



## Complete IP Portfolio-RFIC Solutions Inc.

### CMOS IPs

S.No.	IP Name	Description
<b>180nm Process</b>		
1	RIBPL01	Phase Locked Loop
2	RCLR01	Low Speed, low power Receiver IP for PHY
3	RCLTX01	Low Speed, low power Transmitter IP for PHY
4	RCRX01	High Speed Differential Signal Receiver IP for PHY
5	RCTX01	High Speed Differential Signal Transmitter IP for PHY
6	RFVGR03	Low Power Voltage Reference
7	RJLDO03	Low Dropout Voltage Regulator
8	RFPD01	Phase Frequency Detector
9	RIBFD01	0.1 to 1 GHz Frequency Divider
10	RG01	2.2 to 2.8 GHz Ring Oscillator



## RFCMOS IPs

## RFIPs

S.No.	IP Name	Description
<b>180nm Process</b>		
1	RTLNA01	2 to 4 GHz Low Noise Amplifier
2	RTDA01	2 to 5 GHz Driver Amplifier
<b>130nm Process</b>		
1	IRFLSI	802.5.14g Zigbee RF Transceiver
2	RLNTA12	900 MHz Transconductance Low Noise Amplifier
3	RTG12	900 MHz Tone Generator
4	RPA12C	900 MHz Power Amplifier
5	ROPAM01	900 MHz Op-Amp
6	RCBPF01	900 MHz Complex Band Pass Filter
7	RCTIA01	900 MHz Trans-Impedance Amplifier
8	RMIQ01	900 MHz Mixer
9	RPSBG12	900 MHz Band Gap Reference
10	RCS12	900 MHz LDO
11	RPCO26	900 MHz Crystal
12	RCPGA01	900 MHz Programmable Gain Amplifier
<b>65nm Process</b>		
1	RFTRWF01	2.4 GHz, IEEE802.11b/g Std RFCMOS Transceiver
2	RFWLNA5	5GHz Low Noise Amplifier
3	RFWPA6	5GHz Power Amplifier
4	RFWSW5	5GHz Switch
5	RFWPA24	2.4GHz Power Amplifier
6	RFWLNA25	2.4GHz Low Noise Amplifier
7	RFWSW24	2.4GHz Switch
8	RFPA13	60GHz Power Amplifier
9	RFEM12	2.4GHz Front End Module
10	RFEM13	5GHZ Front End Module
11	RTWiG1	60GHz RF Transceiver
12	RFVC13	30GHz Voltage Controlled Oscillator
13	RFLNA13G	60GHz Low Noise Amplifier
14	RFVCO13	60GHz Voltage Controlled Oscillator
15	RFM24	2.4GHz Mixer
16	RFM05	5GHz Mixer
17	RFDA13	Driver Amplifier



## Digital IPs

S.No.	IP Name	Description
<b>130nm Process</b>		
1	RPDA12	Low Power 5 -10Bit Frequency Divider
2	RPDB12	5 -10Bit Frequency Divider
3	RPDP12	Poly Phase 5 -10Bit Frequency Divider
4	RFIC DCI	Digital Core Interface
5	RAF13	Asynchronous FIFO
6	RSF13	Synchronous FIFO
7	SDER01	SerDes

## SiGe BiCMOS IPs

S.No.	IP Name	Description
<b>350nm Process</b>		
1	RJM01	1.6 to 3.0 GHz Gilbert cell Mixer
2	RS03	2 to 6 GHz Low Noise Amplifier
3	RCM01	1.5 to 3 GHz Mixer
<b>180nm Process</b>		
1	RJL01	1.5 to 1.7 GHz Low Noise Amplifier
2	RJL02	1.5 to 1.7 GHz Low Noise Amplifier
3	RJP01	1.920 to 1.980 GHz WCDMA Power Amplifier
4	RS01	1.7 to 2.7 GHz Low Noise Amplifier
5	RJP05	2.4 to 2.5 GHz WLAN Power Amplifier
6	RCL02	1.7 to 2.7 GHz Low Noise Amplifier
7	RJVC01	0.5 to 1.15 GHz Oscillator
8	RJVC02	2 to 6 GHz Oscillator



