplifiers

- C** SE2425U-R
- SE2433T-R
- SKY65006-348LF
- SKY65009-70LF
- SKY65045-70LF
- SKY65111-348LF
- SKY65116
- SKY65131
- SKY65132
- SKY65135
- SKY65146
- SKY65152
- SKY65162-70LF

Synthesizers/PLLs/VCOs

- D** SKY72300-21
- SKY72300-362
- SKY72301-22
- SKY72310-362
- SKY73120

Varactor Diodes

- H** SMV1142-011LF
- SMV1233-011LF
- SMV1235-040LF
- SMV1235-079LF
- SMV1236-004LF
- SMV1247-011LF
- SMV1247-040LF
- SMV1249-040LF
- SMV1249-079LF
- SMV1251-001LF
- SMV1253-079LF
- SMV1255-011LF
- SMV1405-040LF
- SMV1405-079LF
- SMV1408-001LF
- SMV1413-079LF
- SMV1763-040LF
- SMV1763-079LF

Schottky Diodes

- E** SMS3926-023LF
- SMS3927-023LF
- SMS3928-023LF
- SMS7621-040LF
- SMS7621-060
- SMS7621-079LF
- SMS7630-040LF
- SMS7630-061
- SMS7630-079LF

Tx/Rx Front-end Modules

- F** SE2431L-R
- SE2432L-R
- SE2435L-R
- SE2436L-R
- SE2438T-R
- SE2442L-R
- SKY66101-11
- SKY66108
- SKY66109-11
- SKY65313-21
- SKY65342-11
- SKY65346-21
- SKY65364-11
- SKY65366-21
- SKY65367-11
- SKY66100-11

Battery Chargers

- I** Linear Chargers
- AAT3663
- AAT3681

Switching Charger

- AAT3620

Super Capacitor Chargers

- AAT4621
- AAT4712

DC/DC Converters

Step-Down Converters

- AAT2114A
- SKY87201

Figure 1. Short Range Radio Block Diagram

The Right Products for Your System Applications (Continued)

