

# Low Noise Amplifier



## Features

- ▶ GaAs p-HEMT LNA
- ▶ Single 3V Supply Voltage
- ▶ Lead-free / Green  
RoHS compliant package

## Applications

- ▶ Mobile Infrastructure
- ▶ PCS / CDMA / WCDMA  
WiBro / LTE
- ▶ W-LAN / ISM
- ▶ RFID / Fixed Wireless



## Package

- ▶ DFN 8L
- ▶ SOT-363

## Description

The PL Series are a high performance GaAs p-HEMT LNA (Low Noise Amplifier). The features of PL Series are high linear performance, low noise figure, low power consumption and high reliability. The PL series can be easily matched to obtain optimum noise figure and linearity. The PL Series operate from a single +3 voltage supply and have an internal active bias. These PL series provide the most suitable solutions for LNA in communication systems.

## PL Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PL07A	200~3000	800	20.8	17.1	31.0	0.65	3.0	3.0	45	
		1900	14.6	17.3	33.0	0.86				
		2140	13.2	18.0	34.0	0.92				
		2600	11.8	17.5	33.8	1.08				
PL08	5~3000	900	19.5	16.5	30.0	0.79	3.0	3.0	45	
		1900	14.5	16.5	33.0	0.92				
		2140	13.5	16.5	33.0	0.96				
		2600	12.0	16.5	33.0	1.15				

# IF Amplifier



## Features

- ▶ InGaP HBT IF Amplifier
- ▶ Single Voltage Supply
- ▶ Lead-free / Green  
RoHS compliant package
- ▶ Temperature Compensated  
Bias is Included

## Applications

- ▶ IF Amplifier
- ▶ VHF/UHF Transmission
- ▶ PCS / CDMA / WCDMA  
WiBro / LTE
- ▶ Mobile Infrastructure
- ▶ RFID / Fixed Wireless
- ▶ Smart Meter (AMI)






## Package

- ▶ SOT-89




## Description

The PW IF Series are a high performance InGaP HBT MMIC Amplifier and consist of Darlington pair amplifiers. The features of PW IF Series are high linear performance, high reliability as an IF amplifier and provide stable current variation over temperature. The PW IF Series operate from a single voltage supply and require only two DC-blocking capacitors, a bias resistor and an inductor for operation. The device is a general purpose buffer amplifier that offers high dynamic range in a low cost surface-mounted plastic package.

## PW IF Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PW11A	5~500	70	19.7	23.5	44.0	4.4	5.0	5.0	80	
		140	19.7	24.0	43.4	4.4				
		250	19.5	24.2	41.6	4.5				
		500	19.1	24.0	41.2	4.6				
PW111	5~1000	75	25.5	18.9	34.8	1.7	6.0	4.74	69	
		200	25.4	18.8	34.3	1.8				
		500	25.6	18.5	32.2	1.7				
		900	22.8	18.1	32.2	1.7				
PW112	5~1000	70	26.0	19.5	35.7	3.1	5.0	4.74	74	
		140	26.0	19.5	35.4	3.1				
		250	25.6	19.3	34.8	3.2				
		500	25.0	19.3	33.7	3.3				
PW113	5~1000	70	22.0	20.0	39.0	3.6	5.0	4.7	88	
		140	22.0	20.0	39.0	3.7				
		250	22.0	20.0	38.5	3.6				
		500	21.5	20.0	36.5	3.6				
PW114	5~1000	70	19.1	19.7	40.0	3.6	5.0	4.8	86	
		140	19.1	19.8	39.5	3.6				
		250	19.0	19.8	39.2	3.8				
		500	18.6	19.8	36.8	3.9				
		900	18.0	19.4	34.0	3.8				