## InGaP HBT IPs

S.No.	IP Name	Description
2um InGaP HBT IPs		
1	GRFM1	10.0 to 20.0 GHz Frequency Multiplier
2	GRV03	14.0 to 21.0 GHz Negative Resistance Generator
3	GRV02	10.0 to 15.0 GHz Oscillator
4	GEV03	15.0 to 20.0 GHz Oscillator
5	GR01	14.0 to 16.0 GHz Oscillator
6	GEDA01	7.0 to 20.0 GHz Driver Amplifier
7	GEDA02	20.0 to 40.0 GHz Driver Amplifier
8	RPAW2	0.4 to 4 GHz Wideband Power Amplifier
9	GRDA1	10.0 to 20.0 GHz Driver Amplifier
10	GPA5GH	5 GHz Power Amplifier
11	RPW12	1 Watt Power Amplifier (900 MHz,2400 MHz,2700 MHz)
12	RPW12A	2 Watt Power Amplifier (900 MHz,2400 MHz,2700 MHz)
13	RPW12B	4 Watt Power Amplifier (900 MHz,2400 MHz,2700 MHz)
14	RWFPA	5 GHz WiFi Power Amplifier



## GaAs IPs

### 0.5um GaAs pHEMT process

S.No.	IP Name	Description
<b>Power Amplifier IPs</b>		
1	RGPA01	2.4 to 2.5 GHz High Efficiency MMIC Power Amplifier
2	RGPA03	3.4 to 3.6 GHz High Efficiency MMIC Power Amplifier
3	RGPA04	4.9 to 5.9 GHz High Efficiency MMIC Power Amplifier
4	RGPA06	2.4 to 2.5 GHz High Efficiency MMIC Power Amplifier
5	RPA11	2.4 to 2.5 GHz, 25dBm High Efficiency MMIC Power Amplifier
6	RPA11A	2.1 to 2.8 GHz High Efficiency MMIC Power Amplifier
7	RPA12	4.9 to 5.9 GHz High Efficiency MMIC Power Amplifier
8	RPA13	5 to 6 GHz High Efficiency MMIC Power Amplifier
9	RPA14	0.8 to 6 GHz High Efficiency MMIC Power Amplifier
10	RPA14A	1.7 to 2.1 GHz High Efficiency MMIC Power Amplifier
11	RPA14B	2.4 GHz, 21 dBm High Efficiency MMIC Power Amplifier
12	RPA14C	3.5 GHz, 22.5 dBm High Efficiency MMIC Power Amplifier
13	RPA14D	5 GHz , 22.5 dBm High Efficiency MMIC Power Amplifier
14	RPA15	2Watt, 0.8 to 0.96 GHz High Efficiency MMIC Power Amplifier
15	WFPA13	5GHz Power Amplifier

S.No.	IP Name	Description
<b>CATV Amplifier IPs</b>		
1	RTV01	40 - 870 MHz, 12V, CATV Amplifier
2	RTV01A	10 MHz to 1.2 GHz, 12V, CATV Amplifier
3	RTV01B	11 MHz to 1.2 GHz, 3.3/5V, CATV Amplifier
4	RTV12	40 - 870 MHz, 6V, 19 dB, CATV Amplifier

S.No.	IP Name	Description
<b>FEM Module</b>		
1	RFISFRT01	2.4GHz is a monolithic integrated transceiver front end suitable for 802.11b/g application
2	RFISFR01	RFISFR01 is a 2.5 to 2.7GHz RF front-end module that integrates band switching and is a transceiver front end designed for low voltage operation.



# RFIC Solutions, Inc.

RFIC Solutions, Inc. Proprietary Information

S.No.	IP Name	Description
<b>Driver Amplifier IPs</b>		
1	RGB01	700 MHz to 6.0 GHz Driver Amplifier
2	RGDA01	2.0 to 6.0 GHz Driver Amplifier
3	RDA01	2.0 to 4.0 GHz, 25 dBm, Driver Amplifier
4	RDA11	2.0 to 8.0 GHz, 17.5 dBm, Driver Amplifier
5	RDA11A	2.0 to 4.0 GHz, 25 dBm, Driver Amplifier
6	RDA11N	10 MHz to 10.0 GHz, 17.5 dBm, Driver Amplifier
7	RDA11NA	10 MHz to 10 GHz, 16 dBm, Driver Amplifier
8	RDA12	2.0 to 6.0 GHz, 16.8 dBm, Driver Amplifier
9	RDA12N	2.0 to 6.0 GHz, 19 dBm, Driver Amplifier
10	RDA12NA	2.0 to 6.0 GHz, 21 dBm, Driver Amplifier
11	RDA12NB	2.0 to 6.0 GHz, 11.5 dBm, Driver Amplifier
12	RDAHf01	8 to 16 GHz, 20 dBm, Driver Amplifier
13	RPA13B	Low distortion, 4.9 GHz to 6 GHz, Driver Amplifier
14	RDAT01	Tunable, 2.0 to 10.0 GHz, Driver Amplifier

S.No.	IP Name	Description
<b>Switch IPs</b>		
1	RSW01	2-6 GHz High Power SP2T Switch
2	RSW02	2-6 GHz High Power SP3T Switch
3	RSW11	10 MHz to 2GHz very low-cost transmit/receive switch.
4	WFSW05(5 GHz Switch)	5 GHz SPDT Switch
5	SWH01(5 GHz Switch)	5 GHz SPDT Switch
6	SWH02H(5 GHz Switch)	5 GHz SPDT Switch