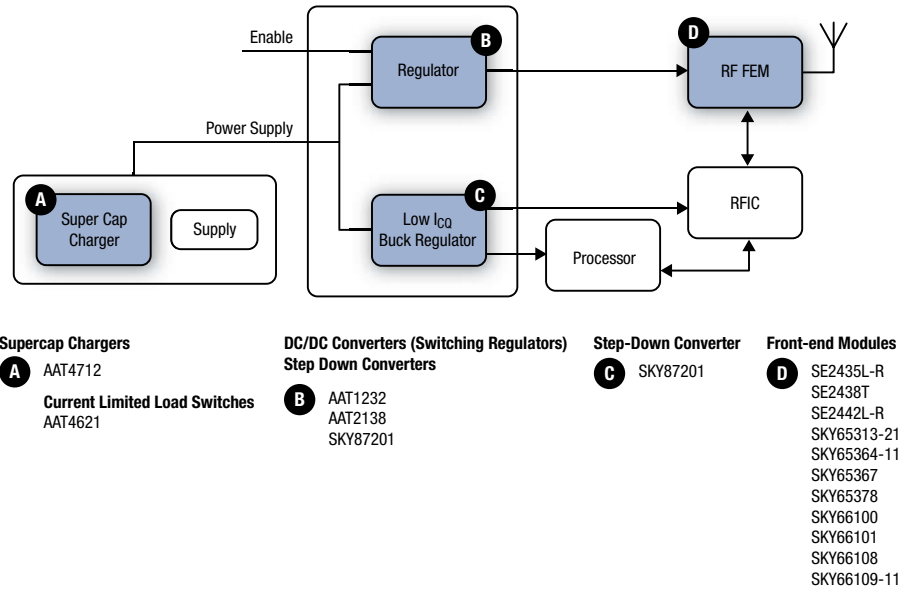


Figure 2. Smart Meter Communication Module (Simplified) Block Diagram

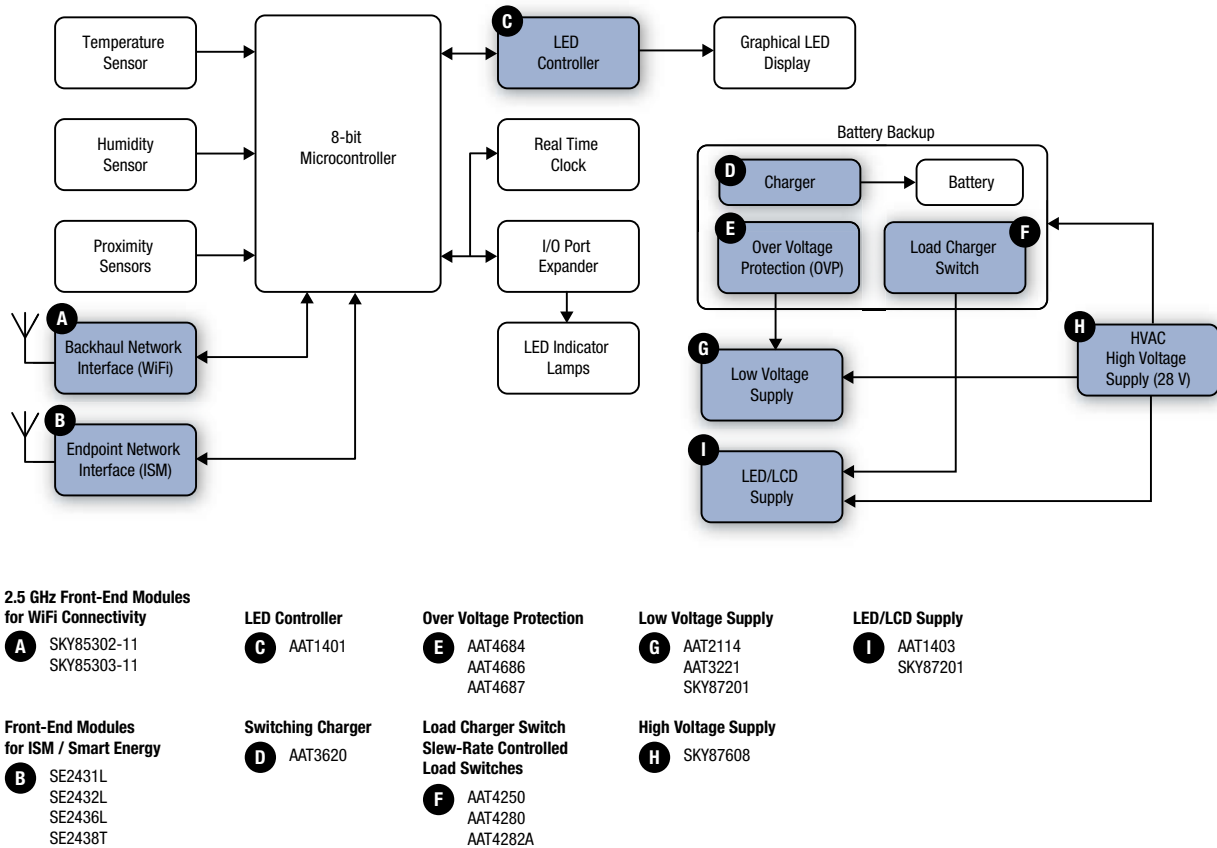


Figure 3. Thermostat Block Diagram

Custom Front-end Modules (FEMs)

Skyworks’ custom FEMs allow for significant size and cost reduction. In addition, many of Skyworks’ FEMs are designed to allow for “plug and play” functionality, thus drastically reducing the design time for new products. Customized FEMs can be created depending on transceiver implementation requirements. Various modules are being targeted at < 170, 410–470, 868–930, and 2400–2500 MHz frequency bands. Figure 4 shows a custom FEM block diagram.

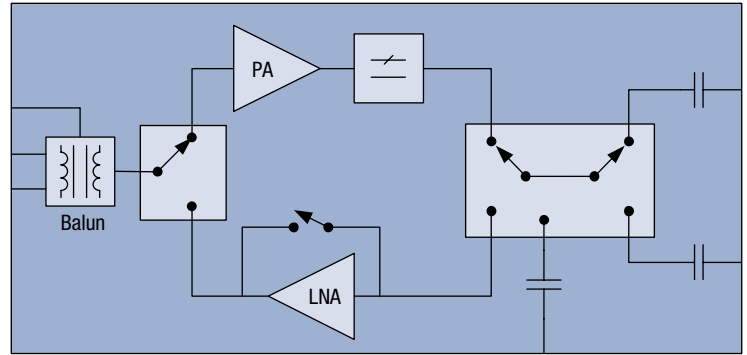


Figure 4. Custom Front-end Module (FEM)

Possibilities for Integration Include:

- T/R Switches
- Power Amplifiers
- Low Noise Amplifiers (LNAs)
- Mixers
- Harmonic Filters

Product Specifications

Specification tables for all of our latest Smart Energy products are provided on the following pages.

