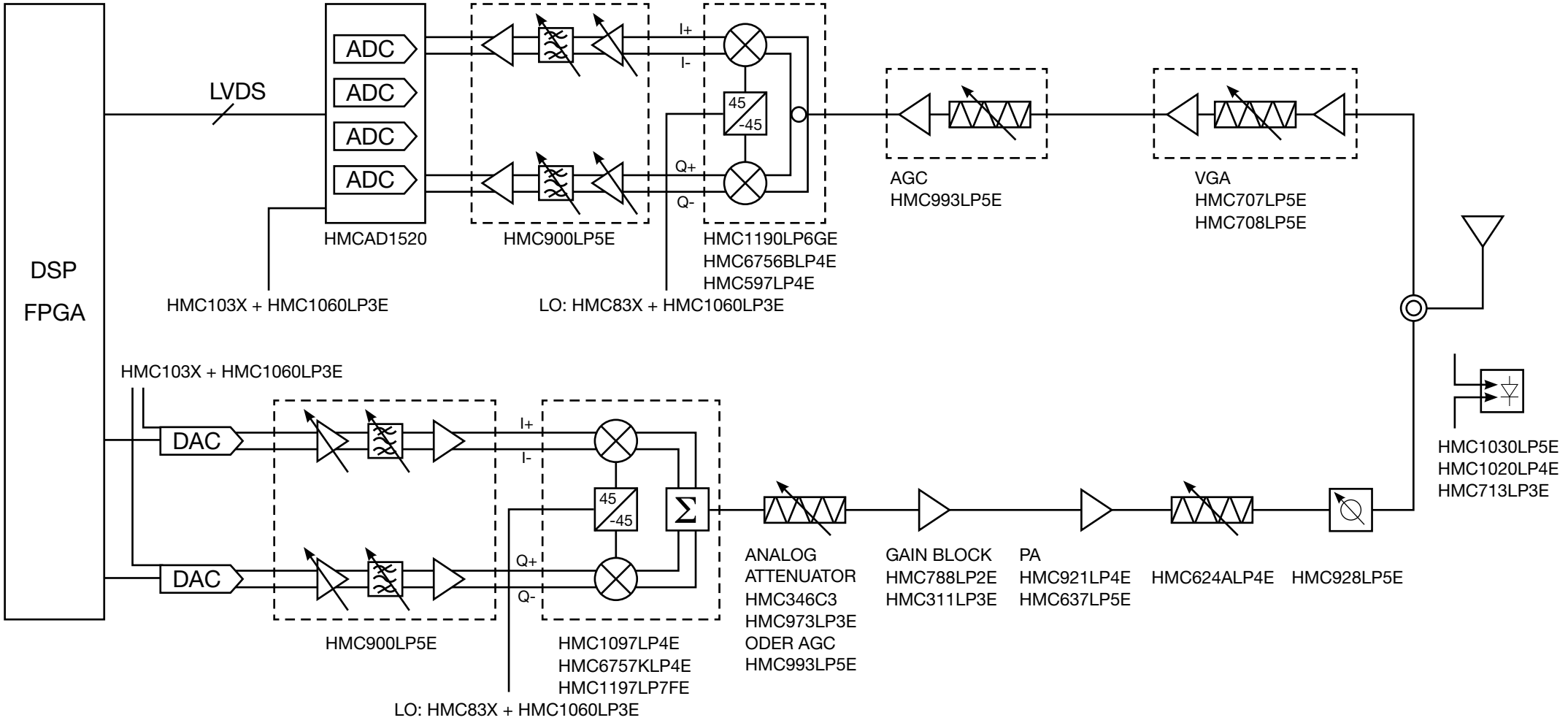
Signalpfad Broadband



TX

HMC900LP5E 50 MHz Dual Baseband Programmable Low Pass Filter	• High linearity: Output IP3 +30 dBm • Programmable Bandwidth: 3.5 to 50 MHz • Exceptional 3 dB Bandwidth Accuracy: ±2.5% • 6th order Butterworth Magnitude & Phase Response • Automatic Filter Calibration
HMC1097LP4E Wideband Direct Quadrature Modulator, 100 - 6000 MHz	• Very Low Noise Floor, -160 dBm/Hz • Excellent Carrier & Sideband Suppression • Very High Linearity, +30 dBm OIP3 • High Output Power, +11 dBm Output P1dB • High Modulation Accuracy
HMC1197LP7FE Wideband Direct Quadrature Modulator w/ Fractional-N PLL & VCO, 100 - 4000 MHz	• Very Low Noise Floor, -160 dBm/Hz • Excellent Carrier & Sideband Suppression • Very High Linearity, +30 dBm OIP3 • High Output Power, +10.5 dBm Output P1dB • High Modulation Accuracy • Maximum Phase Detector Rate: 100 MHz • PLL FOM: -230 dBc/Hz Integer Mode, -227 dBc/Hz Fractional Mode • 160 fs Integrated RMS Jitter (10 kHz to 20 MHz) • External LO Input
HMC6757KLP4E 0.5-4.0 GHz High Linearity Wide-band Direct Modulator	• Very High Linearity, +30 dBm OIP3 • High Modulation Accuracy • Enable/Disable Feature • Base-Band Input Bias: 0.35V • Single Supply: 3.3V • Low Power Dissipation: 180mA Icc
HMC346C3 Voltage Variable Attenuator SMT, DC - 8 GHz	• Wide Bandwidth: DC - 8 GHz • Low Phase Shift vs. Attenuation • 30 dB Attenuation Range • Surface Mount Ceramic Package
HMC973LP3E Voltage Variable Attenuator SMT, 0.5 - 6.0 GHz	• Excellent Linearity: +35 dBm Input IP3 • Wide Attenuation Range: 26 dB • Single Positive Voltage Control: 0 to +5V
HMC993LP5E RF Automatic Gain Controller (RF-AGC), 700 - 3000 MHz	• Wide Gain Control Range: -11 to +32 dB • High Output IP3: +46 dBm • Positive Analog Control: 0V to +5V • Configurable with 1 or 2 Attenuators
HMC788LP2E pHEMT Gain Block Amplifier SMT, DC - 10 GHz	• P1dB Output Power: +20 dBm • Output IP3: +30 dBm • Gain: 14 dB
HMC311LP3E InGaP HBT Gain Block Amplifier SMT, DC - 6 GHz	• P1dB Output Power: +15.5 dBm • Output IP3: +32 dBm • Gain: 14.5 dB
HMC921LP4E GaAs HBT MMIC 2 Watt Power Amplifier, 0.4 - 2.7 GHz	• High Output IP 3: +48 dBm • High Output P1dB: +33 dBm • High Gain: 16 dB @ 900 MHz • Single Supply: +5V • 32% PAE @ +33 dBm Pout
HMC637LP5E 1W Power Amplifier SMT, DC - 6 GHz	• P1dB Output Power: +29 dBm • Gain: 13 dB • Output IP3: +40 dBm
