



SKYWORKS®



Infrastructure Solutions

1118 Rev 1

Delivering End-to-End Seamless Connectivity



Wherever you are, infrastructure solutions of Skyworks are enabling faster and more reliable data connectivity. Whether in cell phone towers thinly disguised as trees or in small cells hidden under stadium seats and lamp posts, our groundbreaking products are connecting people with the information they need.

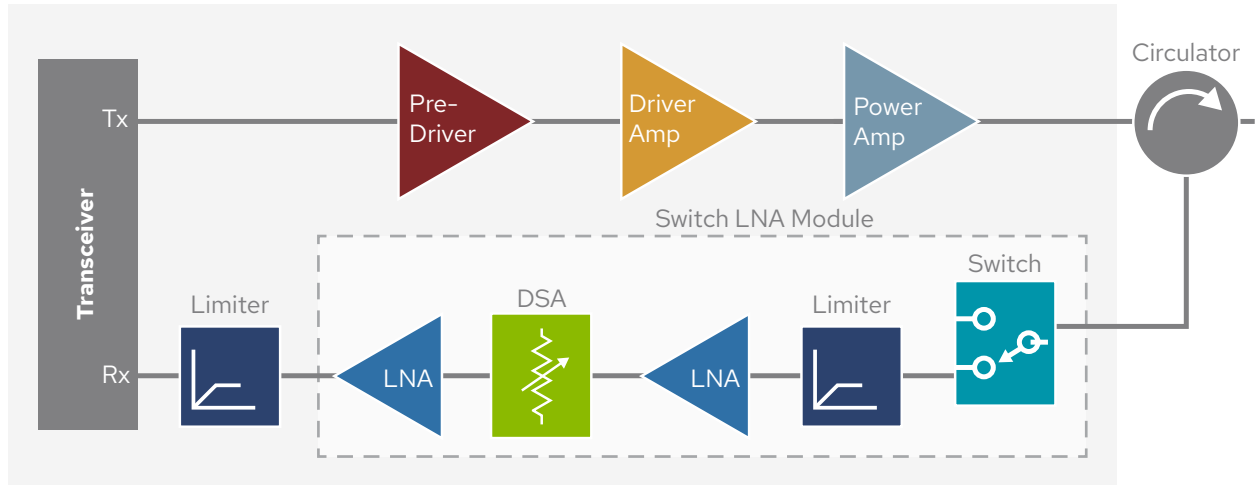
Our broad portfolio supports a multitude of applications—from small cells to massive MIMO and macro cellular base stations—with products that address functions spanning the transceiver to the antenna.

Partner with us on your next project to enable multimedia and data intensive platforms that are exploding across mobile, the Internet of Things and emerging 5G devices. We are at the forefront of developing revolutionary wireless solutions.

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Isolation Applications



Massive MIMO Transceiver Building Blocks

High Efficiency Power Amplifiers

Pre-Driver Amplifiers

- SKY67183-396LF
- [SKY67189-396LF](#)

Driver Amplifiers

- SKY66041-11
- SKY66042-11
- SKY66312-11
- [SKY66313-11](#)
- SKY66315-11

High Efficiency Power Amplifiers

- SKY662xx Series
- SKY663xx Series

Pin-to-Pin Compatible PA Family for 700 MHz to 5.9 GHz

Switches

RF Switches

- [SKY13522-644LF](#)
- [SKY13370-374LF](#)
- [SKY13373-460LF](#)
- SKY13380-350LF

High Power Switches

- [SKY12245-492LF](#)
- [SKY12247-492LF](#)
- SKY12248-492LF
- [SKY12210-478LF](#)
- [SKY12207-478LF](#)

Switch LNA Modules

- SKY73217-31
- SKY73218-11

Limiters

- [SKY16601-555LF](#)
- [SKY16602-632LF](#)
- SKY16603-632LF

Low Noise Amplifiers (LNA)

- [SKY67154-396LF](#)
- SKY67183-396LF
- [SKY67189-396LF](#)
- [SKY67180-306LF](#)

Digital Step Attenuators (DSA)

- [SKY12408-321LF](#)
- [SKY12355-337LF](#)
- [SKY12345-362LF](#)
- [SKY12329-350LF](#)
- [SKY12340-364LF](#)
- [AA116-72LF](#)

Product Specifications

Specification tables for products in this brochure are provided on the following pages.

