

Best in Class Signal/Noise Ratio offering Widest Detection Range
High output power • Low phase noise • Low consumption
Single Front-End • Automotive Qualified products

New 5.8GHz

- DSRC SiGe Transponder for ITS
- ETSI ES 200 674/ EN 300 674 pattern compatible
- High sensitivity @ low current
- -40 to +90°C operation
- QFN 4x4

New 60GHz

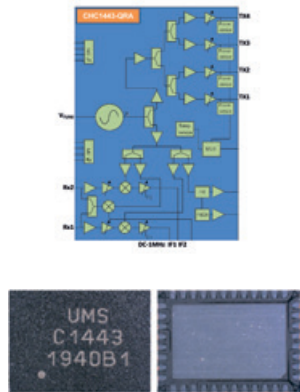
- Low Noise Amplifier
- Variable Gain
- Low Noise 4dB
- High Gain 20dB
- Low DC : 3.3V@75mA
- BGA 3x2.5

New 80GHz

- Low Noise Amplifier
- Variable Gain
- Low Noise 5dB
- High Gain 20dB
- Low DC : 3.5V@85mA
- BGA 4x2.5

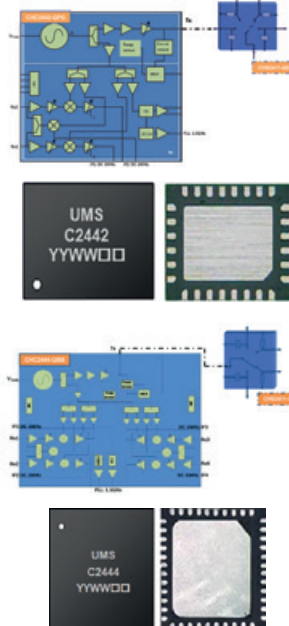
Highly Compact Front End SiP 24GHz Quad Tx/Dual Rx

- Output Power 5dBm/channel
- Integrated switch SP4T
- Low NF SSB 11.5dB@100kHz
- Controlled by SPI
- Low DC: 3.3V@200mA
- -40 to +125°C operation
- QFN5x7 - MSL1



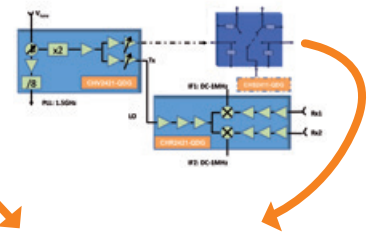
Front-End SiP Tx/Dual Rx & Tx/Quad Rx 24GHz

- High Output Power 13dBm
- Low NF SSB 11.5dB@100kHz
- Controlled by SPI
- DC power: 3.3V@220/315mA
- -40 to +125°C operation
- QFN4x5 & 6x7 - MSL1



Dual Tx VCO & Dual Rx chipset 24GHz

- High Output Power 16dBm
- Embedded functionality
- +5V supply voltage
- -40 to +105°C operation
- QFN4x4 - MSL1



Up to 4 transmit channels with CHS2411-QDG low loss high isolation fast switching SP4T

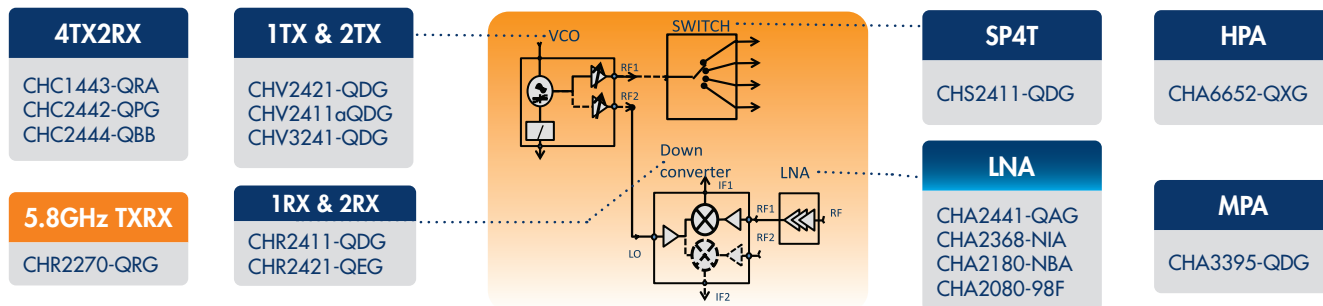


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Building blocks for Wide Detection Range



5.8GHz TRXR

CHR2270-QRG

TRANSPONDER

Part Number	RF Bandwidth (GHz)	Downlink Sensitivity (dBm)	Downlink Freq (KHz)	Uplink Conversion Gain (dB)	Uplink Freq (MHz)	Standby Current (μA)	Case
CHR2270-QRG	5.72-5.88	-44	250-500	-3	DC-30	6.5	QFN

TRANSCEIVER - TRX: 4TR2 / 1 TR2 / 1 TR4

Part Number	RF Bandwidth (GHz)	Gain RX (dB)	Gain TX (dB)	Pout TX (dBm)	NF RX (dB)	Number of Bit Atten.	Bias (mA)	Bias (V)	Case
CHC1443-QRA	24-24.25	37	VCO incl.	5	11.5	4	200	3.3	QFN
CHC2442-QPG*	24-24.5	37	VCO incl.	13.5	11.5	5	225	3.3	QFN
CHC2444-QBB	24-24.5	37	VCO incl.	13	11.5	5	315	3.3	QFN

RECEIVER - RX: R1 & R2

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: 1T & 2T

Part Number	Central Output Freq (GHz)	Tuning Bandwidth (GHz)	Noise @ 100KHz (dBc/Hz)	Output Power (dBm)	Bias (mA)	Bias (V)	Case
CHV2411a-QDG	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 - 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

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

*Automotive qualified products

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
CHA2368-NIA	50-71	20	20	4	12	75	3.3	BGA

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
CHA2180-NBA	71-81	20	11	5.5	-	85	3.5	BGA
CHA2080-98F	71-86	22	12	3.5	10	75	3.5	Die



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