HMC624ALP4E 0.5 dB LSB 6-Bit Digital Attenuator SMT, DC - 6 GHz	• 0.5 dB LSB Steps to 31.5 dB • Power-Up State Selection • High Input IP3: +55 dBm • Low Insertion Loss: 2.2 dB @ 3.5 GHz • TTL/CMOS Compatible,Serial or Parallel Control • ±0.25 dB Typical Step Error • Single +3V or +5V Supply
HMC928LP5E 450° Analog Phase Shifter SMT, 2 - 4 GHz	• Octave Bandwidth: 2 - 4 GHz • 450° Phase Shift • Low Insertion Loss: 3.5 dB • Low Phase Error: ±5° Typ. • Single Positive Voltage Control
HMC1030LP5E Dual RMS Power Detector SMT, Single-Ended, DC - 3.9 GHz	• Crest Factor (Peak-to-Average Power Ratio) Measurement • ±1 dB Detection Accuracy to 3.9 GHz • Input Dynamic Range: -55 dBm to +15 dBm • RF Signal Wave Shape & Crest Factor Independent
HMC1020LP4E RMS Power Detector SMT, Single-Ended, DC - 3.9 GHz	• Broadband Single-Ended RF Input • ±1 dB Detection Accuracy to 3.9 GHz • Input Dynamic Range: -65 dBm to +7 dBm • RF Signal Wave Shape & Crest Factor Independent • Digitally Programmable Integration Bandwidth
HMC713LP3E 54 dB, Logarithmic Detector/ Controller SMT, 50 - 8000 MHz	• Wide Dynamic Range: up to 54 dB • High Accuracy: ±1 dB with 54 dB Range Up To 2.7 GHz • Fast Output Response Time • Supply Voltage: +2.7 to +5.5V

RX

HMC708LP5E **6-Bit Digital Variable Gain Amplifier, 1700 - 2200 MHz**	• -2.5 to 29 dB Gain Control in 0.5 dB Steps • High Output IP3: +37.5 dBm • Low Noise Figure: 1 dB • TTL/CMOS Compatible • Single +3V and +5V Supply
HMC707LP5E **6-Bit Digital Variable Gain Amplifier, 700 - 1200 MHz**	• -2.5 to 29 dB Gain Control in 0.5 dB Steps • High Output IP3: +38 dBm • Low Noise Figure: 0.8 dB • TTL/CMOS Compatible • Single +3V and +5V Supply
HMC993LP5E **RF Automatic Gain Controller (RF-AGC), 700 - 3000 MHz**	• Wide Gain Control Range: -11 to +32 dB • High Output IP3: +46 dBm • Positive Analog Control: 0V to +5V • Configurable with 1 or 2 Attenuators
HMC1190LP6GE **Broadband High IP3 Dual Channel Downconverter w/ Fractional-N PLL & VCO, 0.7 - 3.5 GHz**	• High-side and Low-side LO injection Operation • High Input IP3 of +24 dBm • Power Conversion Gain of 8 dB • Input P1dB of 11 dBm • SSB Noise Figure of 9 dB • 55 dBc Channel-to-Channel Isolation • Maximum Phase Detector Rate: 100 MHz • Low Phase Noise: -110 dBc/Hz in Band Typical •PLL FOM: -230 dBc/Hz Integer Mode, -227 dBc/Hz FractionalMode • <160 fs Integrated RMS Jitter (10 kHz to 20 MHz) • Low Noise Floor: -165 dBc/Hz