New products (purple, bold) are continually being introduced at Skyworks. For up-to-date information on products in development, please contact your local Skyworks sales representative.

Amplifiers

Pre-Driver and Driver Amplifiers

Part Number	Frequency (GHz)	Test Frequency (GHz)	Gain (dBm)	OIP3 (dBm)	OP1 dB (dBm)	V _{DD} (V)	Package (mm)
SKY67183-396LF	1.7-6.0	3.6 4.5	18 19	+33.5 +32.0	+19.5 +17.5	5	8-pin DFN 2 x 2 x 0.75
<u>SKY67189-396LF</u>	0.4-6.0	3.3 3.8 4.4 5.0	18.6 18.3 17.8 17.3	+29 +28 +27 +27	+19 +19 +19 +19	5	8-pin DFN 2 x 2 x 0.75
SKY66041-11	2.3-2.7	2.6	30	-	+28	5 or 3.3	16-pin MCM 3 x 3 x 0.85
SKY66042-11	3.3-4.2	3.55	30	-	+28	5 or 3.3	16-pin MCM 3 x 3 x 0.85
SKY66312-11	2.3-2.4	2.35	35	-	32	5	16-pin MCM 5 x 5 x 1.3
<u>SKY66313-11</u>	3.4-3.6	3.5	37	-	33	5	16-pin MCM 5 x 5 x 1.3
SKY66315-11	4.4-5.0	4.7	35	-	34	5	16-pin MCM 5 x 5 x 1.3

High Efficiency Power Amplifiers

Part Number	Frequency (GHz)	Band	Typ. Gain (dB)	Power (dBm)	Power Added Efficiency (%)	iBW (MHz)	V _{DD} (V)	Typ. Quiescent Current (mA)	Package (mm)
<u>SKY66296-11</u>	0.700-0.800	12, 13, 14, 17, 29, 44	35	+28	43	20	5	70	16-pin MCM 5 x 5 x 1.3
<u>SKY66289-11</u>	0.791-0.821	20	36.1	+28	35.5	20	5	70	16-pin MCM 5 x 5 x 1.3
<u>SKY66295-21</u>	0.800-0.900	5, 18, 19, 26, 27	34	+28	36	20	5	135	16-pin MCM 5 x 5 x 1.3
<u>SKY66298-11</u>	0.9-0.99	8	34	+28	40	20	5	86	16-pin MCM 5 x 5 x 1.3
<u>SKY66291-11</u>	1.8-1.88	3, 9	37.5	+28	36.5	20	5	80	16-pin MCM 5 x 5 x 1.3
<u>SKY66299-11</u>	1.9-2.0	2, 25, 33, 36, 37	36	+28	35	20	5	80	16-pin MCM 5 x 5 x 1.3
<u>SKY66294-11</u>	2.1-2.2	1, 4, 10, 23	36	+28	37	20	5	75	16-pin MCM 5 x 5 x 1.3
<u>SKY66292-11</u>	2.3-2.4	30, 40	35.5	+28	36.5	20	5	70	16-pin MCM 5 x 5 x 1.3
<u>SKY66299-21</u>	1.900-2.000	2, 25, 33, 36, 37	36	+28	28	20	5	110	16-pin MCM 5 x 5 x 1.3
<u>SKY66391-12</u>	1.805-1.880	3, 9	37	+28	34.5	40	5	80	16-pin MCM 5 x 5 x 1.3

Product Specifications

Amplifiers

High Efficiency Power Amplifiers (Continued)