## PW IF Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package		
PW115	5~1000	70	15.9	19.3	41.0	4.0	5.0	4.78	86			
		140	15.9	19.4	40.5	4.0						
		250	15.8	19.5	39.5	4.0						
		500	15.5	19.5	36.5	4.2						
		900	15.1	18.9	33.0	4.1						
PW117	5~1000	70	16.0	19.5	42.5	4.1	5.0	4.7	105			
		140	16.0	19.5	41.7	4.1						
		250	15.9	19.5	41.0	4.2						
		500	15.7	19.7	38.5	4.2						
		900	15.5	19.3	36.0	4.2						
PW118	5~500	70	28.6	18.8	36.2	2.5	5.0	4.2	76			
		140	28.4	19.0	35.5	2.6						
		250	28.0	19.0	35.0	2.8						
		500	26.3	18.7	32.8	2.8						
		70	29.0	20.8	40.0	2.8					5.0	4.6
	140	28.8	21.0	39.5	2.8							
	250	28.2	21.0	38.0	2.8							
	500	26.5	20.6	35.0	2.8							
	PW119	5~500	70	22.0	19.1	39.4	2.6	5.0	4.25			
			140	22.0	19.2	38.6	2.7					
250			21.7	19.2	37.3	2.8						
500			21.1	19.1	34.3	2.9						
70			22.1	20.5	42.0	2.9	5.0			4.65	115	
140		22.0	20.5	40.5	2.9							
250		21.8	20.4	39.0	2.9							
500		21.5	20.1	36.0	2.9							

# Gain Block Amplifier



## Features

- ▶ InGaP HBT Gain Block
- ▶ Single Voltage Supply
- ▶ Lead-free / Green  
RoHS compliant package

## Applications

- ▶ Broadband Gain Block
- ▶ Mobile Infrastructure
- ▶ Cellular / PCS / GSM / GPRS  
WCDMA / WiBro / WiMAX
- ▶ W-LAN / DMB / ISM
- ▶ CATV / DBC
- ▶ RFID / Fixed Wireless






## Package

- ▶ SOT-363
- ▶ SOT-89









## Description

The PW Series are a high performance InGaP HBT MMIC Amplifier and consist of Darlington pair amplifiers. The features of PW Series are high linear performance, wideband operation and high reliability. The PW Series operate from a single voltage supply and require only two DC-blocking capacitors, a bias resistor and an inductor for operation. The device is a general purpose buffer amplifier that offers high dynamic range in a low cost surface-mounted plastic package.

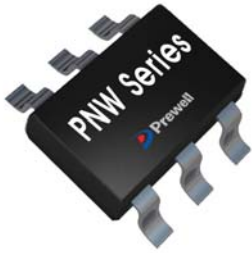
## PW Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PW210-63	5~6000	75	21.5	15.0	28.5	2.9	5.0	4.65	44	
		900	21.0	15.2	29.4	2.9				
		1900	18.8	15.3	29.5	3.0				
		2300	17.8	15.8	29.0	3.1				
		2600	17.3	15.4	28.5	3.1				
PW250-63	5~6000	75	19.0	15.4	29.2	3.2	5.0	4.7	44	
		900	18.4	15.1	29.8	3.2				
		1900	17.0	15.2	29.5	3.3				
		2300	16.1	15.5	28.7	3.3				
		2600	15.6	15.0	27.8	3.3				
PW290-63	5~3000	75	14.0	15.1	30.5	3.5	5.0	4.3	45	
		900	13.6	15.1	31.0	3.5				
		1900	13.4	15.0	30.0	3.6				
		2300	12.8	15.0	28.5	3.7				
		2600	12.3	15.0	27.5	3.8				
PW210	5~6000	75	21.4	16.3	30.0	2.8	5.0	4.74	46	
		900	21.0	16.0	30.0	3.0				
		1900	19.0	16.0	30.0	3.1				
		2300	18.0	16.3	30.0	3.1				
		2600	17.5	15.5	28.5	3.2				
PW250	5~6000	75	19.0	16.5	30.5	3.3	5.0	4.78	46	
		900	18.5	16.0	30.0	3.3				
		1900	17.4	16.0	30.0	3.3				
		2300	16.4	16.5	29.5	3.4				
		2600	15.5	15.5	28.5	3.5				

