



RFHIC Products For Quality & Value Performance!

Introduction

RFHIC is a manufacturer of components and subassemblies primarily for the RF & CATV markets and Microwave wireless. All RFHIC products developed are manufactured in our facility, which means Die Attach, Wire bonding, Packaging, Chip on Board, Hybrid, SMT Line, RF Test Line, and Quality Control are being done in RFHIC building. We value our One Stop facilities to accommodate high quality control, high reliability, and cost cutting technology along with the mass production ability of various high frequency components that are used in wired and wireless telecommunication system and its Base stations, Repeaters, Cable Network and Test Equipment for Infrastructure. RFHIC and its employees strive hard to become the world class leader in the wired and wireless communication industry in the 21st Century by investing in the growth of company and its future.



ISO 9001 / 14001 : 2004



New Technology



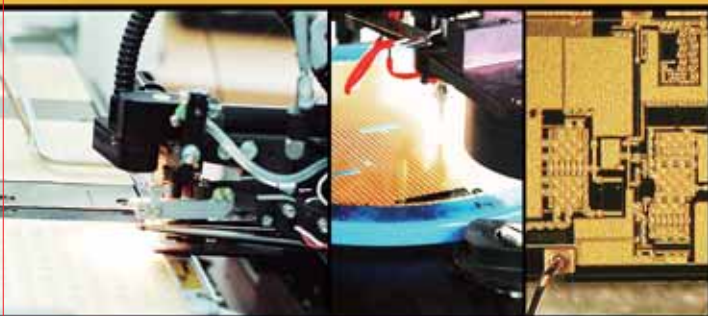
KAB
KAB-OC-26



Reliability

2007 AUTUMN

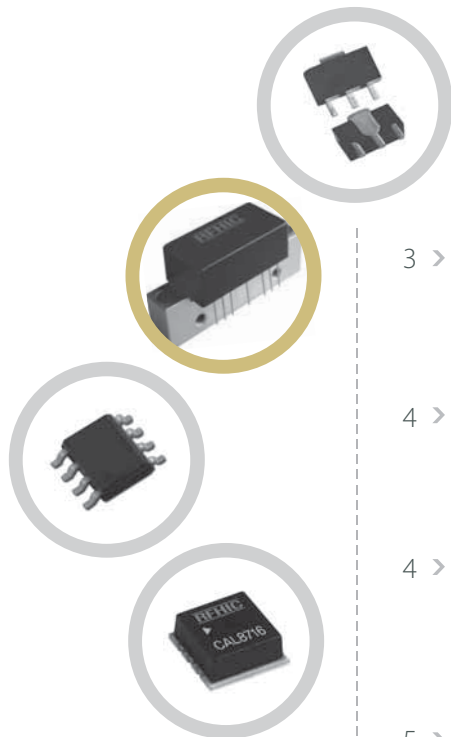
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CATV · DIGITAL TV BROADBAND AMPLIFIER

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3 > Cable TV Line Amplifier

24V Power Doubler (870MHz)

24V Push-Pull (870MHz)

24V Power Doubler (1000MHz)

4 > 24V Push Pull (1000MHz)

12V Power Doubler

12V Push-Pull

4 > GaN Cable TV Line Amplifier

24V Power Doubler (1000MHz)

24V Push-Pull (1000MHz)

5 > MMIC (75Ω)

5 > Wideband Amplifier

5 > High Power Wideband Amplifier

6 > Passive Filter

7 > CATV Low Noise Amplifier

8 > Band Switch Filter (75Ω)

**2007 AUTUMN
CATV · DIGITAL TV
BROADBAND AMPLIFIER**

Manufacturer of high frequency components
for wired & wireless telecommunication



RoHS Compliant

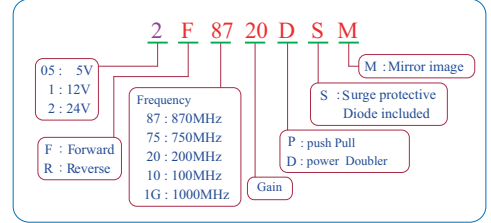
RFHIC warrants and truly realizes the RoHS regulations, and does not use hazardous substances such as lead, cadmium, mercury, hexavalent chromium, brominated flame retardants for all the RFHIC parts in this catalog.

CATV & DTV Broadband Amplifier

» Cable TV Line Amplifier

Product Features

- GaAs MMIC
- Very Low Distortion
- Guaranteed Broadband Power Gain
- Excellent Thermal Conductivity
- Single Supply Voltage @ 24V or 12V
- Heatsink 99.9% Copper, Ag or Gold Plate
- Internal TVS
- No External Circuits Needed



Applications

- CATV Trunk Amplifier
- Optical Drive Amplifier

24V Power Doubler (870MHz)

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|-------------|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
| 2F7522D | 45 ~ 750 | 22 | -17 | 110@48 | -61 | -64 | -62 | 5 | 400 |
| 2F8718DS | 45 ~ 870 | 18 | -18 | 135@44 | -65 | -70 | -66 | 7 | 400 |
| 2F8719DS | 45 ~ 870 | 19 | -18 | 135@44 | -65 | -70 | -66 | 6 | 400 |
| 2F8720DS | 45 ~ 870 | 20 | -18 | 135@48 | -60 | -63 | -60 | 5.5 | 400 |
| 2F8720DSM | 45 ~ 870 | 20 | -18 | 135@48 | -60 | -63 | -60 | 5.5 | 400 |
| 2F8722D | 45 ~ 870 | 22 | -16 | 135@48 | -58 | -60 | -60 | 5 | 400 |
| 2F8722DS | 45 ~ 870 | 22 | -18 | 135@48 | -61 | -65 | -60 | 5 | 400 |
| 2F8722DSM | 45 ~ 870 | 22 | -18 | 135@48 | -61 | -65 | -60 | 5 | 400 |
| 2F8725D | 45 ~ 870 | 25 | -16 | 135@48 | -62 | -64 | -62 | 3.5 | 400 |
| 2F8727D | 45 ~ 870 | 27 | -16 | 135@48 | -62 | -64 | -62 | 3.6 | 400 |
| 2F8729D | 45 ~ 870 | 29 | -16 | 135@48 | -58 | -57 | -60 | 3.5 | 400 |

24V Push-Pull (870MHz)

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|-------------|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
| 2F7523P | 45 ~ 750 | 23 | -17 | 110@40 | -68 | -66 | -61 | 4.7 | 220 |
| 2F8718P | 45 ~ 870 | 18 | -16 | 135@40 | -60 | -62 | -55 | 5.5 | 220 |
| 2F8720P | 45 ~ 870 | 20 | -16 | 135@40 | -66 | -66 | -59 | 5.5 | 220 |
| 2F8723P | 45 ~ 870 | 23 | -16 | 135@40 | -65 | -66 | -60 | 4.7 | 220 |
| 2F8725P | 45 ~ 870 | 25 | -16 | 135@40 | -63 | -62 | -61 | 3.5 | 300 |
| 2F8727P | 45 ~ 870 | 27 | -16 | 135@40 | -63 | -62 | -61 | 3.6 | 300 |
| 2F8734P | 45 ~ 870 | 34 | -16 | 135@45 | -60 | -56 | -60 | 3.3 | 400 |

24V Power Doubler (1000MHz)

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|-------------|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
| 2F1G20DS | 45 ~ 1000 | 20 | -16 | 79@52 | -65 | -63 | -68 | 5.5 | 400 |
| 2F1G22DS | 45 ~ 1000 | 22 | -16 | 79@52 | -68 | -70 | -68 | 5 | 400 |
| 2F1G24D | 45 ~ 1000 | 24 | -16 | 79@52 | -70 | -66 | -68 | 4.5 | 400 |

◀ Test Condition : 79 Channel, NTSC frequency raster : 55.25MHz to 547.25MHz, +45dBmV to +52dBmV tilted.

24V Push Pull (1000MHz)

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|-------------|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
| 2F1G18P | 45 ~ 1000 | 18 | -15 | 135@40 | -59 | -60 | -57 | 5.5 | 220 |
| 2F1G20P | 45 ~ 1000 | 20 | -16 | 135@40 | -60 | -64 | -63 | 5.5 | 220 |
| 2F1G23P | 45 ~ 1000 | 23 | -16 | 135@40 | -65 | -67 | -66 | 4.7 | 220 |
| 2F1G27P | 45 ~ 1000 | 27 | -16 | 135@40 | -66 | -70 | -66 | 4.5 | 310 |

12V Power Doubler

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|-------------|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
| 1F8719D | 50 ~ 870 | 19 | -16 | 135@44 | -63 | -63 | -63 | 6 | 560 |

12V Push-Pull

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|-------------|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
| 1F8734P | 50 ~ 870 | 34 | -16 | 135@44 | -58 | -58 | -60 | 4.5 | 580 |
| 1F7534P | 50 ~ 750 | 34 | -16 | 110@44 | -60 | -62 | -62 | 4.5 | 580 |
| | 50 ~ 750 | 34 | -16 | 79@46 | -61 | -62 | -61 | 4.5 | 580 |
| 1F8719P | 50 ~ 870 | 19 | -16 | 135@40 | -65 | -65 | -62 | 5.5 | 360 |

» GaN Cable TV Line Amplifier**Product Features**

- GaN HEMT
- High Breakdown Voltage
- High Power, P1dB 4W
- Low Noise Figure

Applications

- CATV Trunk Amplifier
- Optical Drive Amplifier

24V Power Doubler (1000MHz)

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|--|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
|  3F1G20DG | 50 ~ 1000 | 20 | -16 | 79 @52/10dB Tilt | -62 | -60 | -60 | 3 | 500 |

24V Push Pull (1000MHz)

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (min)(dB) | CH@Vo (Flat)(dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) |
|--|-----------------|-----------------|-----------------------|--------------------|----------------------|-----|-----|------------------------|-------------------|
| | | | | | CTB | CSO | XMD | | |
|  3F1G20PG | 50 ~ 1000 | 20 | -16 | 79 @44/10dB Tilt | -62 | -62 | -62 | 3 | 220 |

 : Under Development

CATV & DTV Broadband Amplifier

» MMIC (75Ω)

Product Features

- GaAs MMIC
- High IP3
- Lower Noise Figure

Application

- CATV Amplifier
- Satellite Transceiver Application
- Repeater
- Base Station



SOT-89

SOIC-8

| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (dB) | CH@Vo (dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) | Package |
|-------------|-----------------|-----------------|------------------|--------------|----------------------|-----|-----|------------------------|-------------------|---------|
| | | | | | CTB | CSO | XMD | | | |
| AP112 | 3 ~ 2500 | 18 | -12 | 135@30 | -67 | -53 | -65 | 3.5 | 110 | SOT-89 |
| AP230 | 3 ~ 1000 | 15 | -11 | 135@37 | -60 | -63 | -55 | 4 | 220 | SOIC-8 |
| AP2301 | 30 ~ 2000 | 15 | -10 | 135@37 | -60 | -63 | -55 | 4.5 | 220 | SP-12 |
| AP211 | 30 ~ 870 | 12 | -6.5 | 135@40 | -70 | -63 | -53 | 2.5 | 205 | SOIC-8 |
| AP201 | 30 ~ 870 | 12 | -8 | 135@30 | -72 | -50 | -80 | 2.5 | 120 | SOT-89 |
| AP222 | 30 ~ 870 | 12 | -11 | 135@40 | -52 | -55 | -52 | 4.5 | 220 | SOIC-8 |
| AE308 | 50 ~ 1000 | 22 | -15 | 135@16 | -64 | -58 | -67 | 2 | 55 | SOT-89 |