FRONT-END MODULES

Table 1. Front-end Modules

Part Number	Function	P _{OUT} (dBm)	Tx Gain (dB)	Rx Gain (dB)	I _{CC} Tx (mA)	Package (mm)	Frequency Band (MHz)			
							< 170	410–470	868–930	2400–2500
SKY66100-11	Tx / Rx Front-end Module with Rx / Tx Bypass	20–27	30	-0.5	110–300	MCM 4 x 4	•			
SKY65367-11	High Power Tx / Rx Front-end Module with Rx / Tx Bypass	30	35	-0.5	600	MCM 4 x 4	•			
SKY65342-11	High Power Tx / Rx Front-end Module with Rx Bypass	27–30	34	-0.6	650	MCM 8 x 8		•		
SKY65366-21	High Performance Tx / Rx Front-end Module	30.5	22	22	728	MCM 6 x 6		•		
SKY65378-11	Low Power Front-end Module with Tx Bypass and LNA	–	–	14–17	3–7 ⁽¹⁾	QFN 4 x 4				•
SKY65346-21	Tx / Rx Front-end Module with LNA	26	35	13.7	200	MCM 5 x 5				•
SE2435L-R	High Power Tx / Rx Front-end Module with LNA	30	28	16	550	QFN 4 x 4				•
SE2442L-R	High Power Tx / Rx Front-end Module with Rx Bypass	30	28	-0.7	550	QFN 4 x 4				•
SKY65313-21	Tx / Rx Front-end Module with LNA	30.5	28	16.6	695	MCM 6 x 6				•
SKY65364-11	High Power Tx / Rx Front-end Module with LNA, PA, Tx / Rx Bypass, HD Filter	30.5	30	15	730	MCM 6 x 6				•
SKY66101-11	High Performance, Highly Integrated Front-end Module	31	25	16	670	MCM 6 x 6				•
SE2438T-R	Low Power Tx / Rx Front-end Module with LNA	10–14	16	12.3	20–33	QFN 3 x 3				•
SKY66108	Low Power Tx / Rx Front-end Module with LNA	10–14	16	12.3	20–33	QFN 3 x 3				•

1. SKY65378: I_{CC} Rx gain value shown.

FRONT-END MODULES (CONTINUED)

Table 1. Front-end Modules (Continued)

Part Number	Function	P _{OUT} (dBm)	Tx Gain (dB)	Rx Gain (dB)	I _{CC Tx} (mA)	Package (mm)	Frequency Band (MHz)			
							< 170	410–470	868–930	2400–2500
SKY85302-11	2.4 GHz, 256 QAM WLAN/Bluetooth® Front-end Module	19	26	14	–	QFN 2.5 x 2.5				•
SKY85303-11	2.4 GHz, 256 QAM WLAN/Bluetooth® Front-end Module	19	26	14	–	QFN 2.5 x 2.5				•
SE2431L-R	Tx / Rx Front-end Module with LNA	20	23	12	110	QFN 3 x 4				•
SE2432L-R	Tx / Rx Front-end Module with LNA	20	22	11.5	110	QFN 3 x 4				•
SE2436L-R	High Power Tx / Rx Front-end Module with LNA	27	28	11.5	400	QFN 4 x 4				•
SKY66109-11	High Performance, Highly Integrated Front-end Module	20–24	22	12	105	MCM 3 x 4				•

AMPLIFIERS

Table 2. Power Amplifiers

Part Number	Function	P _{OUT} (dBm)	Gain (dB)	P _{1dB} (dBm)	I _{CO} (mA)	Package (mm)	Frequency Band (MHz)		
							450	915	2400
SE2433T-R	2-Stage Power Amplifier	24	22	24	–	QFN 2.5 x 2			•
SKY65116	2-Stage Power Amplifier	–	33	33	320	MCM 8 x 8	•		
SKY65111-348LF	3-Stage Power Amplifier	–	39.5	29.5	250	QFN 3 x 3		•	
SKY65006-348LF	3-Stage Power Amplifier	–	27.5	23.4	50	QFN 3 x 3			•
SKY65131	2-Stage Power Amplifier	–	26	28	150	MCM 4 x 4			•
SKY65132	3-Stage Power Amplifier	–	33	30	330	MCM 6 x 6			•
SKY65009-70LF	Single Stage Driver	–	17	25	110	SOT-89 4.5 x 2.4	•	•	•
SKY65045-70LF	Single Stage Driver	–	14 dB @ 900 MHz	25	60	SOT-89 4.5 x 2.4	•	•	
SKY65162-70LF	Single Stage Driver	–	20	29	185	SOT-89 4.5 x 2.4	•	•	•
SKY65152-11	3-Stage Power Amplifier	–	32	33	490	MCM 6 x 6			•
SKY67130-396LF	Single Stage Driver	–	13	16	22	DFN 2 x 2	•	•	•

New products indicated in **blue, bold** are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

AMPLIFIERS (CONTINUED)

Table 3. Low Noise Amplifiers

Part Number	Function	Gain (dB)	NF (dB)	I _{CC} (mA)	IP _{1 dB} (dBm)	Package (mm)	Frequency Band (MHz)		
							450	915	2400
SKY65050-372LF	LNA, Discrete (250–6000 MHz)	16 dB @ 900 MHz	0.6	10	-9	SC-70 2.2 x 1.35	•	•	•
SKY65047-360LF	LNA with Shutdown Mode	16.5 dB @ 915 MHz	0.85	7.8	-7	QFN 2 x 2	•	•	•
SKY65405-21	LNA with Shutdown Mode	14	1	12	-3	QFN 1.5 x 1.5			•
SKY67012-396LF	LNA, Discrete (300–600 MHz)	16	0.9	15	-1	DFN 2 x 2	•		
SKY67013-396LF	LNA, Discrete (600–1500 MHz)	14.5	0.85	15	2.5	DFN 2 x 2		•	
SKY67014-396LF	LNA, Discrete (1500–3000 MHz)	12	0.95	5	5	DFN 2 x 2			•
SKY67110-396LF	LNA, High Linearity	21	0.65	77	2	DFN 2 x 2	•		
SKY67101-396LF	LNA, High Linearity	17.9	0.5	56	2.6	DFN 2 x 2		•	
SKY67102-396LF	LNA, High Linearity	17.2	0.8	50	-1	QFN 2 x 2			•

