

# ENABLE YOUR 5G PROJECTS WITH UMS

## GaN & GaAs Products & Foundry solutions



sub-6GHz  
& mmwave  
Fronthaul



Fixed Wireless  
Access  
28, 39GHz



Test &  
Measurement



Satellite  
Backhaul



PiP  
Backhaul  
6-86GHz

## Innovative design

- RF Front End 24-30GHz
- Mixed technologies GaAs/GaN
- System in Package (SiP)
- Linear High Power Amplifiers
- Very Low Noise Amplifiers
- Fast & high isolation switches

## Technologies

### GaN

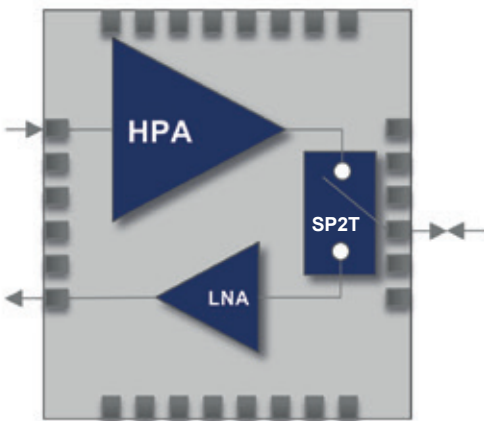
- GH15 High power up to 40GHz
- GH25 High power up to 20GHz

### GaAs

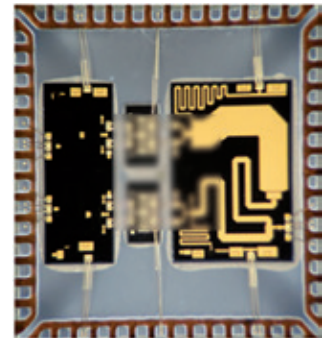
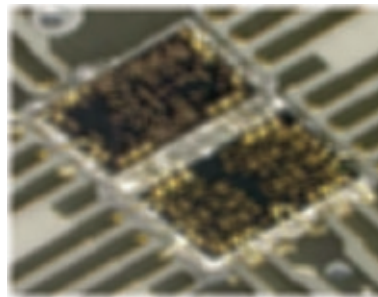
- ULRC passive process for power solutions
- PH10 Low Noise up to 100GHz
- PPH15X-20 Power up to 45GHz

## Products

- Linear MPA & HPA up to 43.5GHz
- E-Band: MPA, LNA, Mixers
- Switches up to 26GHz
- Integrated TRx



Surface mount SiP



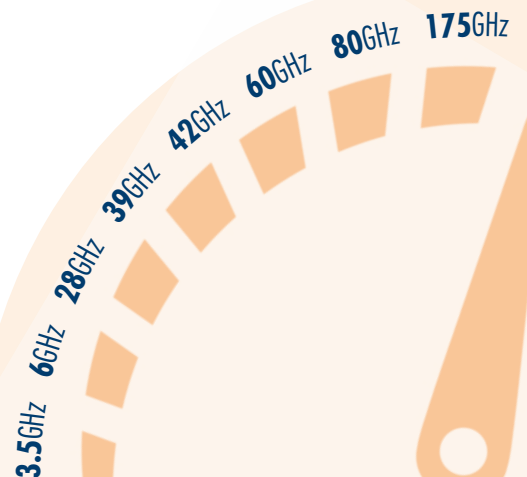
## Package

- QFN from 3x3mm to 8x8mm
- MSL 1, 2, 3



Build your own solution with UMS

[www.ums-gaas.com](http://www.ums-gaas.com)



# Building blocks for your 5G projects

## BUILDING BLOCKS FOR SUB 6GHZ (FR1)

MPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	OP1dB (dBm)
CHA4220-QGG	0.5-20	17	28	20
CHA4105-QDG	2-4	23	-	24
CHA3024-QGG	2-22	15	28	18

GaN Internally matched transistors	Freq (GHz)	Small signal Gain (dB)	Power(W)	PAE %
CHZ8012-QJA	2.6-3.4	16.5	12	54
CHZ9012-QFA	2.7-3.4	16	65	55