## PW Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PW290	5~3000	75	14.0	15.5	31.5	3.5	5.0	4.37	45	
		900	13.5	15.4	31.3	3.5				
		1900	13.2	15.1	30.3	3.6				
		2300	12.6	15.2	29.3	3.7				
		2600	12.3	14.4	28.8	3.8				
PW350	5~3000	75	16.9	18.5	33.5	3.2	5.3	4.84	58	
		900	16.7	17.6	33.5	3.3				
		1900	16.4	16.5	30.5	3.5				
		2300	15.9	15.7	29.0	3.6				
		2600	15.4	15.0	28.0	3.6				
PW370	5~4000	75	15.0	17.5	33.5	3.5	5.3	4.83	58	
		900	14.8	17.7	32.5	3.6				
		1900	14.3	16.6	31.0	3.8				
		2300	14.0	15.3	30.2	3.9				
		2600	13.5	14.0	28.2	4.0				
PW410	5~6000	75	21.5	19.5	35.0	3.1	5.3	4.96	70	
		900	20.5	19.0	35.5	3.4				
		1900	18.5	18.5	33.0	3.5				
		2300	17.5	18.0	32.0	3.6				
		2600	17.5	17.0	31.0	3.5				
PW450	5~6000	75	18.4	19.0	36.0	3.4	5.0	4.94	69	
		900	18.0	18.5	35.5	3.7				
		1900	17.0	17.8	32.5	3.8				
		2300	16.2	17.3	31.5	3.8				
		2600	16.0	16.5	30.5	3.9				
PW470	5~4000	75	16.2	19.4	35.7	3.5	5.3	5.0	69	
		900	16.0	19.2	35.0	3.5				
		1900	15.5	18.4	32.8	3.7				
		2300	14.9	17.7	31.5	3.8				
		2600	14.4	17.0	30.0	3.9				
PW510	5~4000	75	21.5	20.0	38.5	3.4	6.0	5.4	85	
		900	20.5	20.0	38.0	3.4				
		1900	18.5	19.0	35.0	3.5				
		2300	17.5	18.0	33.5	3.6				
		3500	15.7	16.5	30.5					
PW550	5~3000	75	19.0	20.0	38.0	3.4	6.0	5.35	85	
		900	18.2	20.0	37.5	3.5				
		1900	17.2	19.0	34.5	3.7				
		2300	16.2	18.0	33.1	3.8				
		2600	15.5	17.0	32.4	3.9				

# Gain Block Amplifier



## Features

- ▶ InGaP HBT Gain Block
- ▶ Low-current
- ▶ Single Voltage Supply
- ▶ Lead-free / Green  
RoHS compliant package

## Applications

- ▶ Broadband Gain Block
- ▶ Mobile Infrastructure
- ▶ Cellular / PCS / GSM / GPRS  
WCDMA / WiBro / WiMAX / LTE
- ▶ W-LAN / DMB / ISM
- ▶ CATV / DBC
- ▶ RFID / Fixed Wireless





## Package

- ▶ SOT-363

## Description

The PNW Series are a high performance InGaP HBT MMIC Amplifier and high linearity gain block amplifier in a high quality SOT-363 package. The PNW Series have excellent input/output return loss and high linear performance. The device can be easily matched to obtain optimum power and linearity. The product is targeted for using as low-current gain block amplifier for wireless infrastructure applications. The PNW Series operate from a single +3.3 voltage supply and have an internal active bias.

## PNW Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PNW234	500~3000	900	21,5	19,5	29,0	2,4	3,3	3,3	35	
		1900	18,0	19,0	33,0	2,4				
		2600	15,2	18,5	30,0	2,9				
PNW254	5~3000	75	23,5	20,0	29,0	2,5	3,3	3,3	30	
		900	18,5	19,5	27,0	2,3				
		1900	14,5	20,0	29,0	2,3				
		2600	12,0	19,0	30,0	3,2				
PNW464	500~3000	900	18,5	20,0	27,5	3,0	3,3	3,3	48	
		1900	14,5	21,5	32,0	2,8				
		2600	12,0	19,0	31,5	3,8				
PNW533	5~3000	75	20,0	13,0	32,0	4,0	3,3	3,3	60	
		900	19,5	14,0	29,0	4,4				
		1900	18,0	13,5	27,0	4,4				
		2600	17,0	12,0	24,0	4,4				