POWER MANAGEMENT

Battery Chargers

Table 4. Linear Chargers

Part Number	Function	Max. Charge Current (mA)	V _{IN} (V)	Package (mm)
AAT3663	Linear Li-Ion Battery Charger for Single and Dual Cell Applications	1000	4.0–13.2	TDFN 14L 3 x 3
AAT3681	USB Port or AC Adapter Lithium-Ion/Polymer Battery Charger	300	4.0–6.5	SC70JW 8L 2.0 x 2.1

Table 5. Switching Charger

Part Number	Function	Switching Frequency (kHz)	V _{IN} (V)	Package (mm)
AAT3620	Cell Li+ Switch Mode Battery Charger	1500	4.3–6.0	TDFN 14L 3 x 3

Table 6. Supercapacitor Chargers

Part Number	Function	Fault Flag	V _{IN} (V)	Package (mm)
AAT4712	Supercapacitor Charger with Input Current Limit	POK; RDY	2.5–5.5	TDFN34 16L 3 x 4
AAT4621	PC Card Current Limit Interface and Capacitor Charger	Yes	3.0–3.5	TDFN 14L 3 x 3

POWER MANAGEMENT (CONTINUED)**Voltage Regulation—DC/DC Converters (Switching Regulators)****Table 7. Step Up Converter**

Part Number	Function	V_{OUT} (V)	Typ. I_Q (μ A)	I_{OUT} (mA)	Package (mm)
AAT1219	Step Up Converter	2.4 to $V_{OUT} + 0.25$	58	1200	TDFN33 12L 3 x 3

Table 8. Step Down Converter

Part Number	Min. V_{IN} (V)	Max. V_{IN} (V)	Min. V_{OUT} (V)	Max. V_{OUT} (V)	I_{OUT} (mA)	f_{OSC} (kHz)	Typ. I_Q (μ A)	Package (mm)
AAT2114A	2.7	5.5	1	V_{IN}	2500	3000	70	QFN 16L 3 x 3
AAT2138	2.7	5.5	3	V_{IN}	2500	2800	90	TDFN 14L 3 x 3 x 0.75
SKY87201-11	2.7	5.5	0.6	V_{IN}	600	2000	37	SC70JW 8L 2 x 2.1
SKY87608	4.5	28	0.9	$0.8 \cdot V_{IN}$	3000	450	1600	SOP-8L 5 x 6 x 1.55

Low Drop-Out (LDO) Linear Regulator**Table 9. Low Drop-Out (LDO) Linear Regulator**

Part Number	Function	V_{IN} (V)	Typ. I_Q (μ A)	Max. I_{OUT} (mA)	Package (mm)
AAT3221	Ultra Low IQ LDO	$V_{OUT} - 5.5$	1.1	150	SOT-23 5L 2.85 x 2.8 SC70JW 8L 2.2 x 2.0

Display and Lighting**White LED Driver****Table 10. Serial Boost White LED Backlight Driver**

Part Number	Number of LEDs	LED Channels	LED(s) per/Ch	Min. V_{IN} (V)	Max. V_{IN} (V)	Interface	Typ. I_Q (μ A)	Peak Efficiency	Current Accuracy (%)	Current Matching (%)	Max. I_{OUT} per/Ch (mA)	Package (mm)
AAT1401	6	1	6	2.7	5.5	S2Cwire™, Filtered PWM	0.43	85%	±10%	N/A	31	WLCS10L 1.545 x 1.145 x 0.62
AAT1403	10	1	10	2.7	5.5	S2Cwire™, Filtered PWM	0.43	81%	±10%	N/A	31	WLCS10L 1.545 x 1.145 x 0.62

New products indicated in **blue, bold** are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

POWER MANAGEMENT (CONTINUED)**Display and Lighting (Continued)****Table 11. Over Voltage Protection**

Part Number	Number of Channels	Enable	Fault Flag	I_{LIM}	Typ. $R_{DS(ON)}$ (m Ω)	V_{IN} (V)	Typ. I_Q (μ A)	Package (mm)
AAT4684	1	Yes	Yes	1.8 A	100	3.0–14.0	30	TSOPJW 12L 3.0 x 2.85 x 1.02
AAT4686	1	Yes	Yes	N/A	N/A	3.0–14.0	30	SC70JW 8L 2.0 x 2.1 x 1.05
AAT4687	1	Yes	Yes	N/A	130	3.0–14.0	30	SC70JW 10L 2.0 x 2.0 x 1.1