: Under Development

» Wideband Amplifier



DP-27

44.4 x 20 x 13.5 mm

| Part Number | Frequency (MHz) | Gain (dB) | N.F (Typ.)(dB) | P1dB (Typ.)(dBm) | OIP3 (Typ.)(dBm) | Vd (V) | Id (Typ.)(mA) | Package |
|--------------|-----------------|-----------|----------------|------------------|------------------|--------|---------------|---------|
| RFC041 | 400 ~ 800 | 19 | 7.5 | 30 | 47 | 12 | 550 | DP-27 |
| RFC042 | 400 ~ 800 | 23 | 4 | 30 | 50 | 24 | 400 | |
| RFC091 | 800 ~ 1000 | 20 | 7 | 29 | 45 | 12 | 550 | |
| RFC092 | 800 ~ 1000 | 23 | 5 | 30 | 50 | 24 | 400 | |
| 1F5500 | 5 ~ 500 | 19 | 6.5 | 31 | 49 | 12 | 500 | |
| RFC1G19-12 | 5 ~ 1000 | 19 | 7 | 30 | 46 | 12 | 500 | |
| RFC1G22-24 | 20 ~ 1000 | 22 | 3.5 | 30 | 50 | 24 | 400 | |
| RFC1G30-24 | 20 ~ 1000 | 30 | 3.3 | 30 | 46 | 24 | 400 | |
| RFC1G18H4-12 | 20 ~ 1000 | 19 | 3 | 33 | 43 | 12 | 700 | |
| RFC1G18H4-24 | 20 ~ 1000 | 19 | 3 | 36 | 46 | 24 | 700 | |
| RFC3020H4-12 | 100 ~ 300 | 20 | 4 | 35 | 46 | 12 | 700 | |

◀ Test Condition : 800MHz, 20 dBm each tone : GaN Power Transistor

» High Power Wideband Amplifier



DP-75

70 x 51 x 16 mm

| Part Number | Frequency (MHz) | Gain (dB) | Return Loss (dB) | P3dB (dBm) | OIP3 (dBm) | Voltage (V) | Current (A) | Package |
|---------------|-----------------|-----------|------------------|------------|------------|-------------|-------------|---------|
| RFW2500H10-28 | 20 ~ 2500 | 13 | - | 36 | 41 | 28 | 0.9 | DP-75 |
| RFW7735H20-28 | 450 ~ 770 | 33 | -15 / -15 | 43 | 48 | 28 | 1.9 | |
| RFW1G35H20-28 | 20 ~ 1000 | 33 | -10 / -5 | 41 | 47 | 28 | 1.8 | |
| RFW5035H40-28 | 20 ~ 500 | 35 | -8 / -2 | 45 | 51 | 28 | 3.1 | |
| RFW8835H40-28 | 450 ~ 880 | 33 | -13 / -8 | 45 | 51 | 28 | 3.1 | |
| RFW1G33H40-28 | 20 ~ 1000 | 32 | -6 / -2 | 44 | 48 | 28 | 3.1 | |

» **PASSIVE FILTER**

Product Features

- SOT-89 Type Packages
- Passive Integration on Silicon
- Small Size
- High Power Handling
- Low Cost

Application

- Digital TV
- Sub-Systems
- CATV Set Top Box
- CATV Trunk Amp.



| Part Number | Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) | Handling Power (W) | Rejection (dB) | Impedance (Ω) | Package |
|-------------|-----------------|---------------------|------------------|--------------------|----------------|---------------|-------------------|
| Up BWF870 | 270 ~ 470 | 0.9 | 13 | 2 | -35 | 75 | BGA Type (3 in 1) |
| | 470 | 1.9 | 12 | 2 | -20 | 75 | |
| | 470 | 1 | 10 | 2 | -20 | 75 | |
| LPF708 | 870 | 0.5 | 11 | 5 | -40 | 75 | SOT-89 |
| LPF722 | 2200 | 0.5 | 12 | 5 | -25 | 75 | SOT-89 |

Up : Under Development

» **CATV LOW NOISE AMPLIFIER**

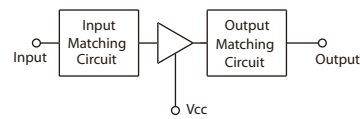
Product Features

- GaAs p-HEMT Chip On Board
- No Matching Circuit Needed
- High IP3
- Good Gain Flatness
- Hybrid Amplifier
- Small Size
- SMD Type

Application

- Distribution / Drop Amplifiers
- Digital TV
- Digital Set Top Box
- TV Antenna

Functional Diagram



| Part Number | Frequency (MHz) | Power Gain (dB) | Return Loss (dB) | CH@Vo (dBmV) | Distortion (typical) | | | Noise Figure (dB)(typ) | Current (mA)(typ) | Package |
|-------------|-----------------|-----------------|------------------|--------------|----------------------|-----|-----|------------------------|-------------------|---------|
| | | | | | CTB | CSO | XMD | | | |
| CAL8716 | 50 ~ 870 | 18 | -8/3.5 | 110@25 | -65 | -60 | -80 | 1.5 | 155 | CP-16 |
| CAL1G20 | 50 ~ 1000 | 20 | -12 | 110@15 | -60 | -54 | -68 | 1.8 | 40 | CP-16 |

» **BAND SWITCH FILTER (75Ω)**

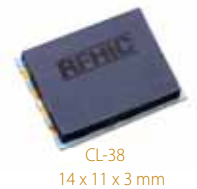
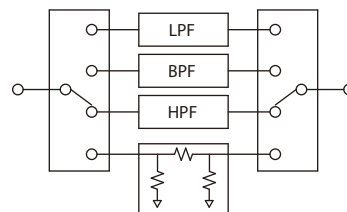
Product Features

- MCM Sub-Module
- High Dynamic Range
- Digital Control
- Low Insertion Loss
- Low Current
- Chip On Board
- Low Cost

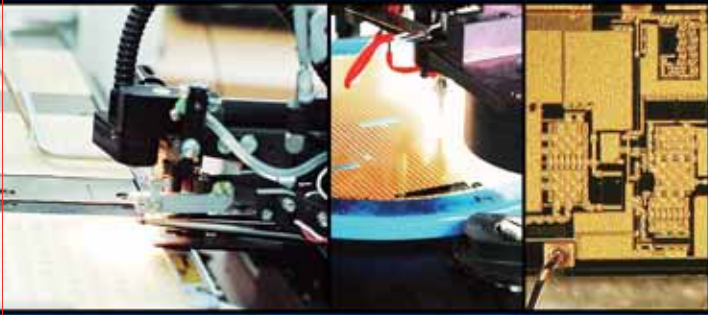
Applications

- Tuner
- Digital TV
- DVD
- Trunk Amp.
- Camcorder
- Broadband System Set Top Box

Functional Diagram

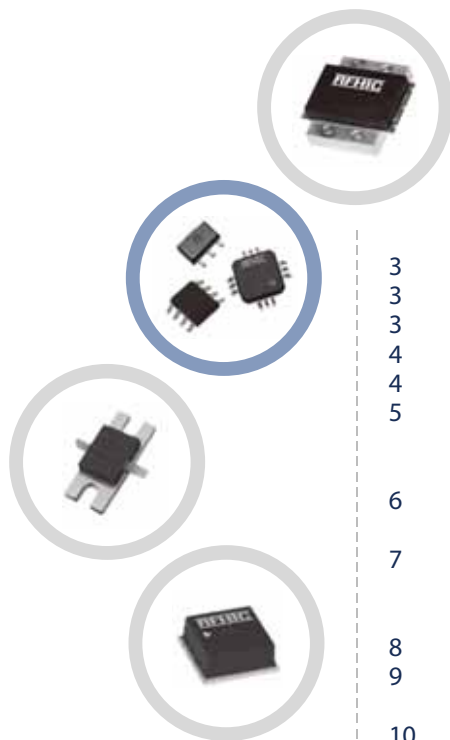


| Part Number | Frequency (MHz) | Output Freq. (MHz) | Insertion Loss (dB) | OIP3 (dBm) | RF Input Power (W) | Digital On/Off (V) | Current (mA) | Package (mm) |
|-------------|-----------------|--------------------|---------------------|------------|--------------------|--------------------|--------------|--------------|
| SF8700 | 45~870 | 45~270 | -1 ~ -30 | 65 | 10 | 3~5 / 0 | 0 | CL-38 |



RF HYBRID COMPONENT

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2007 AUTUMN RF Hybrid Component

Manufacturer of high frequency components
for wired & wireless telecommunication

- 3 > MMIC
- 3 > E-pHEMT
- 3 > Variable Attenuator
- 4 > Power Transistor
- 4 > Wideband Amplifier
- 5 > Low Noise Amplifier
 - GaAs p-HEMT LNA
 - Gain Block Amplifier
- 6 > Wideband LNA
 - MCM Linear LNA
- 7 > Drive Amplifier
 - E-pHEMT
 - Linear Amplifier
 - MCM Linear Amplifier
- 8 > PLL Synthesizer
 - Variable Type
 - Fixed Type (ROM Included)
 - Variable Type (TCXO Included)
 - Fixed Type (ROM & TCXO Included)
 - Fixed Type (ROM & Divider Included)
- 12 > Hybrid Up-Down Converter with PLL
 - Frequency Up / Down Converter
 - Hybrid Up-Down Converter with PLL & ROM
- 13 > Mixer
 - Active Up / Down Mixer , Passive Mixer
- 14 -15 > Power Amplifier
 - M, A, T, N, W Series
- 15 > GaN Pallet High Power Amplifier
- 15 > GaN Pallet Wideband Amplifier
- 16 > 2Way Power Divider
- 16 > Directional Coupler
- 16 > MCM Passive Filter
- 16 > Band Switch Filter (75Ω)



RFHIC Green Mark

RFHIC warrants and truly realizes the RoHS regulations, and does not use hazardous substances such as lead, cadmium, mercury, hexavalent chromium, brominated flame retardants for all the RFHIC parts in this catalog.

