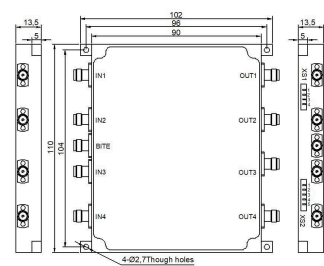


600–1500 MHz Four-Channel Receiver Front End

Four RF receive paths with selectable sub-band filters, 30±1.5 dB gain, noise figure ≤7 dB and independent digital attenuation.



Electrical specifications

Parameter	Value	Unit	Notes
RF input frequency	600–1500	MHz	-
Channel count	4	-	-
Gain	30±1.5	dB	-
Noise figure	≤7	dB	Maximum: 7 dB.
Saturated output power (Psat)	10	dBm	Typical: 10 dBm.
Input and output VSWR	≤2	-	Maximum: 2.
Supply voltage	+12	VDC	Typical: 12 VDC.
Supply current	200	mA	Typical: 200 mA.
Per-channel attenuation range	0–31.5	dB	Source block states 0–31.5 dB for each channel, with six explicit attenuation weights.
Attenuation step	0.5	dB	-
Attenuator bit count	6	-	-
Out-of-band rejection, filter 0	≥25	dBc	Selected filter: 600–1000 MHz. Rejection frequencies: DC–500 MHz; 1200–2400 MHz. Minimum: 25 dBc.
Out-of-band rejection, filter 1	≥25	dBc	Selected filter: 900–1500 MHz. Rejection frequencies: DC–750 MHz; 1650–2700 MHz. Minimum: 25 dBc.

Environmental limits

Parameter	Value	Unit
Operating temperature	–40–+80	°C
Storage temperature	–55–+125	°C

Interfaces and contacts

Parameter	Value	Unit
RF input ports	IN1–IN4: SMA-K (Interface sub-band descriptions differ; the source block establishes same-band RF reception.)	-
RF output ports	OUT1–OUT4: SMA-K (Interface sub-band descriptions differ; the source block establishes same-band RF reception.)	-
BITE calibration input	BITE: SMA-K	-
Supply contacts	XS1: 1, 2 → +12 V	-
Ground contacts	XS1: 3, 4 → GND	-
SPI data contact	XS2: 1 → SPI_MOSI	-
SPI clock contact	XS2: 2 → SPI_SCK	-
SPI select contact	XS2: 3 → SPI_NSS (LE)	-
SPI ground contact	XS2: 4 → GND	-
SPI NC contact	XS2: 5 → NC	-

Control and filter selection

Parameter	Value	Unit	Notes
SPI data rate	2 / 10	Mbps	Typical: 2 Mbps. Maximum: 10 Mbps.
SPI frame	0xAA 0x55 Data[31:0] 0x44 0xBB	-	Data[31:0] occupies four bytes; further payload byte order is not specified.
Channel 1 RF/BITE selection bit	25: 0 → RF; 1 → BITE	-	Bit position and channel number are retained; conflicting symbolic mnemonics are omitted.
Channel 2 RF/BITE selection bit	26: 0 → RF; 1 → BITE	-	Bit position and channel number are retained; conflicting symbolic mnemonics are omitted.
Channel 3 RF/BITE selection bit	27: 0 → RF; 1 → BITE	-	Bit position and channel number are retained; conflicting symbolic mnemonics are omitted.
Channel 4 RF/BITE selection bit	28: 0 → RF; 1 → BITE	-	Bit position and channel number are retained; conflicting symbolic mnemonics are omitted.
Channel 1 attenuation bits	5:16; 4:8; 3:4; 2:2; 1:1; 0:0.5	dB	Each bit: 1 enables its attenuation step; 0 disables it.
Channel 2 attenuation bits	11:16; 10:8; 9:4; 8:2; 7:1; 6:0.5	dB	Each bit: 1 enables its attenuation step; 0 disables it.

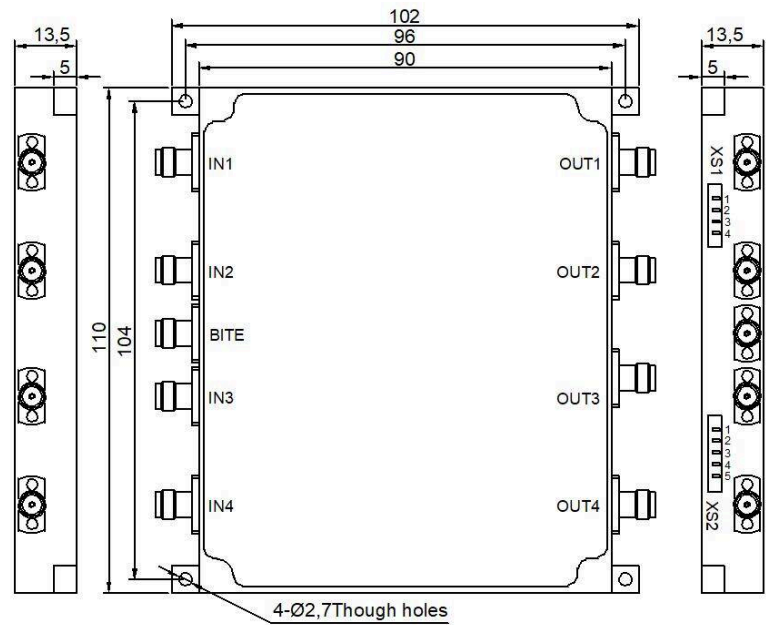
Control and filter selection

Parameter	Value	Unit	Notes
Channel 3 attenuation bits	17:16; 16:8; 15:4; 14:2; 13:1; 12:0.5	dB	Each bit: 1 enables its attenuation step; 0 disables it.
Channel 4 attenuation bits	23:16; 22:8; 21:4; 20:2; 19:1; 18:0.5	dB	Each bit: 1 enables its attenuation step; 0 disables it.
SPI unused bits	29	-	Source marks these data bits as having no meaning.
SPI filter-selection bits	24:C0	-	-
Filter code 0 passband	0 → 600–1000	MHz	-
Filter code 1 passband	1 → 900–1500	MHz	-

Mechanical specifications

Parameter	Value	Unit
Body dimensions	102 × 110 × 13.5	mm
Weight	≤500 (Maximum: 500 g.)	g
Mounting-hole center spacing	96 × 104	mm
Mounting holes	4 × Φ2.7 (Through holes.)	mm

Mechanical Outline



All dimensions are in mm [in].

Current publication record · 1.0 · 2026-10-08. First publication of approved product data.

Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.