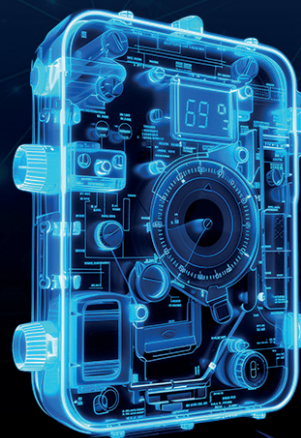


Leading Heritage & Innovation for T&M



UMS propose innovative solutions for high quality test equipments
and challenging applications ranging from DC to THz

Lab Equipment • Portable Field Test •
Over The Air Measurement Systems • Production Automated Test Equipment

Technologies

Full Foundry services

GaN/SiC HEMT process

- GH25: DC to 20GHz
- GH15: DC to 45GHz

GaAs process

- PPH15x pHEMT linear Power
- BES Schottky diode to THz
- PH15/10 pHEMT Low Noise
- ULRC passive

Plastic Package

- QFN 3x3 to 8x8mm²
- DFN 2x2mm² to 3x4mm²
- SiP

Catalog Off the Shelf

Wideband MMIC's

- Detector up to 44GHz
- Switches up to 26GHz
- Linear Atten. up to 45GHz
- Digital Atten. up to 35GHz
- LNA up to 105GHz
- MPA up to 86GHz
- Wilkinson 8 to 35GHz

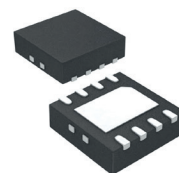
Sub-band

- Front-End 26/28/39GHz

ASIC on demand

Innovations

- New 1.3dB NF LNA 11-18GHz
- New 1.3dB NF LNA 24-32GHz
- New MPA 24-30GHz
- Multi-band chipsets for 5G
- Ultra compact power dividers



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Solutions for Test & Measurement

FOR DC-6GHz

GaN Transistor	Freq (GHz)	small signal Gain (dB) @ freq (GHz)	Power (W)	PAE % @ Freq (GHz)
CHK015AaQIA	Up to 4	18@3	20	55@3

MPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	OPI dB (dBm)
CHA4220-QGG	0.5-20	17	28	20

HPA	Freq (GHz)	Gain (dB)	OPI dB (dBm)	Psat (dBm)
CHA6015-99F	2-8	18.5	36.5	37.5

VVA	Freq (GHz)	Ins. Loss (dB)	Amplitude Ctr1 (dB)	IPI dB (dBm)
CHT4660-QAG	DC-16	2	30	24

Att. Digital	Freq (GHz)	Ins. Loss (dB)	ATT.range (dB)	IPI dB (dBm)
CHT4012-QDG	DC-6	2.5	-0.7/+0.4	20

Switch	Freq (GHz)	Ins. Loss (dB)	IP-I dB (dBm)	Isolation (dB)
CHS5105-QAG	DC-4	0.5	30	35
CHS7012-99F	DC-12	1.4	40.5	35

FOR 6-24GHz



LNA/MPA	Freq (GHz)	Gain (dB)	NF (dB)	OPI dB (dBm)
CHA3024-QGG	2-22	15	3	18
CHA4350-QDG	5.5-11.7	26	5.5	24
CHA5618-99F	6-18	22	-	26
CHA1252-QDG	11-18	26	1.3	7

HPA	Freq (GHz)	Gain (dB)	PAE%	Psat (dBm)
CHA7618-99F	5-18	30	20	40
CHA8618-99F	6-18	33	26	42.5
CHA7063-QCB	12.7-20	20	26	37

Power Detector	Freq (GHz)	Ins. Loss (dB)	Dyn range (dB)	Type
CHE1260-QAG	10-27	1	30	Bidirectionnal

VVA	Freq (GHz)	Ins. Loss (dB)	Amplitude Ctr1 (dB)	IPI dB (dBm)
CHT4690-QAG	5-30	4	31	25

Att. Digital	Freq (GHz)	Ins. Loss (dB)	ATT. range (dB)	IPI dB (dBm)
CHT3029-QEG	DC-30	5	+/-0.5	20

Switch	Freq (GHz)	Ins. Loss (dB)	Isolation (dB)	IPI dB (dBm)
CHS5100-99F	DC-20	2.1	30	20
CHS8618-99F	6-18	1.3	34	42
CHS2411-QDG	23-26	2.9	35	23.5

Power Div.	Freq (GHz)	Ins. Loss (dB)	Isolation (dB)	Return Loss (dB)
CHW4212-QKA	8-22	0.5	20	>20
CHW4213-QAG	15-25	0.5	20	>18

Check all 24GHz products

FOR 24-50GHz



LNA	Freq (GHz)	Gain (dB)	NF (dBm)	OPI dB (dBm)
CHA1351-QAG	24-32	24	1.3	5
CHA2362-98F	26-40	22	2	9

MPA	Freq (GHz)	Gain (dB)	IP3 (dBm)	OPI dB (dBm)
CHA4396-QDG	24-30	22	-	21
CHA3409-98F	25-45	23	26	19

VVA	Freq (GHz)	Ins. Loss (dB)	Amplitude Ctr1 (dB)	IPI dB (dBm)
CHT4699-QDG	36-44	4	30	20

Power Div.	Freq (GHz)	Ins. Loss (dB)	Isolation (dB)	Return Loss (dB)
CHW4312-QKA	22-34	0.75	20	>15
CHW4313-QAG	24-35	0.6	20	>16

Front End	Freq (GHz)	Gain RX (dB)	Gain TX (dB)	Psat TX (dBm)	Case
CHC6054-QQA	24-30	18	28	31	QFN
CHC6094-QDG	37-41	24	23	33	QFN

FOR 50-71GHz

LNA	Freq (GHz)	Gain (dB)	NF (dB)	OPI dB (dBm)
CHA2352-98F	46-52	21	3.5	12
CHA2368-98F	50-71	20	3.5	10
CHA2159-99F	55-65	20	4	14

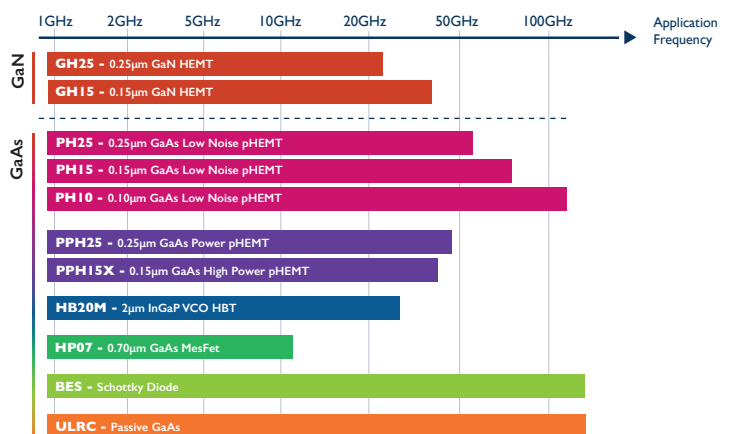
FOR 71-105GHz

LNA	Freq (GHz)	Gain (dB)	NF (dB)	OPI dB (dBm)
CHA2080-98F	71-86	21	3.5	12
CHA1077a98F	76-77	15	4.5	9
CHA1008-99F	80-105	17	6.5	5

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

Mixer	Freq (GHz)	Freq LO (GHz)	Conv. Gain (dB)	IPI dB (dBm)
CHM1080-98F	71-86	34.5-44	-11	10
CHR1080a98F	71-86	34.5-44	8	-10

FOUNDRY PROCESSES



Additional building blocks on www.ums-rf.com