RF Hybrid Component

» MMIC



| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Voltage (V) | Current (mA) | Package |
|-------------|-----------------|-----------|----------|------------|------------|-------------|--------------|---------|
| AP112 | 50 ~ 2200 | 17.6 | 3.4 | 19.8 | 35 | 5 | 100 | SOT-89 |
| | | 17.3 | 3.1 | 17.5 | 30 | 4.5 | 45 | |
| AP201 | 50 ~ 1000 | 14 | 2.5 | 21 | 40 | 6 | 115 | |
| AP205A | 50 ~ 3500 | 14 | 2.3 | 22 | 43 | 5 | 115 | |
| AP209 | 50 ~ 3500 | 13.5 | 2.5 | 24 | 43 | 9 | 120 | |
| AP211 | 50 ~ 3000 | 13 | 2.5 | 24 | 42 | 5 | 240 | SOIC-8 |
| AP222 | 50 ~ 3000 | 13 | 2.8 | 26 | 43 | 9 | 240 | |
| AP230 | 50 ~ 2000 | 17.4 | 3.3 | 21 | 38 | 5 | 220 | |
| AP245 | 50 ~ 3000 | 27 | 2.5 | 21 | 42 | 5 | 240 | |
| AP249 | 50 ~ 3500 | 28 | 2.5 | 24 | 43 | 9 | 240 | |
| AP409 | 50 ~ 3500 | 15.5 | 5 | 18.8 | 33.5 | 5 | 70 | SOT-89 |
| | | 15.3 | 5.1 | 18 | 30 | 4.8 | 65 | |
| | | 15.2 | 5.1 | 16.5 | 27 | 4.5 | 52 | |
| AP410 | 50 ~ 3500 | 19.5 | 5.5 | 20 | 35 | 5 | 85 | |
| | | 19 | 5.4 | 18.7 | 31.5 | 4.8 | 64 | |
| | | 18.5 | 5.3 | 16.7 | 26.7 | 4.5 | 50 | |

◀ Test Condition : @ 900 MHz

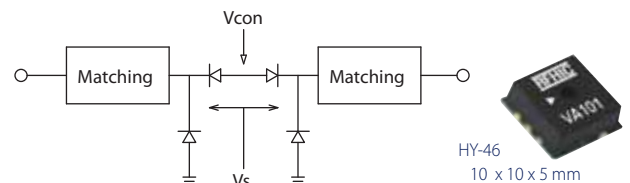
» E-pHEMT



| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Voltage (V) | Current (mA) | Package |
|-------------|-----------------|--------------|----------|------------|------------|-------------|--------------|---------|
| AE308 | 50 ~ 1000 | 22@1000MHz | 2 | 17 | 28 | 5 | 55 | SOT-89 |
| AE608 | 10 ~ 4000 | 19.5@50MHz | 1 | 13 | 25 | 2.5 | 25 | SOT-143 |
| | | 13.5@2100MHz | 0.7 | 14 | 32 | 3 | 45 | |
| AE616 | 500 ~ 4000 | 20@900MHz | 2.7 | 23 | 37 | 5 | 85 | SOT-89 |
| | | 14.5@2100MHz | 1.7 | 24 | 39 | 5 | 85 | |
| AE663 | 500 ~ 4000 | 19.5@900MHz | 3 | 28 | 41 | 5 | 180 | SOT-89 |
| | | 12@2100MHz | 2.5 | 28 | 42 | 5 | 180 | |

» Variable Attenuator

- High Linearity
- Single Voltage with Low Cost



| Part Number | Frequency (MHz) | Insertion Loss (dB) | Atten. Range (dB) | Return Loss (dB) | Flatness (dB) | Vdd (V) | Vctl (V) | Current (mA) |
|-------------|-----------------|---------------------|-------------------|------------------|---------------|---------|----------|--------------|
| VA101 | 50 ~ 3000 | 3 | 30@1~2GHz | -15 | ±0.5 | 5 | 0 ~ 10 | 40 (max) |
| VA102 | 100 ~ 3000 | 2 | 27@1~2GHz | -15 | ±0.5 | 3 | 0 ~ 12 | 34 (max) |
| | 100 ~ 3000 | 3 | 27@1~2GHz | -15 | ±0.5 | 3 | 0 ~ 4.5 | 10 (max) |
| VA103 | 3000 ~ 4000 | 2.2 | 17@3.5GHz | -16 | ±0.5 | 3 | 0 ~ 10 | 30 (max) |

Innovation is everything. Creative RF Leadership.

> Power Transistor

- High Output Power
- High Efficiency
- High Power Gain
- High Linearity



| Part Number | Frequency (MHz) | Gain (dB) | P _{3dB} (dBm) | OIP3 (dBm) | Supply Voltage (V) | I _{dq} (A) | Package |
|-----------------------|-----------------|-----------|------------------------|------------|--------------------|---------------------|----------------|
| RT230PD | 300 ~ 6000 | 15 | 33 (P ₁) | 48 | 9, -1.2 | 0.5 | SP-12 |
| RT550PD | 300 ~ 4000 | 12 | 39 (P ₁) | 51 | 9 / -1.5 | 1.5 | WP-22 |
| RT232 | 50 ~ 6000 | 15 | 35 | 42 | 28 / -1.2 | 0.1 | SP-12 |
| RT233 | 50 ~ 6000 | 16 | 36 | 43 | 28 / -1 | 0.1 | WP-22, WP-22EL |
| RT240J | 50 ~ 6000 | 14 | 43 | 50 | 28 / -1.3 | 0.3 | WP-22, WP-22EL |
| RT243 | 50 ~ 4000 | 12 | 45 | 52 | 28 / -1.3 | 0.6 | WP-12 |
| Push Pull Type | | | | | | | |
| RT433 | 50 ~ 6000 | 15.5 | 38 | 45 | 28 / -1.0 | 0.2 | SP-12 |
| RT440 | 50 ~ 6000 | 13.5 | 45 | 52 | 28 / -1.3 | 0.6 | WP-14 |
| RT443 | 50 ~ 4000 | 11.5 | 47 | 54 | 28 / -1.3 | 1.2 | WP-14 |

★ Test Condition : @ 2GHz

> Wideband Amplifier

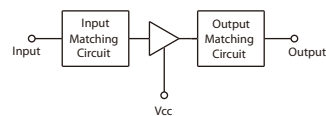
| Part Number | Frequency (MHz) | Gain (dB) | N.F (Typ.)(dB) | P1dB (Typ.)(dBm) | OIP3 (Typ.)(dBm) | V _d (V) | I _d (Typ.)(mA) | Package |
|--------------|-----------------|-----------|----------------|------------------|------------------|--------------------|---------------------------|---------|
| RFC041 | 400 ~ 800 | 19 | 7.5 | 30 | 47 | 12 | 550 | DP-27 |
| RFC042 | 400 ~ 800 | 23 | 4 | 30 | 50 | 24 | 400 | |
| RFC091 | 800 ~ 1000 | 20 | 7 | 29 | 45 | 12 | 550 | |
| RFC092 | 800 ~ 1000 | 23 | 5 | 30 | 50 | 24 | 400 | |
| 1F5500 | 5 ~ 500 | 19 | 6.5 | 31 | 49 | 12 | 500 | |
| RFC1G19-12 | 5 ~ 1000 | 19 | 7 | 30 | 46 | 12 | 500 | |
| RFC1G22-24 | 20 ~ 1000 | 22 | 3.5 | 30 | 50 | 24 | 400 | |
| RFC1G30-24 | 20 ~ 1000 | 30 | 3.3 | 30 | 46 | 24 | 400 | |
| RFC1G18H4-12 | 20 ~ 1000 | 19 | 3 | 33 | 43 | 12 | 700 | |
| RFC1G18H4-24 | 20 ~ 1000 | 19 | 3 | 36 | 46 | 24 | 700 | |
| RFC3020H4-12 | 100 ~ 300 | 20 | 4 | 35 | 46 | 12 | 700 | |

★ Test Condition : 800MHz, 20 dBm each tone : Under Development : GaN Power Transistor

> Low Noise Amplifier

- High IP3, Small Size
- Single Supply Voltage (5V) with Ceramic Substrate
- Surface Mount Hybrid on Tape & Reel

No Additional Parts Needed
 No Additional Matching Needed
 No Additional Testing Needed
 High Maximum Input Power
 Custom Design Available



CP-16A
10.2 x 10.2 x 4 mm

> GaAs p-HEMT LNA

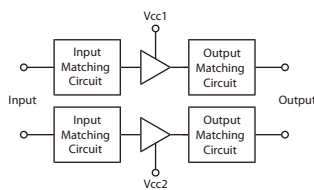
CL series : Low Noise Amplifier

| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Id (mA) | MAX Input Power (dBm) | Package |
|-------------|-----------------|-----------|----------|------------|------------|---------|-----------------------|---------|
| CL0901 | 800 ~ 894 | 19 | 0.5 | 14 | 27 | 65 | 25 | CP-16A |
| | 890 ~ 960 | 18 | 0.5 | 14 | 27 | 65 | 25 | |
| CL0902 | 824 ~ 894 | 20.5 | 0.7 | 20 | 31 | 100 | 25 | |
| | 890 ~ 960 | 20 | 0.7 | 20 | 31 | 100 | 25 | |
| CL1501 | 1400 ~ 1600 | 16 | 0.7 | 15 | 27 | 45 | 25 | |
| CL1502 | 1400 ~ 1600 | 17 | 0.6 | 21 | 33 | 90 | 25 | |
| CL1801 | 1700 ~ 2000 | 15.5 | 0.6 | 16 | 27 | 45 | 25 | |
| CL1802 | 1700 ~ 2000 | 16 | 0.6 | 21 | 33 | 100 | 25 | |
| CL2101 | 1850 ~ 2200 | 14 | 0.7 | 16 | 27 | 45 | 25 | |
| CL2102 | 1850 ~ 2200 | 15 | 0.6 | 20 | 33 | 100 | 25 | |
| CL2701 | 2300 ~ 2700 | 12 | 0.9 | 16 | 28 | 45 | 25 | |
| CL2702 | 2300 ~ 2700 | 12.5 | 0.8 | 20 | 33 | 100 | 25 | |
| CL3501 | 3400 ~ 3600 | 10 | 0.9 | 15 | 32 | 45 | 25 | |
| CL3502 | 3300 ~ 3600 | 10.5 | 1 | 21 | 36 | 100 | 25 | |
| CL1802D | 1700 ~ 2200 | 15 | 0.7 | 20 | 33 | 100 | 30 | |
| CL2102D | 2200 ~ 2700 | 13 | 0.8 | 20 | 33 | 100 | 30 | |

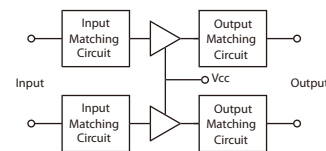
: Under Development

BL Series

BL series : Balanced LNA



Dual-bias Type (CP-18)



Single-bias Type (CP-16C)

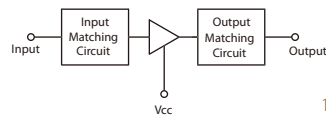


CP-16C
10.2 x 10.2 x 4 mm

| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Id (mA) | MAX Input Power (dBm) | Package |
|-------------|-----------------|-----------|----------|------------|------------|---------|-----------------------|---------|
| BL0902D | 700 ~ 1000 | 20 | 0.8 | 23 | 33 | 200 | 25 | CP-18 |
| BL0902S | | | | | | | | CP-16C |
| BL1802D | 1700 ~ 2200 | 16 | 0.7 | 24 | 35 | 200 | 25 | CP-18 |
| BL1802S | | | | | | | | CP-16c |