S.No.	IP Name	Description
<b>Mixer IPs</b>		
1	RM11	12 dB Low Noise, 1 to 6 GHz, Gilbert Cell Down Conversion Mixer
2	RM11A	17 dB Low Noise, 1 to 6 GHz, Gilbert Cell Down Conversion Mixer
3	RM12	1.7 to 2.5 GHz; Low Noise Double Balanced Diode Mixer



S.No.	IP Name	Description
<b>AGC</b>		
1	RAGC01	2.0 to 8.0 GHz high efficiency Automatic Gain Control Amplifier with Gain Control Range of -16 dB to +18 dB
2	RAGC01N	0.4 to 6 GHz Gain Block with Gain Control

S.No.	IP Name	Description
<b>Low Noise Amplifier IPs</b>		
1	SIL01	Low Noise Amplifier With ESD Only
2	SIL02	Low Noise Amplifier Without ESD Protection Circuit
3	SIL03	Low Noise Amplifier With Temperature Compensation
4	RLN01	0.7 to 3 GHz Low Noise Amplifier
5	RLN02	2 to 6 GHz Low Noise Amplifier
6	RLN03	2 to 15 GHz Low Noise Amplifier
7	RLN04	2 to 6 GHz single Stage Low Noise Amplifier
8	RLN05	0.7 to 3 GHz Low Noise Amplifier
9	RLN06	2-6 GHz Tunable Broadband Low Noise Amplifier
10	RLN07	Low Noise Amplifier With Power Up Down Control System
11	RLNS01	LNA with BY Pass Switch
13	RGLNA01	0.7 to 3.0 GHz Low Noise Amplifier
14	RGLNA03	2.0 to 12.0 GHz Low Noise Amplifier
15	RGLNA02	2.0 to 6.0 GHz Low Noise Amplifier
16	RGLNA08	2.4 to 2.5 GHz high efficiency Low Noise Amplifier
17	RGLNA10	7.0-26.0 GHz; Distributed Amplifiers Low Noise
18	RGLNA11	2 to 6 GHz broadband Low Noise Amplifier
19	RLN23	0.4-4GHz Wideband Low Noise Amplifier
20	RLN24N	Broad Band 0.4 to 3 GHz Low Noise Amplifier
21	RLN24NA(High Gain)	Broad Band DC to 4 GHz Low Noise Amplifier
22	RLN24NB	0.5 GHz-1 GHz, Low Noise Amplifier
23	RLN24NC	Narrow Band 1 GHz- 2 GHz Low Noise Amplifier
24	RLN24NE	Broad Band 0.4 To 3.5 GHz Low Noise Amplifier
25	RLN24ND	0.4 GHz- 2 GHz Low Noise Amplifier
26	RLW01	1.7 to 2.5 GHz high linearity Low Noise Amplifier
27	RLW02	1.7-2.5GHz Low Noise Amplifier with High OIP3
28	RULN01	3.0 to 10.0 GHz Low Noise Amplifier
29	RLN301	4.8 to 6 GHz Low Noise Amplifier
30	RLGPS01	1.5 – 1.625 GHz narrow band Low Noise Amplifier with Bypass Switch



## GaAs IPs

### GaAs pHEMT PS50\_70 process

S.No.	IP Name	Description
<b>Power Amplifier IPs</b>		
1	RNP1W	10 to 12 GHz Power Amplifier
2	RPDW01	2.4-5GHz NarrowBand Power Amplifier with Detector

S.No.	IP Name	Description
<b>Low Noise Amplifier IPs</b>		
1	RLD11	2.4 to 5GHz Low Noise Amplifier with Detector
2	RSL01	2 to 6GHz Low Noise Amplifier with Detector
4	RGLNA10	7 to 26 GHz Low Noise Distributed Amplifiers

S.No.	IP Name	Description
<b>Driver Amplifier IPs</b>		
1	RDB01	2 to 6GHz Driver Amplifier

S.No.	IP Name	Description
<b>Switch IPs</b>		
1	RSDP11	2.4-2.5GHz and 4.9-6GHz DPDT Switch
2	RS12	0.5-6GHz SPDT Switch with series topology
3	RSH12A	0.5-6GHz SPDT Switch with series shunt topology
5	MS11	0.5 to 6GHz Switch with series topology
6	MSH11	0.5 to 6GHz Switch with series-shunt topology
7	MSN11	0.5 to 6GHz Switch with series topology having Build in Resistor
8	MSHN11	0.5 to 6GHz Switch with series-shunt topology having Build in Resistor