Port Protection and Power Distribution**Table 12. Slew Rate Controlled**

Part Number	Number of Channels	Enable	Turn On Rise Time (T_r)	Typ. $R_{DS(ON)}$ (m Ω)	V_{IN} (V)	Typ. I_Q (μ A)	Package (mm)
AAT4250	1	Yes	1.5 ms	120	1.8–5.5	2	SOT-23 5L, (SOT25) 2.85 x 2.80 x 1.20 SC70JW 8L 2.0 x 2.1 x 1.05
AAT4280	1	Yes	0.5 μ s 0.1 ms 1.0 ms	80	1.8–5.5	2	SOT-23 6L 2.85 x 2.80 x 1.20 SC70JW8L 2.2 x 2.0 x 1.05
AAT4282A	2	Yes	0.5 μ s 0.1 ms 1.0 ms	60	1.5–6.5	1	FTDFN22-8 2.0 x 2.0 x 0.75 SC70JW 8L 2.2 x 2.0 x 1.05
AAT4282B	2	Yes	0.065 ms 0.75 ms	67	1.5–6.5	0.04	TDFN22-8 2.0 x 2.0 x 0.75

SWITCHES

Table 13. SPDT (SP2T), SP3T, and DPDT RF Switches

Part Number	Function	Insertion Loss (dB)	Isolation (dB)	P _{1dB} (dBm)	Input IP3 (dBm)	Package (mm)	Frequency Band (MHz)		
							450	915	2400
SKY13268-344LF	SPDT Switch, Low Loss	0.3	25	30	50	SOT-666 1.5 x 1.2	•	•	•
SKY13309-370LF	SP3T Switch, Low Loss	0.5	25	29	–	QFN 2 x 2	•	•	•
AS179-92LF	SPDT Switch, Low Loss	0.3	25	30	48	SC-88 2.2 x 2	•	•	•
SKY13270-92LF	SPDT Switch, Low Loss	0.35	24	>37	56	SC-88 2.1 x 2.0	•	•	•
AS193-73LF	SPDT Switch, Low Loss	0.35	24	37	55	SOT-6 2.8 x 2.9	•	•	•
SKY13348-374LF	SPDT Switch	0.6	27	37	52	DFN 1.5 x 1.5	•	•	•
SKY13370-374LF	SPDT Switch	0.7	31	39	55	DFN 1.5 x 1.5	•	•	•
SKY13299-321LF	SPDT Switch	0.3–0.75	30–22	39	57	QFN 3 x 3	•	•	•
SKY13318-321LF	DPDT Switch	0.95–1.15	22–15	34	57	QFN 3 x 3	•	•	•

SYNTHESIZERS

Table 14. Dual and Single Fractional-N Synthesizers

Part Number	Function	Phase Noise (dBc/Hz)	Direct Modulation	I _{DD} (mA)	Package (mm)	Frequency Band (MHz)		
						450	915	2400
SKY72300-21	Dual Frac-N Synthesizer	-91	FSK, FM, GMSK	12.5	TSSOP 9.7 x 6.4	•	•	
SKY72300-362	Dual Frac-N Synthesizer	-91	FSK, FM, GMSK	12.5	QFN 4 x 4	•	•	
SKY72301-22	Dual Frac-N Synthesizer	-96	FSK, FM, GMSK	11	TSSOP 9.7 x 6.4	•	•	
SKY72310-362LF	Single Frac-N Synthesizer	-91	FSK, FM, GMSK	12.5	QFN 4 x 4	•	•	

VOLTAGE CONTROLLED OSCILLATORS (VCOs)

Table 15. Voltage Controlled Oscillators (VCOs)

Part Number	Function	Phase Noise (dBc/Hz)	Direct Modulation	I _{DD} (mA)	Package (mm)	Frequency Band (MHz)		
						450	915	2400
SKY73120	CMOS VCO	-110 @ 25 kHz Offset	0	26	MCM 6 x 6		•	