# Gain Block Amplifier



## Features

- ▶ InGaP HBT Gain Block
- ▶ Single Voltage Supply
- ▶ Lead-free / Green  
RoHS compliant package
- ▶ No Need Bias Resistor
- ▶ Temperature Compensated  
Bias is included

## Applications

- ▶ Broadband Gain Block
- ▶ Mobile
- ▶ Cellular / PCS / GSM / GPRS  
WCDMA / WiBro / WiMAX / LTE
- ▶ W-LAN / DMB / ISM
- ▶ RFID / Fixed Wireless






## Package

- ▶ SOT-89

## Description

The PG Series are a high performance InGaP HBT MMIC Amplifier and consist of Darlington pair amplifiers. The PG Series feature high linear performance, wideband operation and high reliability. The PG Series are designed for enabling to stable performance over temperature using an internal active bias, temperature compensated circuit. The PG Series operate from a single voltage supply and require only two DC-blocking capacitors and an inductor for operation. A bias resistor is not required, the device to be biased directly from single supply voltage. The device is a general purpose buffer amplifier that offers high dynamic range in a low cost surface-mounted plastic package.

## PG Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PG451	300~3000	900	20.0	21.5	36.0	3.6	4.0	4.0	73	
		1900	16.3	22.5	39.2	3.4				
		2100	15.7	22.5	38.0	3.4				
		2600	14.0	21.4	34.5	4.0				
PG611	5~4000	900	23.1	19.2	31.7	3.1	5.0	5.0	62	
		1900	21.6	17.2	30.3	3.3				
		2100	21.1	17.4	30.5	3.3				
		2600	20.4	17.0	30.0	3.4				
PG631	5~4000	75	20.8	18.6	34.4	4.0	5.0	5.0	68	
		900	20.2	18.8	34.2	3.7				
		1900	18.7	18.8	32.6	3.8				
		2300	17.8	18.0	30.8	4.0				
PG671	5~4000	75	15.8	18.0	35.6	4.9	5.0	5.0	64	
		900	15.5	18.0	34.7	4.5				
		1900	14.9	18.3	33.1	4.7				
		2300	14.5	18.2	31.4	5.0				
PG771	5~4000	75	17.0	19.0	36.5	4.6	5.0	5.0	75	
		900	16.8	19.0	36.0	4.2				
		1900	15.8	19.1	34.5	4.4				
		2300	15.3	18.8	32.8	4.6				
		2600	15.0	18.8	32.0	4.8				

# Gain Block Amplifier



## Features

- ▶ InGaP HBT Gain Block
- ▶ Single Voltage Supply
- ▶ Lead-free / Green  
RoHS compliant package

## Applications

- ▶ Broadband Gain Block
- ▶ Mobile Infrastructure
- ▶ Cellular / PCS / GSM / GPRS  
WCDMA / WiBro / WiMAX / LTE
- ▶ W-LAN / DMB / ISM
- ▶ CATV / DBC
- ▶ RFID / Fixed Wireless








## Package

- ▶ SOT-363
- ▶ SOT-89

## Description

The PS Series are a high performance InGaP HBT MMIC Amplifier and consist of Darlington pair amplifiers. The PS Series feature high linear performance, wideband operation and high reliability. The PS Series operate from a single voltage supply and require only two DC-blocking capacitors, a bias resistor and an inductor for operation. The device is a general purpose buffer amplifier that offers high dynamic range in a low cost surface-mounted plastic package.

