SignalCore SC5328A / SC5428A – Greenjay II

DC to 18 GHz RF Down- and Upconverter · Greenjay II · Product Datasheet

KEY FEATURES – COMPARISON

Parameter	SC5328A	SC5428A
Function	Downconverter (RF–IF)	Upconverter (IF–RF)
Architecture	three-stage	three-stage
RF range	~DC–18 GHz	~DC–18 GHz
Conversion path	1.5–18 GHz	1.5–18 GHz
Bypass path	DC–3.5 GHz	DC–3.5 GHz
IF2	1.5–3.25 GHz, BW 1.25 GHz	1.5–3.25 GHz, BW 1.25 GHz
IF3 / IQ	DC–500 MHz, I/Q BW 1 GHz	DC–500 MHz, I/Q BW 1 GHz
Noise Figure	24 dB typ (8 dB Preamp on)	25 dB typ
OIP3	+30 dBm typ	+27 dBm typ
LO1 range	11–20 GHz	11–20.5 GHz

TECHNICAL SPECIFICATIONS

SC5328A · Downconverter	SC5428A · Upconverter
• **Function** RF Downconverter, three-stage • **RF input** ~DC to 18 GHz • **Conversion / Bypass** 1.5–18 GHz / DC–3.5 GHz • **IF2 output** 1.5–3.25 GHz, BW 1.25 GHz • **IF3 / IQ** DC–500 MHz, I/Q BW 1 GHz • **Conversion Gain** RF–IF2 +31 dB typ (off), +60 dB (Preamp on); RF–IF3 +14 dB typ • **Gain adjustment** –20 dB to +35 dB (to +60 dB with preamp) • **Noise Figure** 24 dB typ / 8 dB typ (Preamp on) • **OIP3 / OP1dB** +30 dBm typ / +18 dBm • **SFDR** 105 dB typ / 116 dB typ (Preamp on) • **RF Isolation** RF–IF2 and RF–IF3 <–90 dBc typ • **LO (external)** LO1 11–20, LO2 9.75–12.25, LO3 DC–3.5 GHz	• **Function** RF Upconverter, three-stage • **RF output** ~DC to 18 GHz • **Conversion / Bypass** 1.5–18 GHz / DC–3.5 GHz • **IF2 input** 1.5–3.25 GHz, BW 1.25 GHz • **IF3 / IQ** DC–500 MHz, I/Q BW 1 GHz • **Conversion Gain** IF2–RF +36/+31/+27 dB typ; IF3–RF +18/+14/+9 dB typ • **Gain adjustment** –30 dB to +35 dB (I/Q path –40 dB to +20 dB) • **Noise Figure** 25 dB typ • **OIP3 / OP1dB** +27 dBm typ / +10 to +25 dBm • **SFDR** 102 dB • **IF Isolation** IF2–RF <–95 dBc typ, IF3–RF <–90 dBc typ • **LO (external)** LO1 11–20.5, LO2 9.75–12.25, LO3 DC–3.5 GHz

APPLICATIONS

Coherent Receivers External LO injection for deterministic phase alignment across modules	**Coherent Transmitters** Matched upconversion path for coherent multi-channel transmit chains	**Phased Arrays** Compact modules for dense, multi-channel array integration
Automotive Radar Broadband DC to 18 GHz coverage for radar front-ends	**Precision Measurement** Configurable IF structure for measurement and characterization systems	**Communication Transceivers** High-IF or baseband I/Q operation for advanced transceivers