DIODES

Table 16. Varactor Diodes for Tuning Applications

Part Number	Function	Capacitance (C _v)	Capacitance Ratio (C _r)	Series Resistance (R _s)/ Quality Factor	Package (mm)	Frequency Band (MHz)		
						450	915	2400
SMV1405-079LF	VCO Tuning	1.8 pF @ 1 V	C _{T0} /C _{T30} = 4.1	Q @ 4 V 50 MHz = 3200	SC-79 1.6 x 0.8	•	•	•
SMV1405-040LF	VCO Tuning	1.8 pF @ 1 V	C _{T0} /C _{T30} = 4.1	Q @ 4 V 50 MHz = 3200	0402 1.0 x 0.6	•	•	•
SMV1413-079LF	VCO Tuning	6.4 pF @ 1 V	C _{T0} /C _{T30} = 4.2	Q @ 4 V 50 MHz = 2400	SC-79 1.6 x 0.8	•	•	•
SMV1408-001LF	VCO Tuning	2.9 pF @ 1 V	C _{T0} /C _{T30} = 4.1	Q @ 4 V 50 MHz = 2900	SOT-23 2.9 x 2.35	•	•	•
SMV1247-011LF	VCO Tuning	7 pF @ 0.3 V	C _{T0.3} /C _{T4.7} = 10	Q @ 3 V 50 MHz = 1500	SOD-323 2.5 x 1.25	•	•	•
SMV1247-040LF	VCO Tuning	7 pF @ 0.3 V	C _{T0.3} /C _{T4.7} = 10	Q @ 3 V 50 MHz = 1500	0402 1.0 x 0.6	•	•	•
SMV1249-040LF	VCO Tuning	31 pF @ 0.3 V	C _{T0.3} /C _{T4.7} = 12.1	R _s @ 3 V 500 MHz = 1.2 Ω	0402 1.0 x 0.6	•	•	•
SMV1249-079LF	VCO Tuning	31 pF @ 0.3 V	C _{T0.3} /C _{T4.7} = 12.1	R _s @ 3 V 500 MHz = 2.2 Ω	SC-79 1.6 x 0.8	•	•	•
SMV1251-001LF	VCO Tuning	42 pF @ 0.3 V	C _{T0.3} /C _{T4.7} = 12.2	R _s @ 3 V 500 MHz = 1.6 Ω	SOT-23 2.9 x 2.35	•	•	•
SMV1253-079LF	VCO Tuning	53 pF @ 0.3 V	C _{T0.3} /C _{T4.7} = 12.3	R _s @ 3 V 500 MHz = 1.4 Ω	SC-79 1.6 x 0.8	•	•	•
SMV1255-011LF	VCO Tuning	64 pF @ 0.3 V	C _{T0.3} /C _{T4.7} = 12.3	R _s @ 3 V 500 MHz = 1.3 Ω	SOD-323 2.5 x 1.25	•	•	•
SMV1233-011LF	VCO Tuning	3.3 pF @ 1 V	C _{T1} /C _{T3} = 1.5	R _s @ 3 V 500 MHz = 1.2 Ω	SOD-323 2.5 x 1.25	•	•	•
SMV1236-004LF	VCO Tuning	17 pF @ 1 V	C _{T1} /C _{T3} = 1.6	R _s @ 3 V 500 MHz = 0.5 Ω	SOT-23 2.9 x 2.35	•	•	•
SMV1763-040LF	VCO Tuning	5.2 pF @ 1 V	C _{T0.5} /C _{T2.5} = 2.3	R _s @ 1 V 900 MHz = 0.7 Ω	0402 1.0 x 0.6	•	•	•
SMV1763-079LF	VCO Tuning	5.2 pF @ 1 V	C _{T0.5} /C _{T2.5} = 2.5	R _s @ 1 V 500 MHz = 0.7 Ω	SC-79 1.6 x 0.8	•	•	•
SMV1142-011LF	VCO Tuning	8.2 pF @ 1 V	C _{T1} /C _{T3} = 1.5	R _s @ 3 V 500 MHz = 0.7 Ω	SOD-323 2.5 x 1.25	•	•	•
SMV1235-079LF	VCO Tuning	11.5 pF @ 1 V	C _{T1} /C _{T3} = 1.8	R _s @ 3 V 500 MHz = 0.6 Ω	SC-79 1.6 x 0.8	•	•	•
SMV1235-040LF	VCO Tuning	11.5 pF @ 1 V	C _{T1} /C _{T3} = 1.8	R _s @ 3 V 500 MHz = 0.6 Ω	0402 1.0 x 0.6	•	•	•

DIODES (CONTINUED)

Table 17. PIN Diodes for Switching Applications













Part Number	Function	Voltage Breakdown (V_B)	Capacitance (C_T)	Series Resistance (R_S)	Package (mm)	Frequency Band (MHz)		
						450	915	2400
SMP1345-518	Antenna Switch	50 V @ 10 μ A	0.18 pF @ 5 V	R_S @ 10 mA = 1.5 Ω	LGA 1.2 x 1.4	•	•	•
 SMP1340-040LF	T/R Switch	50 V @ 10 μ A	0.20 pF @ 5 V	R_S @ 10 mA = 0.9 Ω	0402 1.0 x 0.6	•	•	•
 SMP1340-079LF	Antenna Switch	50 V @ 10 μ A	0.20 pF @ 5 V	R_S @ 10 mA = 0.9 Ω	SC-79 1.6 x 0.8	•	•	•
 SMP1320-040LF	T/R Switch	50 V @ 10 μ A	0.25 pF @ 30 V	R_S @ 10 mA = 0.9 Ω	0402 1.0 x 0.6	•	•	•
 SMP1320-079LF	T/R Switch	50 V @ 10 μ A	0.30 pF @ 30 V	R_S @ 10 mA = 0.9 Ω	SC-79 1.6 x 0.8	•	•	•
 SMP1302-079LF	Attenuator Switch	200 V @ 10 μ A	0.30 pF @ 30 V	R_S @ 10 mA = 3.0 Ω	SC-79 1.6 x 0.8	•	•	•
 SMP1302-040LF	T/R Switch	50 V @ 10 μ A	0.30 pF @ 30 V	R_S @ 10 mA = 0.9 Ω	0402 1.0 x 0.6	•	•	•