## PS Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PS103-63	5~3000	75	22.6	9.3	22.3	2.1	4.5	3.35	21	
		900	21.0	8.5	21.2	2.1				
		1900	18.6	8.5	21.2	2.2				
		2300	17.6	8.4	20.5	2.2				
PS204-63	5~3000	75	23.4	14.0	27.2	2.1	4.5	3.47	34	
		900	21.8	13.1	26.0	2.1				
		1900	19.4	11.3	23.0	2.2				
		2300	18.3	10.3	21.5	2.2				
PS205	5~3000	75	23.7	15.5	29.0	2.1	4.5	3.53	45	
		900	22.2	15.0	27.7	2.3				
		1900	19.3	11.5	24.4	2.3				
		2300	18.2	10.5	22.8	2.3				
PS401	5~3000	75	23.5	14.0	27.5	2.0	4.5	3.45	35	
		900	22.2	13.0	26.4	2.1				
		1900	19.6	11.0	23.4	2.3				
		2300	18.0	10.0	21.3	2.4				
PS404	5~3000	75	23.9	15.0	30.3	2.0	4.5	3.5	45	
		900	22.5	15.0	28.2	2.2				
		1900	19.5	12.0	23.8	2.3				
		2300	17.5	11.0	21.5	2.4				
PS401	5~3000	75	19.5	16.0	34.0	2.3	4.5	3.7	60	
		900	19.0	15.0	29.5	2.5				
		1900	17.8	12.0	23.5	2.6				
		2300	17.0	11.0	21.0	2.7				
PS404	5~3000	75	24.0	16.0	32.5	2.1	4.5	3.64	59	
		900	22.4	15.0	29.2	2.3				
		1900	19.7	13.0	24.3	2.4				
		2300	18.2	11.0	22.2	2.5				



# Medium Power Amplifier



## Features

- ▶ InGaP HBT Medium Power
- ▶ Single Voltage Supply
- ▶ Lead-free / Green  
RoHS compliant package

## Applications

- ▶ Broadband Medium Power
- ▶ Mobile Infrastructure
- ▶ Cellular / PCS / GSM /GPRS  
WCDMA / WiBro / WiMAX / LTE
- ▶ W-LAN / ISM
- ▶ RFID / Fixed Wireless






## Package

- ▶ SOT-89
- ▶ SOIC-8

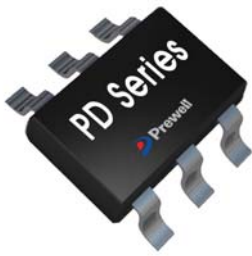
## Description

The PH & PNH Series are a high performance InGaP HBT MMIC Amplifier and high linearity driver amplifier in high quality surface-mounted plastic packages. The PH & PNH Series feature excellent input/output return loss and high linear performance. The device can be easily matched to obtain optimum power and linearity. The products are targeted for using as driver and power amplifier for wireless infrastructure applications. The PH & PNH Series operate from a single voltage and have an internal active bias.

## PNH & PH Series

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	NF dB	Vcc V	Vd V	Id mA	Package
PNH15	5~3000	900	20.5	23.4	40.0	3.9	5.0	5.0	78	
		1900	15.5	23.6	40.0	3.6				
		2600	13.0	23.5	40.0	4.0				
PH330	500~3000	500	20.0	22.5	40.0	5.0	5.0	5.0	110	
		900	18.5	22.5	41.0	3.7				
		1900	14.5	22.5	41.5	3.0				
		2140	13.8	23.0	41.0	3.0				
		2300	13.0	24.0	41.0	3.1				
2600	15.0	23.5	40.0	3.0						
PH480	1500~3000	1950	15.2	27.0	44.0	3.3	5.0	5.0	130	
		2140	14.6	27.0	43.0	3.3				
PH630-S8	800~3000	900	19.0	31.1	48.0	4.5	5.5	5.5	350	
		1900	14.5	30.7	48.5	4.5				
		2140	13.7	30.5	48.5	4.3				
		2350	12.8	30.5	48.0	4.3				
PH830-S8	800~2300	900	17.0	33.0	48.5	5.0	5.5	5.5	785	
		1950	10.5	33.0	48.0	5.3				
		2140	10.0	33.0	48.0	5.5				

# Divider & Splitter



## Features

- ▶ Low-Insertion Loss
- ▶ High Isolation
- ▶ Exceptional amplitude phase balance
- ▶ Lead-free / Green RoHS compliant package

## Applications

- ▶ Mobile Infrastructure
- ▶ Cellular / PCS / GSM WCDMA / WiBro / WiMAX / LTE
- ▶ W-LAN / ISM
- ▶ RFID / Fixed Wireless

## Package

- ▶ SOT-26
- ▶ Bobin-Type

## Description

The PD Series & PBS Series are a high performance Divider/Splitter in a high quality SOT-26 package & surface mounted package. The device feature low insertion loss and high isolation. The device have a good input/output matching and exceptional amplitude/phase balance. The product is targeted for using as wireless infrastructure applications.

