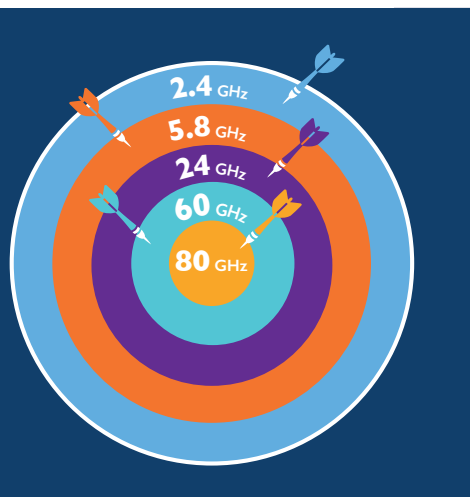




Best in Class Signal/Noise Ratio offering Widest Detection Range
High output power • Low Phase Noise • Low consumption

On board with UMS

Farming Drone

- Agricultural Revolution with Smart sensors
- Wider range capability
- Detection accuracy
- Altimeter sensor
- Collision avoidance



Smart City

- Road tolling
- Free flow
- Long lifetime

Medical Treatment

- Accurate radio location of cancer tumor with RF
- Guiding by Sensing
- Superior speed/accuracy with RF GaAs FET + antenna in smart pill

Speed Detection

- Hight accuracy
- Long Range
- Multi Lane
- Traffic Control
- Portable Sport Radar

LNA 24GHz

- Low Noise 1.3dB
- High Gain 24dB
- Low DC 2V@30mA
- QFN 3x3

60GHz LNA

- Low Noise 3.5dB
- High Gain 20dB
- Variable Gain 15dB
- Low DC 3.3V@75mA
- Die

LNA 80GHz

- Low Noise 3.5dB
- High Gain 20dB
- Variable Gain 12dB
- Low DC 3.5V@85mA
- Die

24GHz SP4T 4 channel Switch

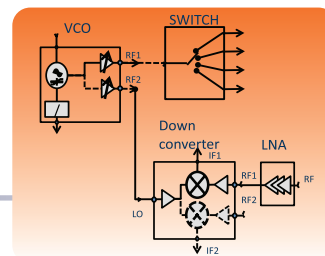
- Low loss
- High Isolation >35dB
- High speed <30ns
- -40 to +125°C operation
- QFN4x4 - MSLI

24GHz Dual Tx VCO & Dual Rx chipset

- High Output Power 16dBm
- Embedded functionality
- +5V supply voltage
- -40 to +105°C operation
- QFN4x4 - MSLI



Building blocks for Wide Detection Range



AMPLIFIER MPA

Part Number	RF Bandwidth (GHz)	Gain (dB)	Gain Flatness (+/-dB)	Noise Figure (dB)	P-1dB OUT (dBm)	Bias (mA)	Bias (V)	Case
CHA4105-QDG	2-4	23	-	-	24	180	5	QFN

GAAS TRANSISTOR

Part Number	RF Bandwidth (GHz)	Gain (dB)	Noise Figure (dB)	Case
EC2612-99F	DC-40	9.5@40GHz	1.5@40GHz	Die

SWITCH

Part Number	RF Bandwidth (GHz)	Loss (dB)	P-1dB IN (dBm)	Isolation (dB)	Type	Case)
CHS5105-QAG	DC-4	0.5	30	35	Reflective	QFN

AMPLIFIER

Part Number	RF Bandwidth (GHz)	Gain (dB)	Gain Flatness (+/-dB)	Noise Figure (dB)	P-1dB OUT (dBm)	Bias (mA)	Bias (V)	Case
CHA3656-QAG	6-17	20	+/- 0.5	1.7	14	68	3	QFN
CHA4107-QDG	4.5-6.5	22	-	-	25.5	120	8	QFN

GAN POWER TRANSISTOR

Part Number	Operating Frequency (GHz)	Glin (dB)@Freq (GHz)	Saturated power (W)	PAE (%) @ Freq (GHz)	Bias (A)	Bias (V)	Case
CHKA012bSYA	Up to 6	19 @ 1.3	130	58 @ 1.3	0.6	50	Hermetic Ceramic Metal Flange

AMPLIFIER - LNA

Part Number	RF Bandwidth (GHz)	Gain (dB)	Gain Flatness (+/-dB)	Noise Figure (dB)	P-1dB OUT (dBm)	Bias (mA)	Bias (V)	Case
CHA2441-QAG*	22-26	25.5	+/-0.25	2.5	-	43	5	QFN
CHA1351-QAG	24-32	24	-	1.3	5	30	2	QFN

*Automotive qualified products

AMPLIFIER - HPA / MPA

Part Number	RF Bandwidth (GHz)	Gain (dB)	IP3 (dBm)	P-1dB OUT (dBm)	Sat. Output Power (dBm)	PAE (%)	Bias (mA) @ (V)	Case
CHA6652-QXG	21-27.5	20	41	32.5	33	25 @ Psat	1300 @ 6	QFN
CHA3395-QDG	21-30	24	32	20	22	18 @ Psat	180 @ 4	QFN
CHA4396-QDG	24-30	21	31	21	23	17 @ Psat	230 @ 4	QFN

RECEIVER - RX: 1 & 2 CHANNELS

Part Number	RF Bandwidth (GHz)	LO Bandwidth (GHz)	IF Bandwidth (GHz)	Conv. Gain (dB)	Noise Figure (dB)	P-1dB IN (dBm)	LO Input Power (dBm)	Bias (mA)	Bias (V)	Case
CHR2411-QDG	22-24.5	22-24.5	DC-0.001	23	7	-21	5	60	5	QFN
CHR2421-QEG	23.75-24.5	23.75-24.5	DC-0.001	22	7	-20	2	165	5	QFN

TRANSMITTER - TX: 1 & 2 CHANNELS

Part Number	Central Output Freq (GHz)	Tuning Bandwidth (GHz)	Noise @ 100KHz (dBc/Hz)	Output Power (dBm)	Bias (mA)	Bias (V)	Case
CHV2411aQDG	24.125	2	-90	16	220	5	QFN
CHV3241-QDG	24.125	2	-94	16	225	5	QFN
CHV2421-QDG	24.25	2	-90	15	233	5	QFN

SWITCH - SP4T

Part Number	RF Bandwidth (GHz)	Loss (dB)	P-1dB IN (dBm)	Isolation (dB)	Type	Case
CHS2411-QDG	23-26	2.9	23.5	35	Reflective	QFN

AMPLIFIER - LNA / VGA

Part Number	RF Bandwidth (GHz)	Gain (dB)	Gain Control (dB)	Noise Figure (dB)	P-1dB OUT (dBm)	Bias (mA)	Bias (V)	Case
CHA2368-98F	50-71	21	21	3.5	12	75	3.3	Die
CHA2159-99F	55-65	20	-	4	14	115	3.5	Die

AMPLIFIER - LNA / VGA

Part Number	RF Bandwidth (GHz)	Gain (dB)	Gain Control (dB)	Noise Figure (dB)	P-1dB OUT (dBm)	Bias (mA)	Bias (V)	Case
CHA2080-98F	71-86	22	12	3.5	10	75	3.5	Die