Table 18. Schottky Diodes for Detector and Mixer Applications

Part Number	Function	Voltage Breakdown (V_B)	Capacitance (C_T)	Forward Voltage (V_F)	Package (mm)	Frequency Band (MHz)		
						450	915	2400
 SMS7630-040LF	Detector	1 V @ 10 μ A	0.30 pF @ 0.15 V	V_F @ 0.1 mA = 60–120 mV	SC-79 1.6 x 0.8	•	•	•
 SMS7630-079LF	Detector	1 V @ 10 μ A	0.30 pF @ 0.15 V	V_F @ 0.1 mA = 60–120 mV	0402 1.0 x 0.6	•	•	•
 SMS7630-061	Detector	1 V @ 10 μ A	0.30 pF @ 0.15 V	V_F @ 0.1 mA = 60–120 mV	0201 0.60 x 0.30	•	•	•
 SMS7621-040LF	Detector/Mixer	2 V @ 10 μ A	0.18 pF @ 0.15 V	V_F @ 1.0 mA = 260–320 mV	0402 1.0 x 0.6	•	•	•
 SMS7621-079LF	Detector/Mixer	2 V @ 10 μ A	0.18 pF @ 0.15 V	V_F @ 1.0 mA = 260–320 mV	SC-79 1.6 x 0.8	•	•	•
 SMS7621-060	Detector/Mixer	2 V @ 10 μ A	0.18 pF @ 0.15 V	V_F @ 1.0 mA = 260–320 mV	0201 0.60 x 0.30	•	•	•
SMS3926-023LF	Low Drive Mixer	2 V @ 10 μ A	0.30 pF @ 0 V	V_F @ 1.0 mA = 200–270 mV	SOT-143 2.37 x 2.92	•	•	•
SMS3927-023LF	Medium Drive Mixer	2 V @ 10 μ A	0.30 pF @ 0 V	V_F @ 1.0 mA = 310–370 mV	SOT-143 2.37 x 2.92	•	•	•
SMS3928-023LF	High Drive Mixer	4 V @ 10 μ A	0.30 pF @ 0 V	V_F @ 1.0 mA = 520–580 mV	SOT-143 2.37 x 2.92	•	•	•

New products indicated in **blue, bold** are continually being introduced at Skyworks. For the latest information, please visit the new products section of our Web site at www.skyworksinc.com.

Copyright © 2011, 2012, 2013, 2014 Skyworks Solutions, Inc. All Rights Reserved.

Information in this document is provided in connection with Skyworks Solutions, Inc. ("Skyworks") products or services. These materials, including the information contained herein, are provided by Skyworks as a service to its customers and may be used for informational purposes only by the customer. Skyworks assumes no responsibility for errors or omissions in these materials or the information contained herein. Skyworks may change its documentation, products, services, specifications or product descriptions at any time, without notice. Skyworks makes no commitment to update the materials or information and shall have no responsibility whatsoever for conflicts, incompatibilities, or other difficulties arising from any future changes.

No license, whether express, implied, by estoppel or otherwise, is granted to any intellectual property rights by this document. Skyworks assumes no liability for any materials, products or information provided hereunder, including the sale, distribution, reproduction or use of Skyworks products, information or materials, except as may be provided in Skyworks Terms and Conditions of Sale.

THE MATERIALS, PRODUCTS AND INFORMATION ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, PERFORMANCE, QUALITY OR NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT; ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED. SKYWORKS DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. SKYWORKS SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO ANY SPECIAL, INDIRECT, INCIDENTAL, STATUTORY, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION,

LOST REVENUES OR LOST PROFITS THAT MAY RESULT FROM THE USE OF THE MATERIALS OR INFORMATION, WHETHER OR NOT THE RECIPIENT OF MATERIALS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Skyworks products are not intended for use in medical, lifesaving or life-sustaining applications, or other equipment in which the failure of the Skyworks products could lead to personal injury, death, physical or environmental damage. Skyworks customers using or selling Skyworks products for use in such applications do so at their own risk and agree to fully indemnify Skyworks for any damages resulting from such improper use or sale.

Customers are responsible for their products and applications using Skyworks products, which may deviate from published specifications as a result of design defects, errors, or operation of products outside of published parameters or design specifications. Customers should include design and operating safeguards to minimize these and other risks. Skyworks assumes no liability for applications assistance, customer product design, or damage to any equipment resulting from the use of Skyworks products outside of stated published specifications or parameters.

Skyworks, the Skyworks symbol, "Breakthrough Simplicity," Green, Green Initiative Innovation to Go, and S2CWire are trademarks or registered trademarks of Skyworks Solutions, Inc., in the United States and other countries. Third-party brands and names are for identification purposes only, and are the property of their respective owners. Additional information, including relevant terms and conditions, posted at www.skyworksinc.com, are incorporated by reference.