## PD Series

*\* Insertion Loss is less 3dB split*

Part Number	BANDWIDTH MHz	Frequency MHz	Insertion Loss dB	Isolation dB	Amplitude Balance dB	Phase Balance deg	Package
PD09A	700~1000	700	0.83	18.0	0.00	0.03	
		800	0.88	26.5	0.00	0.12	
		900	0.99	20.1	0.01	0.01	
		1000	1.17	14.4	0.02	0.11	
PD18A	1500~2300	1500	0.60	14.7	0.07	0.01	
		1900	0.62	26.2	0.04	0.05	
		2100	0.77	20.5	0.02	0.13	
		2300	0.97	15.9	0.01	0.56	
PD26A	1800~3000	1800	0.79	14.0	0.01	0.33	
		2300	0.79	22.1	0.02	0.26	
		2600	0.84	22.1	0.01	0.43	
		3000	1.07	16.0	0.02	0.75	

## PBS Series

*\* Insertion Loss is less 3dB split*

Part Number	BANDWIDTH MHz	Frequency MHz	Insertion Loss dB	Isolation dB	Amplitude Balance dB	Phase Balance deg	Package
PBS10A	5~1000	5	0.19	31.4	0.09	0.11	
		10	0.19	31.7	0.11	0.16	
		200	0.24	27	0.17	1	
		600	0.43	22	0.1	2.3	
		800	0.52	20.9	0.02	2	
		1000	1	20.1	0.15	4	
PBS30A	50~3000	50	0.55	17.0	0	0.15	
		400	0.6	29.8	0.02	0.69	
		800	0.7	38.2	0.06	1.02	
		2000	1.48	19.0	0.17	2.04	
		2600	1.91	16.1	0.1	1.58	
		3000	1.54	13.2	0.06	0.65	



## Features

- ▶ Good Phase Balance
- ▶ Surface Mount
- ▶ RoHS-Compliant transformer
- ▶ Low Cost
- ▶ Broadband

## Applications

- ▶ Impedance Matching
- ▶ Balanced Amplifier
- ▶ Balun

## Package

- ▶ Lid-Type
- ▶ Bobin-Type

## Description

The Transformer is a RoHS compliant RF flux coupled transformer in a low cost and broadband. The Applications include impedance matching and balanced amplifier. The Transformer is surface mounted package and designed for high temperature soldering reflow.

## Transformer

*\* Insertion Loss is less 3dB split*

Part Number	BANDWIDTH MHz	Frequency MHz	Insertion Loss dB	Input Return Loss dB	Amplitude Balance dB	Phase Balance deg	Package
PB1T1A	1~500	10	0.47	15.7	0.05	0.2	
		50	0.46	15.6	0.02	0.0	
		200	0.23	16.0	0.28	1.0	
		400	0.14	12.0	0.83	0.7	
		500	0.74	8.6	1.54	1.0	
PB4T1A	1~500	10	0.09	15.7	0.01	0.2	
		50	0.01	16.7	0.00	0.2	
		250	0.22	23.5	0.15	2.3	
		400	0.59	17.1	0.47	5.4	
		500	1.14	11.1	0.83	8.7	
PBI11A	1~500	1~5	0.31	18.3	0.00	0.1	
		5~250	1.35	13.0	0.04	1.6	
		250~500	2.18	6.7	0.33	0.6	
PBI21A	3~300	3~10	0.39	25.8	0.02	1.0	
		10~150	0.63	18.7	0.14	1.0	
		150~300	0.94	10.1	0.76	1.0	
PBI41A	1~350	1~10	0.98	17.7	0.00	3.0	
		10~150	0.96	19.4	0.00	3.0	
		150~356	1.40	15.7	0.38	3.0	
PBR11S	4.5~3000	4.5	0.20	30.5	0.70	3.8	
		50	0.20	30.0	0.60	0.2	
		100	0.25	29.5	0.60	0.3	
		500	0.50	19.5	0.50	0.9	
		1000	0.70	15.5	0.30	1.7	
		2000	1.20	16.5	0.70	1.4	
		3000	3.30	6.5	0.60	14.0	
PBR41S	500~2500	500	0.50	23.0	0.10	2.1	
		1000	0.60	15.0	0.40	5.3	
		2000	1.62	8.5	0.50	8.5	
		2500	2.10	8.5	0.40	7.0	