> Gain Block Amplifier

GB series : Low Noise Gain Block

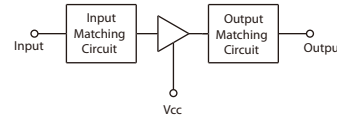


CP-16A
10.2 x 10.2 x 4 mm

| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Vd (V) | Id (mA) | Package |
|-------------|-----------------|-----------|----------|------------|------------|--------|---------|---------|
| GB0108 | 60 ~ 400 | 20 | 1.9 | 19 | 31 | 5 | 100 | CP-16A |
| GB0115 | 60 ~ 400 | 20 | 1.9 | 21 | 34 | 5 | 160 | |
| GB0408 | 400 ~ 800 | 18 | 1.4 | 19 | 32 | 5 | 100 | |
| GB0415 | 400 ~ 800 | 18 | 1.3 | 21 | 34 | 5 | 160 | |
| GB0908 | 824 ~ 960 | 18 | 1 | 20 | 32 | 5 | 90 | |
| GB0915 | 824 ~ 960 | 18.5 | 1 | 20 | 35 | 5 | 160 | |
| GB1808 | 1750 ~ 1870 | 14.5 | 1.1 | 20 | 33 | 5 | 90 | |
| GB1815 | 1750 ~ 1870 | 15 | 1.2 | 21.5 | 36 | 5 | 160 | |
| GB2108 | 1400 ~ 2000 | 15.5 | 1.2 | 20 | 33 | 5 | 90 | |
| GB2115 | 1400 ~ 2000 | 16 | 1.3 | 21.5 | 36 | 5 | 160 | |

> **Wideband LNA**

WL series : Wideband Low Noise Amplifier



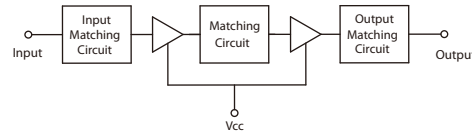
CP-16A
10.2 x 10.2 x 4 mm



| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Id (mA) | MAX Input Power (dBm) | Package |
|-------------|-----------------|-----------|----------|------------|------------|---------|-----------------------|---------|
| WL1008 | 50 ~ 1000 | 16 | 1.5 | 19 | 31 | 100 | 25 | CP-16A |
| WL1015 | 50 ~ 1000 | 16 | 1.7 | 21 | 35 | 160 | 25 | |
| WL2208 | 50 ~ 2200 | 15 | 1.5 | 20 | 31 | 100 | 25 | |
| WL2215 | 50 ~ 2200 | 15 | 1.7 | 21 | 35 | 160 | 25 | |

> **MCM Linear LNA**

LCL series : Low Noise Amplifier with high OIP3



CP-16B
10.2 x 10.2 x 4 mm



| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Id (mA) | MAX Input Power (dBm) | Package |
|-------------|-----------------|-----------|-----------|------------|------------|-----------|-----------------------|---------|
| LCL0402 | 380 ~ 520 | 33.5 | 1.2 | 21 | 40 | 150 ~ 190 | 25 | CP-16B |
| LCL0902 | 800 ~ 894 | 33.5 | 0.9 | 21 | 36 | 150 ~ 190 | 25 | |
| | 890 ~ 960 | 33 | 0.8 | 21 | 36 | 150 ~ 190 | 25 | |
| LCL0912 | 800 ~ 894 | 35 | 0.8 | 21 | 42 | 180 ~ 240 | 20 | |
| | 890 ~ 960 | 34.5 | 0.7 | 21 | 42 | 180 ~ 240 | 20 | |
| LCL1502 | 1300 ~ 1850 | 28 | 0.8 | 21 | 35 | 150 ~ 190 | 25 | |
| LCL1503 | 1400 ~ 1600 | 32 | 0.9 | 16 | 30 | 90 ~ 120 | 25 | |
| LCL1512 | 1400 ~ 1600 | 29 | 0.8 | 21 | 42 | 180 ~ 240 | 20 | |
| LCL1802 | 1750 ~ 1870 | 27.5 | 0.9 | 21 | 35 | 150 ~ 190 | 25 | |
| LCL1803 | 1750 ~ 1870 | 31.7 | 1 | 18 | 30 | 90 ~ 120 | 25 | |
| LCL1812 | 1750 ~ 1870 | 28 | 0.8 | 21 | 42 | 180 ~ 240 | 20 | |
| LCL1902 | 1920 ~ 1980 | 24.5 | 0.8 | 20 | 35 | 150 ~ 190 | 25 | |
| LCL1903 | 1920 ~ 1980 | 30 | 0.9 | 18 | 29.5 | 90 ~ 120 | 25 | |
| LCL1904 | 1700 ~ 1900 | 34 | 1 | 18 | 33 | 110 ~ 150 | 25 | |
| | 1900 ~ 2200 | 32 | 1 | 19 | 34 | 110 ~ 150 | 25 | |
| LCL2102 | 2110 ~ 2170 | 24.5 | 0.9 | 20 | 35 | 150 ~ 190 | 25 | |
| LCL2103A | 2110 ~ 2170 | 29 | 1 | 18 | 29.5 | 90 ~ 120 | 25 | |
| LCL2112 | 1920 ~ 2170 | 24.8 | 0.8 | 21 | 42 | 180 ~ 240 | 20 | |
| LCL2302 | 2200 ~ 2400 | 21.5 | 0.9 | 20 | 35 | 150 ~ 190 | 25 | |
| LCL2304 | 2200 ~ 2400 | 31 | 1.1 | 20 | 31 | 110 ~ 150 | 25 | |
| LCL2312 | 2300 ~ 2400 | 22 | 1 | 20 | 41 | 180 ~ 240 | 20 | |
| LCL2603 | 2500 ~ 2900 | 28.5 ~ 27 | 1.2 ~ 1.3 | 18 | 30 | 90 ~ 120 | 25 | |
| LCL2702 | 2500 ~ 2700 | 20.5 | 1 | 20 | 34 | 150 ~ 190 | 25 | |
| LCL2712 | 2300 ~ 2700 | 20.5 | 1 | 20 | 40 | 180 ~ 240 | 20 | |
| LCL3212 | 2900 ~ 3400 | 20.5 | 1.1 | 21 | 42 | 180 ~ 240 | 20 | |
| LCL3503 | 3400 ~ 3600 | 25 | 1.4 ~ 1.7 | 18 | 29 | 90 ~ 120 | 25 | |
| LCL3504 | 3400 ~ 3600 | 25.7 | 1.6 | 19 | 34 | 110 ~ 150 | 25 | |
| LCL3512 | 3400 ~ 3600 | 19 | 1.2 | 21 | 42 | 180 ~ 240 | 20 | |
| LCL3712 | 3600 ~ 3800 | 18.5 | 1.3 | 21 | 42 | 180 ~ 240 | 20 | |

» Drive Amplifier

- High IP3, Small Size
- Single Supply Voltage (5V) with Ceramic Substrate
- Surface Mount Hybrid on Tape & Reel

No Additional Parts Needed
 No Additional Matching Needed
 No Additional Testing Needed
 Custom Design Available

CP-16A
 10.2 x 10.2 x 4 mm



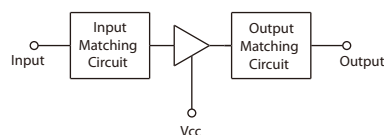
> E-pHEMT

| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Vd (V) | Id (mA) | Package |
|-------------------|-----------------|-----------|----------|------------|------------|--------|---------|---------|
| NEW CE2027 | 1920 ~ 2170 | 13 | 3 | 28.5 | 42 | 5 | 270 | CP-16A |
| NEW CE2029 | 1920 ~ 2170 | 12.5 | 3 | 29 | 45 | 5 | 400 | |
| NEW CE2527 | 2300 ~ 2700 | 11.5 | 3 | 29 | 41.5 | 5 | 270 | |
| NEW CE2529 | 2300 ~ 2700 | 11 | 3 | 30 | 45 | 5 | 400 | |

NEW : NEW Product

> Linear Amplifier

LM series : High OIP3, High P1dB



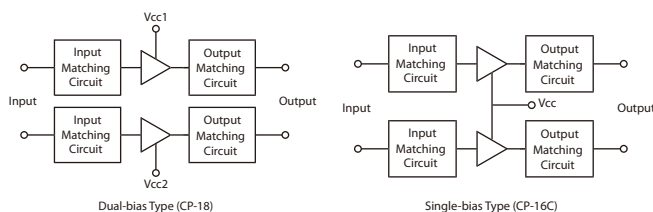
CP-16A
 10.2 x 10.2 x 4 mm



| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Vd (V) | Id (mA) | Package |
|-------------|-----------------|-----------|----------|------------|------------|--------|---------|---------|
| LM0105 | 50 ~ 200 | 12 | 5 | 21.6 | 40 | 5 | 140 | CP-16A |
| LM0409 | 400 ~ 500 | 14 | 2.5 | 23 | 43 | 9 | 120 | |
| LM0905 | 800 ~ 1000 | 14 | 2.1 | 22 | 43 | 5 | 140 | |
| LM0909 | 800 ~ 1000 | 14 | 2.6 | 24 | 43 | 9 | 140 | |
| LM1009 | 800 ~ 1500 | 13 | 2.6 | 24 | 43 | 9 | 140 | |
| LM1905 | 1700 ~ 2000 | 11 | 2.9 | 22 | 43 | 5 | 140 | |
| LM1909 | 1710 ~ 1990 | 12.5 | 2.8 | 24 | 43 | 9 | 140 | |
| LM2105 | 1900 ~ 2200 | 10.4 | 2.8 | 22 | 42 | 5 | 140 | |
| LM2109 | 1910 ~ 2110 | 12 | 2.8 | 24 | 43 | 9 | 140 | |
| LM2305 | 2200 ~ 2500 | 9.7 | 2.8 | 22 | 43 | 5 | 140 | |
| LM2309 | 2200 ~ 2500 | 12 | 2.9 | 22.5 | 41 | 9 | 130 | |
| LM2505 | 2500 ~ 2700 | 10 | 2.7 | 22 | 41 | 5 | 140 | |
| LM2509 | 2500 ~ 2700 | 9 | 2.8 | 24 | 40 | 9 | 140 | |

BLM Series

BLM series : Balanced Drive Amplifier



CP-16C
 10.2 x 10.2 x 4 mm

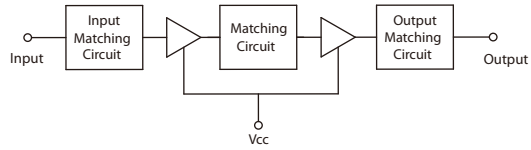


| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Vd (V) | Id (mA) | Package |
|--------------------|-----------------|-----------|----------|------------|------------|--------|---------|---------|
| UD BLM0905D | 800 ~ 1000 | 14 | 3 | 25 | 45 | 5 | 280 | CP-18 |
| UD BLM0905S | | | | | | | | CP-16C |
| UD BLM1909D | 1700 ~ 2200 | 12.5 | 3.5 | 27 | 45 | 9 | 280 | CP-18 |
| UD BLM1909S | | | | | | | | CP-16C |