- Sales Offices
- ◆ Design Centers
- ★ Manufacturing

www.skyworksinc.com

USA

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

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

Skyworks Solutions, Inc.
 3230 Scott Boulevard
 Santa Clara, CA 95054
 Telephone: (408) 330-1400
 Fax: (408) 737-4611
sales@skyworksinc.com

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

EUROPE

France
 Skyworks Solutions, Inc.
 60 rue Saint André des Arts
 Bâtiment D
 75006 Paris
 France
 Telephone: +33 1 43548540
 Fax: +33 1 43540005
irene.pfeiffer@skyworksinc.com

United Kingdom
 Skyworks Solutions, Ltd.
 South Building
 Walden Court
 Parsonage Lane
 Bishops Stortford
 Hertfordshire CM23 5DB
 United Kingdom
 Telephone: +44 7585 964479
 Fax: +44 01279 464201
daniel.godsiff@skyworksinc.com

Finland
 Skyworks Solutions, Inc.
 Keilaranta 16 (5th Floor)
 FIN-02150 Espoo
 Finland
 Telephone: +358 9251 07131
 Fax: +358 9 2510 7129
tommi.hiillos@skyworksinc.com

ASIA • PACIFIC

China
 Skyworks Solutions, Inc.
 Room 2901-02, Chong Hing
 Finance Center
 No. 288 Nanjing Road (W)
 Shanghai 200003 China PRC
 Telephone: +86 21 23066230
 ext. 60167
 Fax: +86 21 33663398
elaine.zhao@skyworksinc.com

Skyworks Solutions, Inc.
 Room 2701, 27/F Tower 3
 Kerry Plaza
 No. 1 Zhongxinsi Road
 Futian District
 Shenzhen 518048 China PRC
 Telephone: +86 755 8828 8399
 Fax: +86 755 8828 8358
jesse.li@skyworksinc.com

Skyworks Solutions, Inc.
 Suite 1315, Tower B, COFCO Plaza, No. 8
 Jianguomennei Avenue
 Dongcheng District
 Beijing 100005 China PRC
 Telephone: +8610 652 60859
 ext. 61602
 Fax: +8610 652 61358
abby.huang@skyworksinc.com

Japan
 Skyworks Solutions Co., Ltd.
 Tokyo Opera City Tower 36F
 3-20-2 Nishi-Shinjuku
 Shinjuku-ku
 Tokyo, 163-1436
 Japan
 Telephone: +81 3 5308 5180
 Fax: +81 3 5308 5190
ahihiro.karikomi@skyworksinc.com

Korea
 Skyworks Solutions, Inc.
 12th Floor West Wing Posco Center
 892 Daechi 4-Dong, Kangnam-Gu
 Seoul, Korea 135-777
 Telephone: +82 2 3490 3800
 Fax: +82 2 553 5459
juhee.lee@skyworksinc.com

Singapore
 Skyworks Global Pte Ltd.
 10 Ang Mo Kio Street 65
 #05-15/16 Techpoint
 Singapore 569059
 Telephone: +65 64031971
 Fax: +65 64031931
yuenfong.choong@skyworksinc.com

Taiwan
 Skyworks Solutions, Inc.
 4 F, #198, Section 2
 Tun Hwa S. Road
 Taipei 106, Taiwan ROC
 Telephone: +8862 5559 8992
 Fax: +8862 2735 6508
joanna.wu@skyworksinc.com

Skyworks Solutions

Skyworks Solutions, Inc. is an innovator of high performance analog semiconductors. Leveraging core technologies, Skyworks supports automotive, broadband, wireless infrastructure, energy management, GPS, industrial, medical, military, wireless networking, smartphone, and tablet applications. The Company's portfolio includes amplifiers, attenuators, circulators, demodulators, detectors, diodes, directional couplers, front-end modules, hybrids, infrastructure RF subsystems, isolators, lighting and display solutions, mixers, modulators, optocouplers, optoisolators, phase shifters, PLLs/synthesizers/VCOs, power dividers/combiners, power management devices, receivers, switches, and technical ceramics.

Headquartered in Woburn, Massachusetts, USA, Skyworks is worldwide with engineering, manufacturing, sales, and service facilities throughout Asia, Europe, and North America.

New products are continually being introduced at Skyworks. For the latest information, please visit our Web site at www.skyworksinc.com, contact your local sales office, or email us at sales@skyworksinc.com.

The Skyworks Advantage

- Broad front-end module and precision analog product portfolio
- Market leadership in key product segments
- Solutions for all air interface standards, including CDMA, GSM / GPRS / EDGE, LTE, WCDMA, and WLAN
- Engagements with a diverse set of top-tier customers
- Strategic partnerships with all leading baseband suppliers
- Analog, RF, and mixed-signal design capabilities
- Access to all key process technologies: GaAs HBT, pHEMT, BiCMOS, SiGe, CMOS and RF CMOS, and Silicon
- World-class manufacturing capabilities and scale
- Unparalleled level of customer service and technical support
- Commitment to technology innovation



Skyworks Solutions, Inc.

20 Sylvan Road, Woburn, MA 01801

USA: (781) 376-3000 • Asia: 886 2 2735 0399

Europe: 33 (0)1 43548540 • Fax: (781) 376-3100

Email: sales@skyworksinc.com • www.skyworksinc.com

NASDAQ: SWKS



BRO388-14A 01/14  Printed on Recycled Paper.



SKYWORKS®

BREAKTHROUGH SIMPLICITY

Skyworks:

SKY65313-11 SMV1247-040LF