

RF Front End Automotive sensors

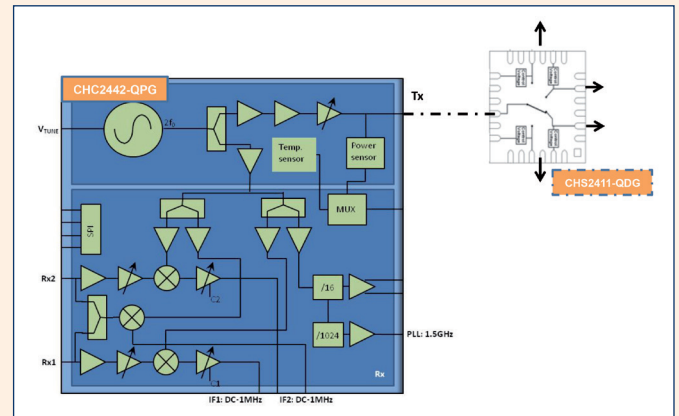
24GHz integrated solutions in volume production since 2007

Fully integrated single component

Single component Tx / dual Rx in SMD plastic package.

- Fully integrated
- Controlled by SPI
- Rx BIT
- Power & temperature sensors
- Low DC power with 3.3 Volt and 220mA.
- Extended temperature range (+125°C)

➔ Tx multi beam access using
the CHS2411-QDG switch



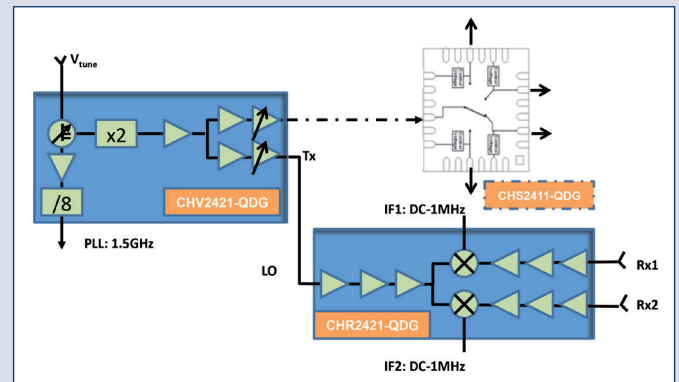
Dual Rx 24GHz sensor chipset

2 component chipset:

Tx & dual Rx in SMD plastic package.

- More embedded functionality
- +5V supply Voltage
- +105°C temperature range

➔ Tx multi beam access using
the CHS2411-QDG switch



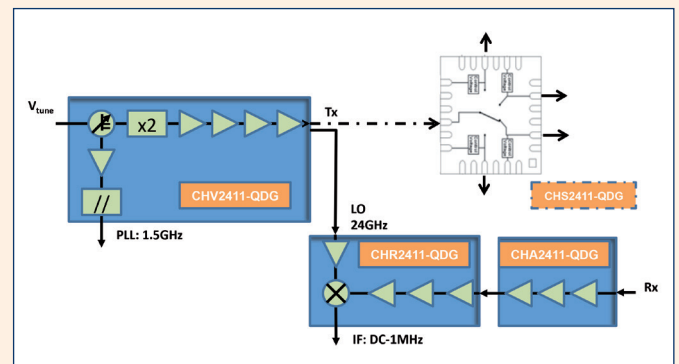
Full 24GHz sensor chipset

3 component chipset:

Tx + Rx + LNA in SMD plastic package

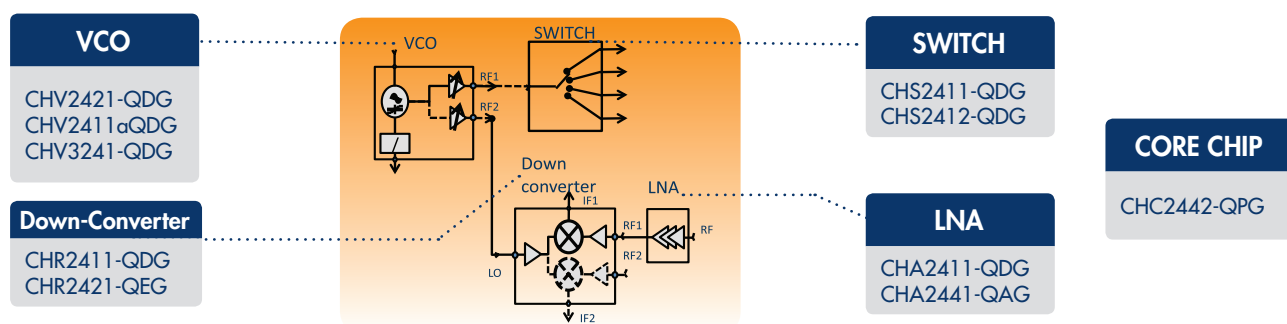
- Totally flexible
- +5V supply Voltage /
- +105°C temperature range

➔ Tx multi beam access using
CHS2411-QDG switch



Build your own solution with UMS

Tailor your circuits with UMS state of the art building blocks



AMPLIFIER – LNA

Part Number	RF Bandwidth (GHz)	Gain (dB)	Gain Flatness (+/-dB)	Noise Figure (dB)	P-1dB OUT (dBm)	Bias (mA)	Bias (V)	Case
CHA2411-QDG	20-25	26	0.5	2.5	-	43	5	QFN
CHA2441-QAG	21-26	25.5	+/- 0.25	2.5	12	50	3.3	QFN

CORE CHIP RX - TX

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
CHC2442-QPG	24-24.5	37	VCO incl.	13.5	11.5	5	225	3.3	QFN
• Rx section	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)
	24.0-24.5	24.0-24.5	DC-0.001	37	11.5	-18	-8	90	3.3
• Tx section	Central Output Freq (GHz)	Tuning Bandwidth (GHz)	Noise @ 100KHz (dBc/Hz)	Output Power (dBm)	Bias (mA)	Bias (V)			
	24.125	2	-90	13.5	135	3.3			

DOWN - CONVERTER

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

OSCILLATOR – VCO

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

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
CHS2412-QDG*	23-26	2.9	23.5	35	reflective	QFN

* Dual source



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