UD : Under Development

> MCM Linear Amplifier

GLM series : High Gain, High OIP3



| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Vd (V) | Id (mA) | Package |
|-------------|-----------------|-----------|----------|------------|------------|--------|---------|---------|
| GLM0921 | 824 ~ 960 | 30 | 6 | 21 | 40 | 5 | 220 | CP-16B |
| GLM1521 | 1429 ~ 1501 | 27 | 6 | 21 | 40 | 5 | 220 | |
| GLM1821 | 1750 ~ 1870 | 25 | 6 | 21 | 40 | 5 | 220 | |
| GLM2121 | 1920 ~ 2170 | 25 | 6 | 21 | 38 | 5 | 220 | |
| GLM2123 | 1800 ~ 2200 | 26.5 | 5.9 | 22 | 42 | 5 | 200 | |
| GLM2521 | 2100 ~ 3100 | 22 | 6 | 21 | 39 | 5 | 220 | |
| GLM2523 | 2400 ~ 2600 | 25.5 | 6 | 22 | 40 | 5 | 200 | |
| GLM2723 | 2500 ~ 2700 | 24 | 5.6 | 22 | 40 | 5 | 200 | |
| GLM3623 | 3200 ~ 3800 | 21 | 5.7 | 22 | 40 | 5 | 200 | |

2LM Series

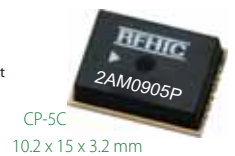
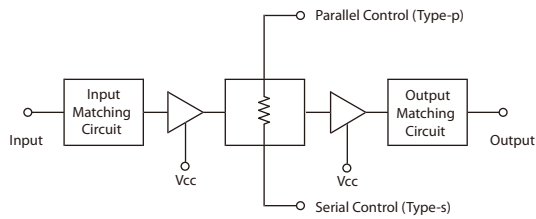
2LM series : High OIP3, High P1 dB

| Part Number | Frequency (MHz) | Gain (dB) | N.F (dB) | P1dB (dBm) | OIP3 (dBm) | Vd (V) | Id (mA) | Package |
|-------------|-----------------|-----------|----------|------------|------------|--------|---------|---------|
| 2LM0905 | 800 ~ 1000 | 28 | 2.4 | 21.5 | 41 | 5 | 240 | CP-16B |
| 2LM0909 | 800 ~ 1000 | 27 | 2.9 | 23 | 40 | 9 | 220 | |
| 2LM2105 | 1700 ~ 2200 | 20 | 2.4 | 22 | 40 | 5 | 220 | |
| 2LM2109 | 1800 ~ 2200 | 21 | 2.9 | 23 | 40 | 9 | 220 | |

◀ Custom Design Available

2AM Series

2AM series : Variable Gain Amplifier



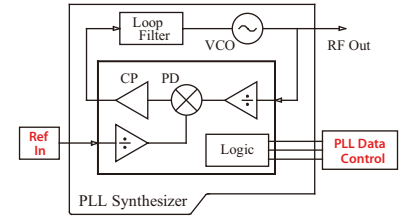
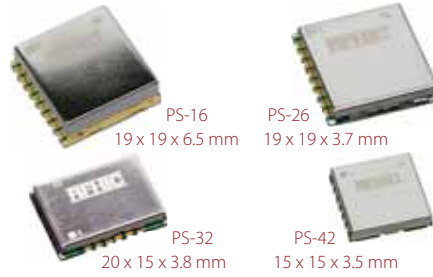
| Part Number | Frequency (MHz) | Gain (dB) | Attenuation Range (dB) | P1dB (dBm) | OIP3 (dBm) | Vd (V) | Id (mA) | Package |
|-------------|-----------------|-----------|------------------------|------------|------------|--------|---------|---------|
| 2AM0905P | 800 ~ 1000 | 28 | 31.5@0.5dB steps | 21.5 | 41 | 5 | 240 | CP-5CP |
| 2AM0905S | | | | | | | | CP-5CS |
| 2AM2109P | 1800 ~ 2200 | 21 | 31.5@0.5dB steps | 23 | 40 | 9 | 220 | CP-5CP |
| 2AM2109S | | | | | | | | CP-5CS |

◀ Attenuator Insertion : 6 bit. Flexible parallel and serial programming interfaces. : Under Development

RF Hybrid Component

> PLL Synthesizer

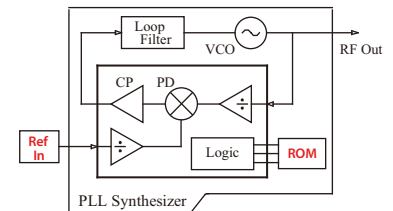
- Excellent Phase Noise
- Low Spurious
- 3~5V DC Voltage Supply
- 4 Different Types of Package Available
- Fractional-N & Integer-N PLL IC
- Custom Design Available



> Variable Type

| Part Number | Frequency (MHz) | Step Size (KHz) | Output Power (dBm) | Spurious (MAX)(dBc) | Voltage / Current 5V / (mA) | Phase Noise(C/N) Offset @ 10KHz [dBc/Hz] | Package |
|-------------|-----------------|-----------------|--------------------|---------------------|-----------------------------|--|---|
| PLV 63 | 63±2.5 | 10 | 10.5 | -70 | 22 | -112 | PS-16 PS-26 PS-32 PS-42 & (PLS Series 9.8 x 8 x 2 9.8 x 9.3 x 2) |
| PLV160 | 160±5 | 1000 | 2 | -70 | 22 | -111 | |
| PLV 395 | 395±10 | 25 | 7.5 | -70 | 23 | -107 | |
| PLV 746 | 746±10 | 10 | 8.5 | -70 | 23 | -107 | |
| PLV 762.5 | 762.5±13 | 200 | 9 | -70 | 23 | -106 | |
| PLV 805 | 805±10 | 10 | 3 | -70 | 23 | -106 | |
| PLV 832.5 | 832.5±13 | 100 | 7.5 | -70 | 23 | -106 | |
| PLV 948 | 948±15 | 200 | 10 | -70 | 23 | -106 | |
| PLV 1017.5 | 1017.5±15 | 200 | 3 | -70 | 24 | -107 | |
| PLV 1100 | 1100±30 | 10 | 5 | -70 | 24 | -105 | |
| PLV 1300 | 1300±20 | 200 | 7 | -70 | 24 | -105 | |
| PLV 1580 | 1580±45 | 200 | 9 | -70 | 24 | -103 | |
| PLV 1610 | 1610±40 | 100 | 5 | -70 | 24 | -103 | |
| PLV 1670 | 1670±20 | 50 | 6 | -70 | 24 | -104 | |
| PLV 1770 | 1770±30 | 200 | 5 | -70 | 24 | -104 | |
| PLV 1811 | 1811±40 | 500 | 5 | -70 | 24 | -100 | |
| PLV 1987 | 1987±35 | 500 | 5 | -70 | 25 | -100 | |
| PLV 2010 | 2010±40 | 200 | 2 | -70 | 25 | -101 | |
| PLV 2120 | 2120±30 | 100 | 3.5 | -70 | 25 | -102 | |
| PLV 2205 | 2205±40 | 250 | 3 | -70 | 25 | -103 | |
| PLV 2220 | 2220±30 | 250 | 5 | -70 | 25 | -103 | |
| PLV 2340 | 2340±40 | 500 | 2 | -70 | 26 | -100 | |
| PLV 2440 | 2440±40 | 500 | 0 | -70 | 26 | -100 | |
| PLV 2680 | 2680±10 | 20 | 3.5 | -70 | 26 | -99 | |
| PLV 3700 | 3700±30 | 250 | 1 | -70 | 26 | -101 | |
| PLV 5640 | 5640±50 | 500 | 1 | -70 | 26 | -95 | |
| PLV2640F | 2640±40 | 250 | 3 | -70 | 30 | -105 | |
| PLV3600F | 3600±15 | 250 | 3 | -70 | 30 | -104 | |
| PLV5750F | 5750±20 | 500 | 0 | -70 | 30 | -98 | |

> Fixed Type (ROM Included)

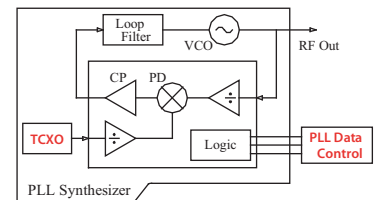


| Part Number | Frequency (MHz) | Step Size (KHz) | Output Power (dBm) | Spurious (MAX)(dBc) | Voltage / Current 5V / (mA) | Phase Noise(C/N) Offset @ 10KHz [dBc/Hz] | Package |
|-------------|-----------------|-----------------|--------------------|---------------------|-----------------------------|--|-------------------------|
| PLF 10 | 10 | - | 9 | -70 | 23 | -145 | PS-16 PS-26 PS-42 |
| PLF 40 | 40 | - | 8 | -70 | 23 | -140 | |
| PLF 70 | 70 | - | 7 | -70 | 23 | -110 | |
| PLF 115 | 115 | - | 7.5 | -70 | 23 | -109 | |
| PLF 160 | 160 | - | 5 | -70 | 23 | -110 | |

> Fixed Type (ROM Included)

| Part Number | Frequency (MHz) | Step Size (KHz) | Output Power (dBm) | Spurious (MAX)(dBc) | Voltage / Current 5V / (mA) | Phase Noise(C/N) Offset @ 10KHz [dBc/Hz] | Package |
|-------------|--------------------|--------------------|-----------------------|------------------------|--------------------------------|---|-------------------------|
| PLF 401 | 401 | - | 4 | -70 | 23 | -110 | PS-16 PS-26 PS-42 |
| PLF 677 | 677 | - | 5 | -70 | 24 | -108 | |
| PLF 766 | 766 | - | 8 | -70 | 24 | -106 | |
| PLF 832.5 | 832.5 | - | 7 | -70 | 24 | -106 | |
| PLF 972.5 | 972.5 | - | 7 | -70 | 24 | -106 | |
| PLF 1017.5 | 1017.5 | - | 6 | -70 | 24 | -105 | |
| PLF 1450 | 1450 | - | 3 | -70 | 25 | -105 | |
| PLF 1550 | 1550 | - | 5 | -70 | 25 | -105 | |
| PLF 1685 | 1685 | - | 4 | -70 | 25 | -105 | |
| PLF 1695 | 1695 | - | 4 | -70 | 25 | -105 | |
| PLF 1697.5 | 1697.5 | - | 4 | -70 | 25 | -104 | |
| PLF 1770 | 1770 | - | 0 | -70 | 25 | -104 | |
| PLF 1830 | 1830 | - | 4 | -70 | 25 | -104 | |
| PLF 1880 | 1880 | - | 0 | -70 | 25 | -104 | |
| PLF 1907.4 | 1907.4 | - | 4 | -70 | 25 | -103 | |
| PLF 1912.5 | 1912.5 | - | 4 | -70 | 25 | -103 | |
| PLF 2020 | 2020 | - | 0 | -70 | 26 | -103 | |
| PLF 2097.4 | 2097.4 | - | 5 | -70 | 26 | -103 | |
| PLF 2270F | 2270 | - | 2 | -70 | 26 | -106 | |
| PLF 2345 | 2345 | - | 3 | -70 | 26 | -103 | |
| PLF 2420F | 2420 | - | 2 | -70 | 26 | -106 | |
| PLF 2470F | 2470 | - | 2 | -70 | 26 | -106 | |
| PLF 2620 | 2620 | - | 3 | -70 | 26 | -100 | |
| PLF 2642.5 | 2642.5 | - | 3 | -70 | 26 | -99 | |
| PLF 3600 | 3600 | - | 2 | -70 | 30 | -101 | |