Part Number	Frequency (GHz)	Band	Typ. Gain (dB)	Power (dBm)	Power Added Efficiency (%)	iBW (MHz)	V _{DD} (V)	Typ. Quiescent Current (mA)	Package (mm)
SKY66399-11	1.930–1.935	2, 25, 33, 36, 37	36.5	+28	34	40	5	90	16-pin MCM 5 x 5 x 1.3
SKY66394-11	2.100–2.200	1, 4, 10, 23	36	+28	35	40	5	105	16-pin MCM 5 x 5 x 1.3
SKY66397-12	2.570–2.690	38, 41, n41	35	+28	35	40	5	95	16-pin MCM 5 x 5 x 1.3
SKY66288-11	5.150–5.925	LTE-U, 46	>30	+28	20–25	40	5	95	16-pin MCM 5 x 5 x 1.3
SKY66312-11	2.300–2.400	30, 40	35	+23	22	100	5	75	16-pin MCM 5 x 5 x 1.3
SKY66317-11	2.490–2.700	7, 38, 41, n41	38	+28	34 @ 28 dBm	100	5	90	16-pin MCM 5 x 5 x 1.3
SKY66313-11	3.400–3.600	22, 42	36	+23	15	100	5	115	16-pin MCM 5 x 5 x 1.3
SKY66315-11	4.400–5.000	n79	35	+23	20	100	5	75	16-pin MCM 5 x 5 x 1.3
SKY66318-11	3.300–3.600	22, 42, n78	35	+28	25	100	5	105	16-pin MCM 5 x 5 x 1.3
SKY66319-11	4.800–5.000	China 5G, n79	35	+28	23	100	5	100	16-pin MCM 5 x 5 x 1.3
SKY66395-11	4.400–5.000	n79	36	+30	20	100	5	210	16-pin MCM 5 x 5 x 1.3
SKY66398-11	2.500–2.700	n41	36	+30	30	100	5	180	16-pin MCM 5 x 5 x 1.3

Low Noise Amplifiers

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Gain (dB)	OIP3 (dBm)	OP1dB (dBm)	V _{DD} (V)	Typ. Supply Current (mA)	Typ. NF (dB)	Package (mm)
SKY67021-396LF	0.6–1.2	0.9	17.5	+40	+21.7	5	100	0.6	8-pin DFN 2 x 2 x 0.75
SKY67022-396LF	1.6–2.2	1.85	17.5	+39.5	+22	5	95	0.65	8-pin DFN 2 x 2 x 0.75
SKY67023-396LF	2.0–3.0	2.6	17.3	+39.5	+19.5	5	100	0.89	8-pin DFN 2 x 2 x 0.75
SKY67150-396LF	0.3–2.2	0.45 1.9	23 14.5	+36 +36.5	+19 +18	5	82	0.45 0.38	8-pin DFN 2 x 2 x 0.75
SKY67151-396LF	0.7–3.8	0.849 1.840 3.600	26.0 20.5 16.5	+34.5 +36.0 +36.0	+21.5 +20.5 +18	5	80 70 80	0.25 0.35 0.70	8-pin DFN 2 x 2 x 0.75
SKY67153-396LF	0.7–3.8	0.849 2.500 3.600	26.0 19.0 16.5	+34.5 +36.0 +36.0	+21.5 +20.0 +18.0	5	80 72 80	0.25 0.50 0.70	8-pin DFN 2 x 2 x 0.75
SKY67154-396LF	0.7–3.8	2.5	19	+38	+21	5	72	0.55	8-pin DFN 2 x 2 x 0.75
SKY67159-396LF	0.2–6.0	0.7 2.7 3.8 3.5	17.5 17.0 16.5 14.0	+31 +29 +27 +29	+18.0 +16.0 +14.5 +15.5	3.3 3.3 3.3 5.0	45	0.95 1.00 1.30 1.70	8-pin DFN 2 x 2 x 0.75

Product Specifications

Amplifiers

Low Noise Amplifiers (Continued)

Part Number	Frequency Range (GHz)	Test Frequency (GHz)	Gain (dB)	OIP3 (dBm)	OP ₁ dB (dBm)	V _{DD} (V)	Typ. Supply Current (mA)	Typ. NF (dB)	Package (mm)
<u>SKY67179-306LF</u>	1.5-3.8	2.6	34	+35	+18	5	113	0.65	16-pin QFN 4 x 4 x 0.90
<u>SKY67180-306LF</u>	1.5-3.8	2.6 3.5	34 31	+36 +34	+15	5	125	0.64 0.80	16-pin QFN 4 x 4 x 0.90
<u>SKY67113-11</u>	1.7-2.7	2.7	12.5	+37	-	5	107	5.15	36-pin SMT 6 x 6 x 0.95
<u>SKY67183-396LF</u>	0.4-6.0	1.7 2.5 3.6 4.5	23.0 21.5 18.0 17.5	+33 +33 +28 +28	+20 +20 +20 +19	5	56	0.45 0.40 0.45 0.50	8-pin DFN 2 x 2
<u>SKY67189-396LF</u>	0.4-6.0	0.4-1.1 1.1-2.2 2.2-2.7 2.7-3.8 3.8-6.0	22 22 22 22 20	+36 +36 +36 +36 +34	+20 +20 +19 +18 +19	3.3	75	0.6 0.7 0.7 0.7 1.0	8-pin DFN 2 x 2