# CATV Amplifier



## Features

- ▶ InGaP HBT CATV Amplifier
- ▶ p-HEMT CATV Amplifier
- ▶ Lead-free / Green  
RoHS compliant package

## Applications

- ▶ Headend Driver Amplifier
- ▶ Predriver Amplifier
- ▶ Line Driver Amplifier
- ▶ Optic Transceiver
- ▶ Active Splitter
- ▶ MOCA
- ▶ FTTH Application






## Package

- ▶ SOT-363
- ▶ SOT-89
- ▶ SOIC-8
- ▶ DFN-8L












## Description

The CATV Amplifier Series are a high performance InGaP HBT MMIC, GaAs p-HEMT MMIC Amplifier and consist of Darlington pair amplifiers with temperature compensation that is internally matched 75Ω input/output. The device feature high gain, high linear performance and high reliability as a CATV amplifier and provide stable current variation over temperature. The device operate from a single voltage supply and require minimal external components, a bias resistor and an inductor for operation. The purpose of using CATV amplifier is that offers high dynamic range in a low cost surface-mounted plastic packages.





## Reverse

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	Condition	NF dB	Vcc V	Vd V	Id mA	Package
PS401	5~100	5	19.5	14.4	33.2	+5dBm/ tone, 1MHz Spacing	2.3	4.5	3.7	50	
		50	19.5	14.7	33.0		2.2				
		100	19.5	15.2	32.5		2.2				
PS404	5~100	5	23.9	14.7	33.0	+5dBm/ tone, 1MHz Spacing	1.9	4.5	3.6	45	
		50	23.9	15.2	32.5		1.9				
		100	23.7	15.5	32.0		1.9				
PW125	5~100	5	23.0	16.5	36.5	+5dBm/ tone, 1MHz Spacing	2.5	5.0	4.5	95	
		50	23.0	17.0	37.0		2.5				
		100	22.8	17.5	35.0		2.5				
PW450	5~100	5	18.5	17.2	34.0	+5dBm/ tone, 1MHz Spacing	3.5	5.0	4.94	60	
		50	18.5	17.7	35.0		3.5				
		100	18.5	17.9	33.5		3.5				
PW128	5~100	5	21.7	23.1	37.9	+5dBm/ tone, 1MHz Spacing	5.2	5.0	4.5	220	
		50	21.7	23.7	43.0		4.9				
		100	21.7	24.1	42.5		4.7				