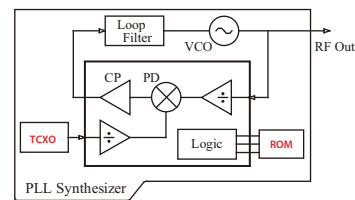
> Variable Type (TCXO Included)



| Part Number | Frequency (MHz) | Step Size (KHz) | Output Power (dBm) | Spurious (MAX)(dBc) | Voltage / Current 5V / (mA) | Phase Noise(C/N) Offset @ 10KHz [dBc/Hz] | Package |
|-------------|--------------------|--------------------|-----------------------|------------------------|--------------------------------|---|-------------------------|
| PLT 760 | 760±15 | 50 | 5 | -70 | 23 | -107 | PS-16 PS-26 PS-42 |
| PLT 836 | 836±15 | 15 | 7 | -70 | 23 | -107 | |
| PLT 866 | 866±7 | 100 | 8 | -70 | 23 | -107 | |
| PLT 945 | 945±15 | 10 | 7 | -70 | 23 | -106 | |
| PLT 1000 | 1000±10 | 200 | 8 | -70 | 24 | -105 | |
| PLT 1600 | 1600±30 | 10 | 5 | -70 | 24 | -104 | |
| PLT 1690 | 1690±20 | 200 | 5 | -70 | 24 | -104 | |
| PLT 1705 | 1705±25 | 200 | 7 | -70 | 24 | -104 | |
| PLT 1770 | 1770±40 | 200 | 6 | -70 | 24 | -103 | |
| PLT 1810 | 1810±30 | 10 | 5 | -70 | 24 | -102 | |
| PLT 1920 | 1920±20 | 100 | 3 | -70 | 25 | -102 | |
| PLT 2040 | 2040±20 | 100 | 3 | -70 | 25 | -102 | |
| PLT 2100 | 2100±20 | 10 | 0 | -70 | 25 | -101 | |
| PLT 2210 | 2210±20 | 200 | 3 | -70 | 25 | -102 | |
| PLT 2300 | 2300±20 | 200 | 0 | -70 | 26 | -101 | |
| PLT 2460 | 2460±10 | 50 | 0 | -70 | 26 | -100 | |

> PLL Synthesizer

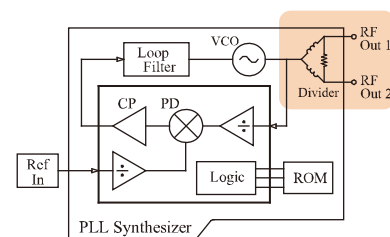
> Fixed Type (ROM & TCXO Included)



| Part Number | Frequency (MHz) | Step Size (KHz) | Output Power (dBm) | Spurious (MAX)(dBc) | Voltage / Current 5V / (mA) | Phase Noise(C/N) Offset @ 10KHz [dBc/Hz] | Package |
|-------------|-----------------|-----------------|--------------------|---------------------|-----------------------------|--|-------------------------|
| PLA50 | 50 | - | 5 | -70 | 24 | -112 | PS-16 PS-26 PS-42 |
| PLA 89.9 | 89.9 | - | 1 | -70 | 24 | -110 | |
| PLA 150 | 150 | - | 5 | -70 | 24 | -111 | |
| PLA 315 | 315 | - | 5 | -70 | 24 | -109 | |
| PLA 401.5 | 401.5 | - | 7 | -70 | 24 | -109 | |
| PLA 433 | 433 | - | 5 | -70 | 24 | -108 | |
| PLA 693 | 693 | - | 8 | -70 | 25 | -108 | |
| PLA 766.5 | 766.5 | - | 7 | -70 | 25 | -107 | |
| PLA 823.64 | 823.64 | - | 0 | -70 | 25 | -107 | |
| PLA 915 | 915 | - | 7 | -70 | 25 | -107 | |
| PLA 1000 | 1000 | - | 5 | -70 | 26 | -106 | |
| PLA 1690 | 1690 | - | 6 | -70 | 26 | -106 | |
| PLA 1780 | 1780 | - | 3 | -70 | 26 | -106 | |
| PLA 1895 | 1895 | - | 5 | -70 | 26 | -104 | |
| PLA 1935 | 1935 | - | 5 | -70 | 26 | -104 | |
| PLA 2000 | 2000 | - | 0 | -70 | 27 | -104 | |
| PLA 2040 | 2040 | - | 3 | -70 | 27 | -103 | |
| PLA 2085 | 2085 | - | 5 | -70 | 27 | -103 | |
| PLA 2150 | 2150 | - | 2 | -70 | 27 | -103 | |
| PLA 2250 | 2250 | - | 3 | -70 | 27 | -102 | |
| PLA 2410 | 2410 | - | 0 | -70 | 27 | -101 | |
| PLA 2550 | 2550 | - | 0 | -70 | 27 | -101 | |
| PLA 2650 | 2650 | - | 0 | -70 | 27 | -100 | |

> Fixed Type (ROM & Divider Included)

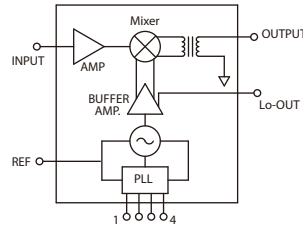
Package Type : PS-16, PS-26



| Part Number | Frequency (MHz) | Step Size (KHz) | Output Level 1 (dBm) | Output Level 2 (MAX)(dBc) | Spurious (dBc) | Voltage / Current 5V / (mA) | Phase Noise(C/N) @ 10KHz [dBc/Hz] |
|-------------|-----------------|-----------------|----------------------|---------------------------|----------------|-----------------------------|-----------------------------------|
| PLV 1920D | 1920±20 | 100 | 4 | 4 | -70 | 24 | -102 |
| PLV 2090D | 2090±20 | 100 | 3 | 3 | -70 | 25 | -101 |
| PLT 1945D | 1945±40 | 10 | 1 | 1 | -70 | 24 | -100 |
| PLT 2000D | 2000±25 | 200 | 3 | 3 | -70 | 25 | -100 |
| PLF 960D | 960 | - | 6 | 6 | -70 | 25 | -105 |
| PLF 2040D | 2040 | - | 5 | 5 | -70 | 25 | -102 |
| PLA 1945.3D | 1945.3 | - | 4 | 4 | -70 | 26 | -103 |
| PLA 2150D | 2150 | - | 2 | 2 | -70 | 26 | -101 |

» Hybrid Up-Down Converter with PLL

- No Additional Parts
- No Additional Matching
- No Additional Testing
- **Custom Design Available** (Frequency)



HY-5A 29.6 x 19.3 x 6.6 mm

> Frequency Up Converter

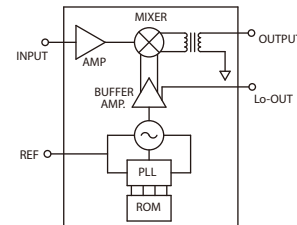
| Part Number | Input Freq. (MHz) | Output Freq. (MHz) | LO Freq. (MHz) | Conv.Gain (dB) | N.F (dB) | OIP3 (dBm) | Phase Noise @ 10KHz (dBc) | Voltage / Current (V) / (mA) |
|-------------|-------------------|--------------------|----------------|----------------|----------|------------|---------------------------|------------------------------|
| RFUR08-50 | 70 | 824 ~ 849 | 754 ~ 779 | 8 | 6 | 26 | -95 | 5 / 170 |
| RFUR08-56 | 70 | 869 ~ 894 | 939 ~ 964 | 8 | 10 | 26 | -95 | 5 / 170 |
| RFUR09-50 | 70 | 890 ~ 915 | 820 ~ 845 | 8 | 8 | 24 | -95 | 5 / 170 |
| RFUR09-56 | 70 | 935 ~ 960 | 1005 ~ 1030 | 9 | 6.5 | 26 | -95 | 5 / 170 |
| RFUR14-59 | 70 | 1480 ~ 1520 | 1410 ~ 1450 | 6 | 10 | 24 | -95 | 5 / 170 |
| RFUR16-52 | 70 | 1550 ~ 1600 | 1480 ~ 1530 | 6.5 | 7 | 24 | -95 | 5 / 170 |
| RFUR19-50 | 70 | 1750 ~ 1770 | 1680 ~ 1700 | 5.5 | 8 | 26 | -95 | 5 / 170 |
| RFUR19-56 | 70 | 1840 ~ 1860 | 1770 ~ 1790 | 6.5 | 7 | 26 | -95 | 5 / 170 |
| RFUR20-50A | 70 | 1920 ~ 1960 | 1850 ~ 1890 | 6.5 | 7.5 | 25 | -95 | 5 / 170 |
| RFUR20-50B | 160 | 1960 ~ 1980 | 1800 ~ 1820 | 6.5 | 6 | 23 | -95 | 5 / 170 |
| RFUR20-56A | 70 | 2110 ~ 2150 | 2040 ~ 2080 | 6.5 | 6 | 23 | -95 | 5 / 170 |
| RFUR39-50 | 360 | 921 ~ 960 | 561 ~ 600 | 6.5 | 6 | 23 | -95 | 5 / 170 |
| RFUR89-60 | 824 ~ 849 | 1750 ~ 1780 | 926 ~ 931 | 6 | 7 | 25 | -95 | 5 / 170 |
| RFUR20-56B | 160 | 2150 ~ 2170 | 1990 ~ 2010 | 6 | 7 | 24 | -95 | 5 / 170 |

> Frequency Down Converter

| Part Number | Input Freq. (MHz) | Output Freq. (MHz) | LO Freq. (MHz) | Conv.Gain (dB) | N.F (dB) | OIP3 (dBm) | Phase Noise @ 10KHz (dBc) | Voltage / Current (V) / (mA) |
|-------------|-------------------|--------------------|----------------|----------------|----------|------------|---------------------------|------------------------------|
| RFDR08-51 | 824 ~ 849 | 70 | 754 ~ 779 | 9 | 10 | 28 | -95 | 5 / 170 |
| RFDR08-55 | 869 ~ 894 | 70 | 939 ~ 964 | 9 | 10 | 28 | -95 | 5 / 170 |
| RFDR09-51 | 890 ~ 915 | 70 | 820 ~ 845 | 9 | 6.5 | 28 | -95 | 5 / 170 |
| RFDR09-55 | 935 ~ 960 | 70 | 1005 ~ 1030 | 9 | 6.5 | 28 | -95 | 5 / 170 |
| RFDR14-58 | 1480 ~ 1520 | 70 | 1410 ~ 1450 | 7 | 10 | 24 | -95 | 5 / 170 |
| RFDR16-53 | 1550 ~ 1600 | 70 | 1480 ~ 1530 | 5.5 | 8 | 24 | -95 | 5 / 170 |
| RFDR19-51 | 1750 ~ 1770 | 70 | 1680 ~ 1700 | 5.5 | 6.5 | 26 | -95 | 5 / 170 |
| RFDR19-55 | 1840 ~ 1860 | 70 | 1770 ~ 1790 | 6 | 6.5 | 26 | -95 | 5 / 170 |
| RFDR20-51A | 1920 ~ 1960 | 70 | 1850 ~ 1890 | 4.5 | 11 | 25 | -95 | 5 / 170 |
| RFDR20-51B | 1960 ~ 1980 | 160 | 1800 ~ 1820 | 4.5 | 11 | 25 | -95 | 5 / 170 |
| RFDR20-55A | 2110 ~ 2150 | 70 | 2040 ~ 2080 | 0 | 12 | 19 | -95 | 5 / 170 |
| RFDR20-55B | 2150 ~ 2170 | 160 | 1990 ~ 2010 | 0 | 12 | 19 | -95 | 5 / 170 |
| RFDR93-51 | 920 ~ 960 | 360 | 561 ~ 600 | 6 | 7 | 25 | -95 | 5 / 170 |
| RFDR98-61 | 1750 ~ 1780 | 824 ~ 849 | 926 ~ 931 | 6 | 10 | 24 | -95 | 5 / 170 |