GaN Power transistors	Freq (GHz)	Gain (dB) @ Freq (GHz)	Power (W)	PAE % @ Freq (GHz)
CHK015AaQIA	Up to 6	13@6	15	50@6
CHK8101-99F	Up to 6	14@6	20	60@6
CHK9013-99F	Up to 8	18@6	88	65@6

VVA	Freq (GHz)	Ins. Loss (dB)	ATT. range (dB)	IP1dB (dBm)
CHT3091aQAG	DC-12	3	20	15
CHT4660-QAG	DC-16	2	30	24

## BUILDING BLOCKS FOR 6-8GHZ

LNA	Freq (GHz)	Gain (dB)	IP3 (dBm)	OP1dB (dBm)
CHA3656-QAG	6-17	20	-	14

MPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	OP1dB (dBm)
CHA4220-QGG	0.5-20	17	28	20
CHA3024-QGG	2-22	15	28	18

GaN Power transistors	Freq (GHz)	Gain (dB) @ Freq (GHz)	Power (W)	PAE % @ Freq (GHz)
CHK8013-99F	Up to 10	18@6	15	65@6

VVA	Freq (GHz)	Ins. Loss (dB)	ATT. range (dB)	IP1dB (dBm)
CHT4660-QAG	DC-16	2	30	24

## BUILDING BLOCKS FOR 24-30GHZ

LNA	Freq (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)
CHA3688aQDG	12.5-30	26	2	14
CHA2069-QDG	18-31	20	3	10.5
CHA2362-98F	26-40	22	2	9

MPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	OP1dB (dBm)
CHA3395-QDG	21-29.5	24	32	20
CHA3396-QDG	27-33.5	22	30	19

HPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	Psat (dBm)
CHA6652-QXG	21-27.5	20	41	33
CHA6653-QXG	27-33.5	20	38	33

VVA	Freq (GHz)	Ins. Loss (dB)	ATT. range (dB)	IP1dB (dBm)
CHT4694-QAG	25-40	4	22	22

## BUILDING BLOCKS FOR 37-43.5GHZ

LNA	Freq (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)
CHA1294-QAG	31-43.5	14	2.5	11.5
CHA2494-QEG	34-44	22	3	12

MPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	P-1dB (dBm)
CHA3397-QDG	36-40.5	21	29	18
CHA3398-98F	36-43.5	22	29	18
CHA3398-QDG	38-43.5	22	29	18

HPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	Psat (dBm)
CHA6194-QXG	37- 40	20	38	31
CHA5659-QXG	36-43.5	20	38.5	30
CHA5659-98F	36-43.5	22	38.5	30.5

VVA	Freq (GHz)	Ins. Loss (dB)	ATT. range (dB)	IP1dB (dBm)
CHT4699-QDG	36-44	4	30	20

## BUILDING BLOCKS FOR V-BAND

LNA	Freq (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)
CHA2157-99F	55-60	10	3.5	15
CHA2159-99F	55-66	20	-	14

Mixer	Freq (GHz)	Freq LO (GHz)	Conv gain (dB)	IP1dB (dBm)
CHM1298-99F	55-65	27-35	-11	0

## BUILDING BLOCKS FOR E-BAND

LNA	Freq (GHz)	Gain (dB)	NF (dB)	OP1dB (dBm)
CHA2080-98F	71-86	22	3.5	10

MPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	OP1dB (dBm)
CHA3080-98F	71-76	16	25	19
CHA3090-98F	81-86	13	23	17

Mixer	Freq (GHz)	Freq LO (GHz)	Conv gain (dB)	IP1dB (dBm)
CHM1080-98F	71-86	34.5-44	-11	10

Additional building blocks on [www.ums-gaas.com](http://www.ums-gaas.com)



Contact us:

**UMS SAS – EMEA,**  
Ph: +33 1 69 86 32 00  
mktsales@ums-gaas.com

**UMS USA, Inc. - America,**  
Ph: +1 781 791 5078  
philippe.labasse@us.ums-gaas.com

**UMS - Asia,**  
Ph: +86 21 6103 1703  
xavier.taltasse@ums-gaas.com

Worldwide distributor:  
Richardson RFPD  
www.richardsonrfpd.com

[www.ums-gaas.com](http://www.ums-gaas.com)