Linear Power Amplifiers

Part Number	Frequency (GHz)	Typ. Gain (dB)	OIP3 (dBm)	Output Power (dBm)	P ₁ dB (dBm)	ACLR (5 MHz WCDMA) (dBc)	V _{DD} (V)	Typ. Quiescent Current (mA)	Package (mm)
<u>SKY66001-11</u>	2.10-2.20	30	+40	+19	+27	< -48	4.2	57	10-pin MCM 3 x 3 x 0.9
<u>SKY66002-11</u>	1.9-2.025	30	+40	+19	+27	< -48	4.2	60	10-pin MCM 3 x 3 x 0.9
<u>SKY66005-11</u>	0.85-0.92	30	+40	+19	+27	< -48	4.2	46	10-pin MCM 3 x 3 x 0.9
<u>SKY66008-11</u>	0.90-0.99	30	+40	+19	+27	< -48	4.2	48	10-pin MCM 3 x 3 x 0.9
<u>SKY66013-11</u>	0.7-0.8	27.5	+40	+19	+27	< -48	4.2	46	10-pin MCM 3 x 3 x 0.9
<u>SKY66181-11</u>	1.805-1.88	39	+44	+23	+31	< -48	3.3	360	28-pin MCM 5 x 5 x 1.25
<u>SKY66184-11</u>	2.1-2.2	39	+44	+23	+31	< -48	3.3	400	28-pin MCM 5 x 5 x 1.25
<u>SKY66185-11</u>	0.85-0.9	36.5	+44	+23	+30	< -48	3.3	130	28-pin MCM 5 x 5 x 1.25
<u>SKY66186-11</u>	0.728-0.768	37	+44	+23	+31	< -48	3.3	125	28-pin MCM 5 x 5 x 1.25
<u>SKY66188-11</u>	0.758-0.803	37	+44	+23	+31	< -48	3.3	155	28-pin MCM 5 x 5 x 1.25
<u>SKY66189-11</u>	1.930-1.995	40	+44	+23	+31	< -48	3.3	370	28-pin MCM 5 x 5 x 1.25

Product Specifications

Switches

SPDT (SP2T) RF Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. IP0.1 dB (dBm)	Max. Tx Power (W)	Package (mm)
SKY13286-359LF	SPDT (A)	0.1-6.0	0.8-1.5	62-42	+46	+30	1	16-pin QFN 4 x 4 x 0.9
SKY13370-374LF	SPDT (A)	3.6	0.8	29	+55	+39	+40	6-pin DFN 1.5 x 1.5 x 0.45
SKY13372-467LF	SPDT (A)	0.1-6.0	0.8-1.7	40-56	+42	+28	1	16-pin QFN 4 x 4 x 0.9
SKY13373-460LF	SP3T (R)	4.9	0.8	22	+70	+39	+39	12-pin DFN 2 x 2 x 0.55
SKY13380-350LF	SP4T (R)	2.6	0.6	21	+100 (IMD)	+39	+40	16-pin QFN 3 x 3 x 0.75
SKY13392-359LF	SP4T (A)	0.02-4.0	0.9-1.5	60-46	+47	+30	1.5	16-pin QFN 4 x 4 x 0.9
SKY13581-676LF	SPDT (A)	0.4-3.8	0.35-0.6	25-36	+66	+35	2.5	9-pin QFN 1.1 x 1.1 x 0.5
SKY13522-644LF	SPDT (A)	0.7-6.0	0.6-0.9	35-53	+57	+32	0.5	8-pin QFN 1.1 x 1.1 x 0.45