» Hybrid Up-Down Converter with PLL & ROM

- No Additional Parts
- No Additional Matching
- No Additional Testing
- No Additional ROM
- **Custom Design Available** (Frequency)



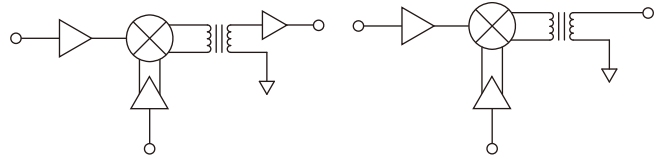
HY-5A 29.6 x 19.3 x 6.6 mm

| Part Number | Input Freq. (MHz) | Output Freq. (MHz) | LO Freq. (MHz) | Conv.Gain (dB) | N.F (dB) | OIP3 (dBm) | Phase Noise @ 10KHz (dBc) | Voltage / Current (V) / (mA) |
|-------------|-------------------|--------------------|----------------|----------------|----------|------------|---------------------------|------------------------------|
| URF696 | 185 | 881 | 696 | 5.5 | 9.5 | 24 | -95 | 5 / 170 |
| URF726 | 110 | 836 | 726 | 5.5 | 9.5 | 24 | -95 | 5 / 170 |
| URF1890 | 250 | 2140 | 1890 | 6 | 9.5 | 23 | -95 | 5 / 170 |
| URF2010 | 60 | 1950 | 2010 | 5.5 | 9.5 | 21 | -95 | 5 / 170 |
| DRF726 | 836 | 110 | 726 | 9 | 9.5 | 30 | -95 | 5 / 170 |
| DRF2010 | 1950 | 60 | 2010 | 2 | 9.5 | 22 | -95 | 5 / 170 |

RF Hybrid Component

>> Mixer

- Integrated Monolithic GaAs MESFET Active Mixer Packages Module
- Very Low Noise Figure & Low Distortion
- External Matchings are required to MO4Q and MO9Q
- **Custom Design Available** (Frequency)
- No Additional Matching for other models (except QFN3 pkg)



> Active Up Mixer

| Part Number | IF Freq. (MHz) | RF Freq. (MHz) | Conv. Gain (dB) | OIP3 (dBm) | N.F (dB) | Vd / Id (V) / (mA) | Package |
|-------------|----------------|----------------|-----------------|------------|----------|--------------------|---------|
| MO4Q | 30 ~ 200 | 150 ~ 3800 | 6@2100MHz | 24@2100MHz | 8.5 | 5 / 130 | QFN3 |
| MU0941 | 50 ~ 200 | 700 ~ 900 | 10 | 26 | 8.5 | 5 / 130 | HY-1 |
| MU1541 | 50 ~ 200 | 1400 ~ 1600 | 4 | 23 | 8.5 | 5 / 125 | |
| MU1841 | 50 ~ 200 | 1700 ~ 1900 | 6 | 22 | 8.5 | 5 / 125 | |
| MU2141 | 50 ~ 200 | 1900 ~ 2200 | 5 | 25 | 8.5 | 5 / 125 | |
| MU2341 | 50 ~ 200 | 2200 ~ 2500 | 5 | 24 | 8.5 | 5 / 125 | |
| MU2741 | 50 ~ 200 | 2500 ~ 2700 | 2 | 22 | 9 | 5 / 125 | |
| MU3541 | 50 ~ 200 | 3400 ~ 3600 | 3 | 20 | 9.5 | 5 / 125 | |

◀ Test Condition : @ IF 70MHz

> Active Down Mixer

| Part Number | RF Freq. (MHz) | IF Freq. (MHz) | Conv. Gain (dB) | IIP3 (dBm) | N.F (dB) | Vd / Id (V) / (mA) | Package |
|-------------|----------------|----------------|-----------------|------------|----------|--------------------|---------|
| MO9Q | 150 ~ 3800 | 30 ~ 200 | 9@2100MHz | 17@2100MHz | 8.5 | 5 / 145 | QFN3 |
| MD0993 | 700 ~ 900 | 50 ~ 200 | 12 | 16 | 8.5 | 5 / 145 | HY-3 |
| MD1893 | 1700 ~ 1900 | 50 ~ 200 | 10 | 16 | 8.5 | 5 / 145 | HY-3 |
| MD2193 | 1900 ~ 2200 | 50 ~ 200 | 10 | 17 | 8.5 | 5 / 145 | HY-3 |
| MD2393 | 2200 ~ 2500 | 50 ~ 200 | 9 | 17 | 8.5 | 5 / 145 | HY-3 |
| MD2793 | 2500 ~ 2700 | 50 ~ 200 | 2 | 20 | 9 | 5 / 145 | HY-3 |
| MD3593 | 3400 ~ 3600 | 50 ~ 200 | 0 | 20 | 9.5 | 5 / 135 | HY-3 |
| MDH2191 | 2100 ~ 2200 | 70 | 25 | 13 | 9.5 | 5 / 245 | HY2-1 |

◀ Test Condition : @ IF 70MHz

> Passive Mixer (Preliminary)

- The MP Series is high linearity Quad MOSFET Mixer.

| Part Number | RF Freq. (MHz) | IF Freq. (MHz) | Conv. Loss (dB) | IIP3 (dBm) | Input 1dB (dBm) | LO INPUT Power (dBm) | Package |
|-------------|----------------|----------------|-----------------|------------|-----------------|----------------------|---------|
| MP091 | 820 ~ 920 | 70 (Typ.) | 7 | 32 | 21 | 17 | HY-3 |
| MP201 | 1800 ~ 2000 | 260 (Typ.) | 7 | 30 | 22 | 17 | HY-3 |

Power Amplifier

- Fully matched, Flange Type, Drop-in Amplifier
- Isolator included in selected models
- GaAs or GaN device based
- 100% Tested • Reliability proven



DP-36
29 x 31 x 10 mm

Power Amplifier (M series)

| Part Number | Frequency (MHz) | Gain (dB) | P1dB (dBm) | CDMA (dBm) | OIP3 (dBm) | Vd (V) | Id (A) | Package |
|-------------|-----------------|-----------|------------|------------|------------|--------|--------|---------|
| RFM0424-10 | 380 ~ 450 | 16 | 38 | - | 49 | 9 | 1.2 | DP-36 |
| RFM0836-10 | 824 ~ 849 | 16 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM0882-10 | 869 ~ 894 | 16 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM0902-10 | 890 ~ 915 | 16 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM0947-10 | 935 ~ 960 | 16 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM1747-10 | 1710 ~ 1785 | 13 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM1765-10 | 1750 ~ 1780 | 13 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM1842-10 | 1805 ~ 1880 | 12.5 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM1855-10 | 1840 ~ 1870 | 12.5 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM1880-10 | 1850 ~ 1910 | 12.5 | 38 | 32 | 50 | 9 | 1.2 | |
| RFM1950-10 | 1920 ~ 1980 | 12 | 38 | 29 | 50 | 9 | 1.2 | |
| RFM2140-10 | 2100 ~ 2170 | 11.5 | 38 | 28 | 50 | 9 | 1.2 | |
| RFM2324-09 | 2300 ~ 2400 | 10 | 37 | - | 50 | 9 | 1.2 | |
| RFM2424-09 | 2400 ~ 2500 | 10 | 37 | - | 50 | 9 | 1.2 | |
| RFM2624-09 | 2500 ~ 2600 | 9 | 37 | - | 50 | 9 | 1.2 | |
| RFM2724-08 | 2600 ~ 2700 | 9 | 37 | - | 50 | 9 | 1.2 | |

◀ Operating BW : 30 ~ 100MHz

◀ Test Condition : 27 dBm / tone , CDMA 1FA

◀ Shut down function provided

Power Amplifier (A series)

| Part Number | Frequency (MHz) | Gain (dB) | P1dB (dBm) | CDMA (dBm) | OIP3 (dBm) | Vd (V) | Id (A) | Package |
|-------------|-----------------|-----------|------------|------------|------------|--------|--------|---------|
| RFA0836-04 | 824 ~ 894 | 29 | 35 | 29 | 48 | 9 | 1 | DP-36 |
| RFA0882-04 | 824 ~ 894 | 29 | 35 | 29 | 48 | 9 | 1 | |
| RFA0902-04 | 890 ~ 960 | 29 | 35 | 29 | 48 | 9 | 1 | |
| RFA0947-04 | 890 ~ 960 | 29 | 35 | 29 | 48 | 9 | 1 | |
| RFA1747-03 | 1710 ~ 1785 | 26 | 34 | 29 | 48 | 9 | 1 | |
| RFA1765-03 | 1750 ~ 1780 | 26 | 34 | 29 | 48 | 9 | 1 | |
| RFA1842-03 | 1805 ~ 1880 | 26 | 34 | 29 | 48 | 9 | 1 | |
| RFA1855-03 | 1840 ~ 1870 | 26 | 34 | 29 | 48 | 9 | 1 | |
| RFA1930-03 | 1920 ~ 1980 | 25 | 34 | 27 | 48 | 9 | 1 | |
| RFA1950-03 | 1920 ~ 1980 | 25 | 34 | 27 | 48 | 9 | 1 | |
| RFA1970-03 | 1920 ~ 1980 | 25 | 34 | 27 | 48 | 9 | 1 | |
| RFA2120-03 | 2110 ~ 2170 | 24 | 34 | 27 | 48 | 9 | 1 | |
| RFA2140-03 | 2110 ~ 2170 | 24 | 34 | 27 | 48 | 9 | 1 | |
| RFA2160-03 | 2110 ~ 2170 | 24 | 34 | 27 | 48 | 9 | 1 | |

◀ Operating BW : 30 ~ 100MHz

◀ Test Condition : 23 dBm / tone , CDMA 1FA

◀ Shut down function provided

Power Amplifier (T series)