HMC6756BLP4E **0.4 - 6.0GHz High Linearity Wide-band Direct Demodulator**	High Linearity: +27 dBm IIP3 & +65 dBm IIP2 High Voltage Gain: +2.5 dB Low Noise Figure: DSB 11.5 dB Image Rejection: 40dB I/Q Bandwidth: 600 MHz 1 dB Low Power Dissipation: 240mA Icc @ 3.3V
HMC597LP4E **SiGe Wideband Direct Demodulator SMT, 0.1 - 4.0 GHz**	• High Linearity: +25 dBm IIP3 & +60 dBm IIP2 • Low Noise Figure: 15 dB • High Integration: On-Chip RF Balun
HMC900LP5E **50 MHz Dual Baseband Programmable Low Pass Filter**	• High linearity: Output IP3 +30 dBm • Programmable Bandwidth: 3.5 to 50 MHz • Exceptional 3 dB Bandwidth Accuracy: ±2.5% • 6th order Butterworth Magnitude & Phase Response • Automatic Filter Calibration
HMCAD1520 **High Speed Multi-Mode 8/12/14-Bit 1000/640/105 MSPS A/D Converter**	• High Speed Modes (12-bit / 8-bit) Quad Channel Mode: FSmax = 160 / 250 MSPS Dual Channel Mode: FSmax = 320 / 500 MSPS Single Channel Mode: FSmax = 640 / 1000 MSPS SNR: 70 dB, SFDR: 60/75 dB (12-bit 1ch Mode) • Precision Mode (14-bit) Four channels up to 105 MSPS SNR : 74 dB, SFDR: 83 dB @ 70 MHz SNR : 72.5 dB, SFDR: 78 dB @ 140 MHz • Ultra Low Power Dissipation 490 mW including I/O at 12-bit 640 MSPS • 0.5 µs start-up time from Sleep, 15 µs from Power Down • 1.8 V supply voltage • 1.7 - 3.6 V CMOS logic on control interface pins

Clock & Timing

HMC830LP6GE Fractional-N PLL with Integrated VCO SMT, 25 - 3000 MHz	• RF Bandwidth: 25 - 3000 MHz • Maximum Phase Detector Rate 100 MHz • Ultra Low Phase Noise -110 dBc/Hz in Band Typ. • Figure of Merit (FOM) -230 dBc/Hz Integer
HMC835LP6GE Wideband PLL+VCO, 33 - 4100 MHz, 4 Outputs	• Wideband: 33 - 4100 MHz • Maximum Phase Detector Rate 100 MHz • PLL FOM: -230 dBc/Hz Integer Mode, -227 dBc/Hz Fractional Mode • < 160 fs Integrated RMS Jitter (1 kHz to 100 MHz) • Figure of Merit (FOM) -226 dBc/Hz • Low Noise Floor: -165 dBc/Hz • 2 Differential RF or 4 Single Ended Outputs
HMC1032LP6GE Clock Generator with Fractional-N PLL & Integrated VCO SMT, 125 - 350 MHz	• Frequency Range: 125 - 350 MHz • 75 fs RMS Jitter Generation (Typical) • Exceeds G.8251 & GR-253-CORE Jitter Specifications • -165 dBc/Hz Phase Noise floor • Maximum Phase Detector Rate 100 MHz • Figure of Merit (FOM) -227 dBc/Hz

HMC1035MS8GE High Performance, +3.3V Clock Generator, 25 - 2500 MHz	3.3 V Only, Single Supply Rail Operation • Output Frequency Range: 25 MHz - 2500 MHz • Integer or Fractional-N mode Frequency Translation • Configurable LVDS-compatible or LVPECL type Differential Outputs • "Power Priority" and "Performance Priority" modes • < 97 fs RMS Jitter Generation (12 kHz-20 MHz, 2500MHz, Typ) • -163 dBc/Hz Phase Noise Floor to Improve ADC/DAC SNR (maximum output swing levels)
HMC1060LP3E Quad Low Noise High PSRR Linear Voltage Regulator	• Ultra Low Noise: 3nV/√Hz at 10 kHz, 7 nV/√Hz at 1 kHz • High Power Supply Rejection Ratio (PSRR) 80 dB at 1 kHz, 60 dB at 1 MHz • Four Adjustable Voltage Outputs: VR1: 100 mA at 1.8V to 5.2V VR2 & VR3: 50 mA at 1.8V to 5.2V VR4: 300 mA at 1.8V to 5.2V • Optional Proportional To Temperature (PTAT) Output Voltages: 7 % / 125 °C • Thermal Protection