## Forward

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	CSO dBc	CTB dBc	Condition	NF dB	Vcc V	Vd V	Id mA	Package
PS401	45~1000	50	19.0	62.0	76.0	+15dBmV/ 132ch Flat	2.2	4.5	3.7	60	
		450	19.0	66.0	76.0		2.3				
		870	19.0	67.0	76.0		2.3				
PS404	45~1000	50	23.0	57.0	77.0	+15dBmV/ 132ch Flat	1.9	4.5	3.6	59	
		450	23.0	61.0	77.0		2.1				
		870	22.5	66.0	75.0		2.1				
PW125	45~1000	50	21.5	57.0	82.0	+25dBmV/ 132ch Flat	2.8	5.0	4.5	120	
		450	21.5	54.0	72.0		2.8				
		870	21.0	55.0	71.0		2.8				
PW450	45~1000	50	18.1	55.0	82.0	+25dBmV/ 132ch Flat	3.5	5.0	4.94	69	
		450	18.1	54.0	72.0		3.5				
		870	17.8	61.0	71.0		3.5				
PW470	45~1000	50	15.9	55.0	82.0	+25dBmV/ 132ch Flat	3.7	5.3	5.0	69	
		450	15.9	56.0	77.0		3.7				
		870	15.7	65.0	75.0		3.5				
PW510	45~1000	50	20.8	55.0	82.0	+25dBmV/ 132ch Flat	3.3	6.0	5.4	85	
		450	20.7	57.0	77.0		3.5				
		870	20.5	64.0	77.0		3.5				
PW113	45~1000	50	21.0	58.0	73.0	+25dBmV/ 132ch Flat	3.9	5.0	4.7	88	
		450	21.0	59.0	72.0		3.9				
		870	20.5	65.0	70.0		4.0				
PW114	45~1000	50	18.5	61.0	74.0	+25dBmV/ 132ch Flat	3.9	5.0	4.8	86	
		450	18.5	59.0	73.0		3.9				
		870	18.5	62.0	70.0		3.8				
PW115	45~1000	50	15.1	62.0	75.0	+25dBmV/ 132ch Flat	4.1	5.0	4.78	86	
		450	15.1	61.0	73.0		4.1				
		870	15.1	64.0	71.0		4.1				
PK831	45~1000	50	17.3	66.0	75.0	+30dBmV/ 132ch Flat	2.0	5.0	5.0	125	
		450	17.2	63.0	73.0		1.9				
		870	17.2	70.0	72.0		2.0				
PW128	45~1000	50	16.3	68.0	74.0	+35dBmV/ 132ch Flat	4.9	5.0	4.5	235	
		450	17.1	65.0	68.0		5.3				
		870	16.5	63.0	63.0		5.8				


## Satellite Amplifier

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	Condition	NF dB	Vcc V	Vd V	Id mA	Package
PW210	950~2150	950	21.0	16.0	30.4	0dBm/ tone, 1MHz Spacing	3.0	5.0	4.74	46	
		1500	20.1	15.7	30.3		3.0				
		2150	19.0	15.7	30.3		3.0				
PW350	950~2150	950	16.7	17.6	33.5	+3dBm/ tone, 1MHz Spacing	3.3	5.3	4.84	58	
		1500	16.4	16.5	30.5		3.5				
		2150	15.9	15.7	29.0		3.6				
PW550	950~2150	950	18.2	20.0	37.5	+3dBm/ tone, 1MHz Spacing	3.5	6.0	5.35	85	
		1500	17.2	19.0	34.5		3.7				
		2150	16.2	18.0	33.1		3.8				
PK833	950~2150	950	17.5	20.0	39.0	+5dBm/ tone, 1MHz Spacing	2.0	5.0	5.0	125	
		1500	17.5	20.0	38.5		2.2				
		2150	17.5	20.0	38.0		2.5				

## Set Top Box LNA

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	P1dB dBm	OIP3 dBm	Condition	NF dB	Vcc V	Vd V	Id mA	Package
PS205	950~2150	950	22.2	13.0	26.4	0dBm/ tone, 1MHz Spacing	2.1	4.5	3.5	35	
		1500	19.6	11.0	23.4		2.3				
		2150	18.0	10.0	21.3		2.4				
PW210-63	950~2150	950	21.0	15.2	29.4	-3dBm/ tone, 1MHz Spacing	2.9	5.0	4.65	44	
		1500	18.8	15.3	29.5		3.0				
		2150	17.8	15.8	29.0		3.1				
PW250-63	950~2150	950	18.4	15.1	29.8	-3dBm/ tone, 1MHz Spacing	3.2	5.0	4.7	44	
		1500	17.0	15.2	29.5		3.3				
		2150	16.1	15.5	28.7		3.3				
PW290-63	950~2150	950	13.6	15.1	31.0	-3dBm/ tone, 1MHz Spacing	3.5	5.0	4.3	45	
		1500	13.4	15.0	30.0		3.6				
		2150	12.8	15.0	28.5		3.7				

## Set Top Box Active Splitter

Part Number	BANDWIDTH MHz	Frequency MHz	Gain dB	CSO dBc	CTB dBc	Condition	NF dB	Vcc V	Vd V	Id mA	Package
PSC13A	50~1000	50	3.3	61.0	61.0	+15dBmV/ 132ch Flat	2.2	5.0	5.0	130	
		500	3.3	58.0	61.0		2.5				
		850	3.3	58.0	28.5		2.6				