DP-56
45 x 32 x 10 mm



| Part Number | Frequency (MHz) | Gain (dB) | P1dB (dBm) | CDMA (dBm) | OIP3 (dBm) | Vd (V) | Id (A) | Package |
|-------------|-----------------|-----------|------------|------------|------------|--------|--------|---------|
| RFT1950-08 | 1920 ~ 1980 | 27 | 38 | 30 | 51 | 9 | 1.6 | DP-56 |
| RFT2140-08 | 2110 ~ 2170 | 26 | 38 | 30 | 51 | 9 | 1.6 | |
| RFT2350-08 | 2300 ~ 2400 | 25 | 37 | - | 51 | 9 | 1.6 | |
| RFT2550-07 | 2500 ~ 2600 | 24 | 37 | - | 51 | 9 | 1.6 | |
| RFT2650-07 | 2600 ~ 2700 | 23 | 37 | - | 51 | 9 | 1.6 | |
| RFT3500-07 | 3500 | 18 | 36 | - | 50 | 9 | 1.6 | |

◀ Operating BW : 30 ~ 100MHz

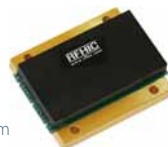
◀ Test Condition : 27 dBm / tone , CDMA 1FA

◀ Shut down function provided

» Power Amplifier

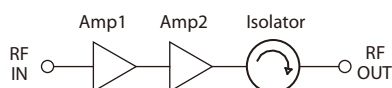
> Power Amplifier (N series)

DP-66
50 x 27 x 12 mm



| Part Number | Frequency (MHz) | Gain (dB) | P1dB (dBm) | WCDMA OFDM (dBm) | OIP3 (dBm) | Voltage (V) | Current (A) | Package |
|-------------|-----------------|-----------|------------|------------------|------------|-------------|-------------|---------|
| RFN2140-08 | 2100 ~ 2200 | 27 | 39 | 29 | 49 | 27 | 0.6 | DP-66 |
| RFN2350-08 | 2300 ~ 2400 | 26 | 39 | 29 | 49 | 27 | 0.6 | |
| RFN2550-08 | 2500 ~ 2600 | 24 | 39 | 29 | 49 | 27 | 0.6 | |
| RFN3500-08 | 3400 ~ 3500 | 19 | 38 | 29 | 49 | 27 | 0.6 | |

> Power Amplifier (W series)



DP-56
45 x 32 x 10 mm



| Part Number | Frequency (MHz) | Gain (dB) | P1dB (dBm) | WCDMA / CDMA (dBm) | OIP3 (dBm) | Voltage (V) | Current (A) | Package |
|-------------|-----------------|-----------|------------|--------------------|------------|-------------|-------------|---------|
| RFW0836-10 | 824 ~ 849 | 30 | 38 | 32 | 51 | 10 | 1.5 | DP-56 |
| RFW0882-10 | 869 ~ 894 | 30 | 38 | 32 | 51 | 10 | 1.5 | |
| RFW0902-10 | 890 ~ 915 | 30 | 38 | 32 | 51 | 10 | 1.5 | |
| RFW0947-10 | 935 ~ 960 | 30 | 38 | 32 | 51 | 10 | 1.5 | |
| RFW1747-10 | 1710 ~ 1785 | 26 | 37 | 31 | 51 | 10 | 1.5 | |
| RFW1842-10 | 1805 ~ 1880 | 25.5 | 37 | 31 | 51 | 10 | 1.5 | |
| RFW1880-10 | 1850 ~ 1910 | 25 | 37 | 31 | 51 | 10 | 1.5 | |
| RFW1960-10 | 1930 ~ 1990 | 25 | 37 | 31 | 51 | 10 | 1.5 | |
| RFW1950-10 | 1920 ~ 1980 | 25 | 37 | 29 | 51 | 10 | 1.5 | |
| RFW2140-10 | 2110 ~ 2170 | 24.5 | 36 | 29 | 51 | 10 | 1.5 | |

◀ Test Condition : 27 dBm / tone , CDMA 1FA

◀ Shut down function provided

» GaN Pallet High Power Amplifier

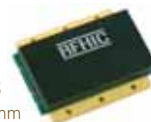


| Part Number | Frequency (MHz) | Gain (dB) | P3dB (dBm) | Pout (dBm) | Vd / Ids (V) / (A) | Mode (Type) | Size (mm) |
|-------------|-----------------|-----------|------------|------------|--------------------|-------------|-----------|
| RGP0936-120 | 800 ~ 1000 | 16 | 50 | 46 | 28 / 5.5 | CDMA 7FA | 100x70x19 |
| RGP2036-120 | 1800 ~ 2000 | 14.5 | 50 | 46 | 28 / 5.5 | WCDMA 2FA | |
| RGP2536-110 | 2300 ~ 2700 | 13 | 50 | 40 | 28 / 3 | OFDM 1FA | |
| RGP3536-90 | 3400 ~ 3700 | 10 | 50 | 39 | 28 / 3 | OFDM 1FA | |

: Under Development

» GaN Pallet Wideband Amplifier

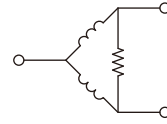
DP-75
70 x 51 x 16 mm



| Part Number | Frequency (MHz) | Gain (dB) | Return Loss (dB) | P3dB (dBm) | OIP3 (dBm) | Voltage (V) | Current (A) | Package |
|---------------|-----------------|-----------|------------------|------------|------------|-------------|-------------|---------|
| RFW7735H20-28 | 450 ~ 770 | 33 | -15 / -15 | 43 | 48 | 28 | 1.9 | DP-75 |
| RFW1G35H20-28 | 20 ~ 1000 | 33 | -10 / -5 | 41 | 47 | 28 | 1.8 | |
| RFW5035H40-28 | 20 ~ 500 | 35 | -8 / -2 | 45 | 51 | 28 | 3.1 | |
| RFW8835H40-28 | 450 ~ 880 | 33 | -13 / -8 | 45 | 51 | 28 | 3.1 | |
| RFW1G33H40-28 | 20 ~ 1000 | 32 | -6 / -2 | 44 | 48 | 28 | 3.1 | |
| RFW2500H10-28 | 20 ~ 2500 | 13 | - | 36 | 41 | 28 | 0.9 | |

» 2 Way Power Divider

• The 2 way power divider has low loss, high isolation and good matching

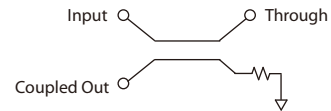


SOIC-8

SOT23-6L

| Part Number | Frequency (MHz) | Insertion Loss (dB) | Input Return Loss (dB) | Output Return Loss (dB) | Isolation (Deg.) | Handling Power (W) | Package (Ω) |
|-------------|-----------------|---------------------|------------------------|-------------------------|------------------|--------------------|-------------|
| PD09C2 | 720 ~ 960 | 0.3 | 35 | 35 | 27 | 2 | SOIC-8 |
| PD18C2 | 1700 ~ 1900 | 0.3 | 25 | 25 | 25 | 2 | |
| PD20C2 | 1900 ~ 2200 | 0.3 | 35 | 27 | 27 | 2 | |
| PD23C2 | 2200 ~ 2400 | 0.3 | 22 | 27 | 27 | 2 | |
| PD26C2 | 2500 ~ 2700 | 0.3 | 25 | 22 | 35 | 2 | |
| PD36C2 | 3400 ~ 3700 | 0.3 | 27 | 32 | 32 | 2 | |
| PD09T2 | 720 ~ 960 | 0.3 | 22 | 23 | 35 | 1 | SOT23-6L |
| PD18T2 | 1700 ~ 1900 | 0.3 | 17 | 19 | 28 | 1 | |
| PD20T2 | 1900 ~ 2200 | 0.3 | 19 | 23 | 31 | 1 | |
| PD23T2 | 2200 ~ 2400 | 0.3 | 13 | 18 | 19 | 1 | |
| PD26T2 | 2500 ~ 2700 | 0.4 | 16 | 16 | 19 | 1 | |
| PD36T2 | 3400 ~ 3700 | 0.4 | 20 | 23 | 17 | 1 | |

» Directional Coupler

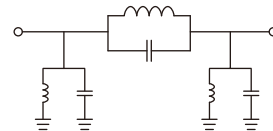


SOIC-8

| Part Number | Frequency (MHz) | Insertion Loss (dB) | Isolation (dB) | Return Loss (dB) | Coupling (dB) | Package |
|-------------|-----------------|---------------------|----------------|------------------|---------------|---------|
| CP090 | 720 ~ 960 | 0.3 | 20 | 35 | 14 | SOIC-8 |
| CP180 | 1700 ~ 1900 | 0.3 | 20 | 23 | 14 | |
| CP210 | 1900 ~ 2200 | 0.3 | 21 | 21 | 14 | |
| CP230 | 2400 ~ 2500 | 0.3 | 24 | 18 | 14 | |
| CP260 | 2500 ~ 2700 | 0.3 | 25 | 17 | 15 | |
| CP360 | 3400 ~ 3700 | 0.3 | 21 | 15 | 15 | |

» MCM Passive Filter

• The MCM filter has good return loss and suitable for high power applications



SOT-89

| Part Number | Frequency (MHz) | Insertion Loss (dB) | Return Loss (dB) | Handling Power (W) | 2f0 Rejection (dB) | Impedance (Ω) | Package |
|-------------|-----------------|---------------------|------------------|--------------------|--------------------|---------------|----------|
| LPF509 | 960 | 0.5 | 30 | 3 | -30 | 50 | SOT-89 |
| LPF518 | 1800 | 0.5 | 30 | 3 | -40 | 50 | |
| LPF524 | 2400 | 0.5 | 25 | 3 | -40 | 50 | |
| BWF870 | 270 ~ 470 | 0.9 | 13 | 2 | -35 | 75 | BGA Type |
| | 470 | 1.9 | 12 | 2 | -20 | 75 | |
| | 470 | 1 | 10 | 2 | -20 | 75 | |
| LPF708 | 870 | 0.5 | 11 | 5 | -40 | 75 | SOT-89 |
| LPF722 | 2200 | 0.5 | 12 | 5 | -25 | 75 | SOT-89 |

» Band Switch Filter (75Ω)

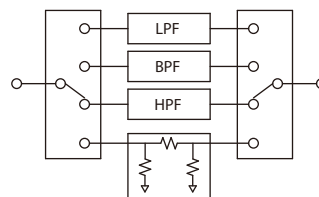
Product Features

- MCM Sub-Module
- High Dynamic Range
- Digital Control
- Low Insertion Loss
- Low Current
- Chip On Board
- Low Cost

Applications

- Tuner
- Digital TV
- DVD
- Trunk Amp.
- Camcorder
- Broadband System Set Top Box

Functional Diagram



CL-38
14 x 11 x 3 mm

| Part Number | Frequency (MHz) | Output Freq. (MHz) | Insertion Loss (dB) | OIP3 (dBm) | RF Input Power (W) | Digital On/Off (V) | Current (mA) | Package |
|-------------|-----------------|--------------------|---------------------|------------|--------------------|--------------------|--------------|---------|
| SF8700 | 45~870 | 45~270 | -1.0 ~ -30 | 65 | 10 | 3~5 / 0 | 0 | CL-38 |

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