High Power Switches

Part Number	Description (Absorptive/ Reflective)	Frequency (GHz)	Typ. IL (dB)	Typ. Isol. (dB)	Typ. IIP3 (dBm)	Typ. IP0.1 dB (dBm)	Max. Tx Power (W)	Package (mm)
SKY12245-492LF	SPDT (R)	0.3-3.8	0.1-0.35	46-43	+86	+50	100	6-pin SC-70 2 x 1.25 x 0.9
SKY12247-492LF	SPDT (R)	3.4-3.8	0.3	40	+86	+50	100	12-pin QFN 2 x 2 x 0.55
SKY12210-478LF	SPDT (R)	0.9-3.4	0.4	44	+78	+49	100	16-pin QFN 4 x 4 x 1.5
SKY12207-478LF	SPDT (R)	0.9-4.0	0.4	42	+78	+47	50	16-pin QFN 4 x 4 x 1.5
SKY12248-492LF	SPDT (R)	2.6	0.3	40	-	+50.2	120	20-pin QFN 5 x 5 x 1.5

Switch LNA Modules

Part Number	Frequency (GHz)	Description	NF (dB)	Rx Isol. (dB)	Rx Gain (dB)	Tx IL (dB)	Tx Isol. (dB)	Max. Tx Power (W)	Package (mm)
SKY73217-31	3.4-3.8	SPDT + LNA	1.3	70	33	0.5	54	60	16-pin MCM 8 x 8 x 1.3
SKY73218-11	3.7-4.2	SPDT + LNA	1.3	70	33	0.5	-	60	16-pin MCM 8 x 8 x 1.3

Product Specifications

Limiters

Limiter Modules

Part Number	RF Test Freq. (GHz)	Typ. Insertion Loss (dB) Pin = 0 dBm	Typ. Return Loss (dB) Pin = 0 dBm	Typ. Threshold Level (dBm)	Max. Saturated Power (W)	Typ. Flat Leakage Power (dBm)	Package (mm)
SKY16601-555LF	0.50-6.0	0.1	27.5	+11	29	13 (Pin = +20 dBm)	2-pin MLP 2.5 x 2.5 x 0.75
SKY16602-632LF	0.90 2.45	0.3 0.5	14 25	+6 +5	30 23	6 (Pin = +10 dBm) 4 (Pin = +10 dBm)	DFN 2-pin 2.3 x 2.3 x 0.55
SKY16603-632LF	2.6	0.3	22	+8	30	9 (Pin = +15 dBm)	DFN 2-pin 2.3 x 2.3 x 0.55

Attenuators

Digital Step Attenuators

Part Number	Frequency (GHz)	Bits	LSB	P ₁ dB (dBm)	Attenuation (dB)	In Loss (dB)	IIP3 (dBm)	Package (mm)
SKY12408-321LF	0.05-0.6	2/P	6	+34	12	0.3	+49	12-pin QFN 3 x 3
SKY12407-321LF	0.05-0.60	2/P	12	+31	15	0.3	+48	12-pin QFN 3 x 3
SKY12355-337LF	0.35-4.0	2/P	6	+28	12	0.45-0.75	+47	12-pin QFN 3 x 3 x 0.75
SKY12349-362LF	0.7-4.0	5/S	0.5	+32	18	1.2-2.0	+42	24-pin QFN 4 x 4 x 0.9
SKY12348-350LF	0.1-3.0	4/P	1	+30	7	0.8-1.2	+45	16-pin QFN 3 x 3 x 0.75
SKY12345-362LF	0.7-4.0	5/S	0.5	+32	15.5	1.2-2.0	+42	24-pin QFN 4 x 4 x 0.9
SKY12343-364LF	0.01-4.0	7/P	0.25	+35	15.5	1.8-1.9	+50	32-pin QFN 5 x 5 x 0.9
SKY12340-364LF	0.3-2.0	5/S	0.5	+30	31	1.4-1.8	+45	32-pin QFN 5 x 5 x 0.9
SKY12329-350LF	0.4-4.0	5/P	1	+29	31	1.2-2.7	+39	16-pin QFN 3 x 3 x 0.75
SKY12325-350LF	0.5-6.0	3/P	1	+27	15.5	0.7-1.3	+47	16-pin QFN 3 x 3 x 0.75
AA116-72LF	LF-2.0	1/P	15	+20	31.75	0.35-0.4	+41	SOT-23 5L 2.8 x 2.9 x 1.18

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