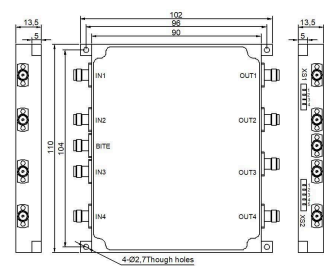


### 3–6 GHz Four-Channel Receiver Front End

Four RF receive channels with three switched filter bands, 30±1.5 dB gain, ≤8 dB noise figure and per-channel DSA control.



#### Electrical specifications

| Parameter                     | Value     | Unit | Notes                                                                                  |
|-------------------------------|-----------|------|----------------------------------------------------------------------------------------|
| RF input frequency            | 3000–6000 | MHz  | -                                                                                      |
| Channel count                 | 4         | -    | -                                                                                      |
| Gain                          | 30±1.5    | dB   | -                                                                                      |
| Noise figure                  | ≤8        | dB   | Maximum: 8 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         | -    | -                                                                                      |

#### 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.) | -    |

Interfaces and contacts

| Parameter              | Value                 | Unit |
|------------------------|-----------------------|------|
| 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 | 26: 0 → RF; 1 → BITE                  | -    | Bit position and channel number are retained; conflicting symbolic mnemonics are omitted. |
| Channel 2 RF/BITE selection bit | 27: 0 → RF; 1 → BITE                  | -    | Bit position and channel number are retained; conflicting symbolic mnemonics are omitted. |
| Channel 3 RF/BITE selection bit | 28: 0 → RF; 1 → BITE                  | -    | Bit position and channel number are retained; conflicting symbolic mnemonics are omitted. |
| Channel 4 RF/BITE selection bit | 29: 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.                                  |
| 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                 | 30–31                                 | -    | Source marks these data bits as having no meaning.                                        |

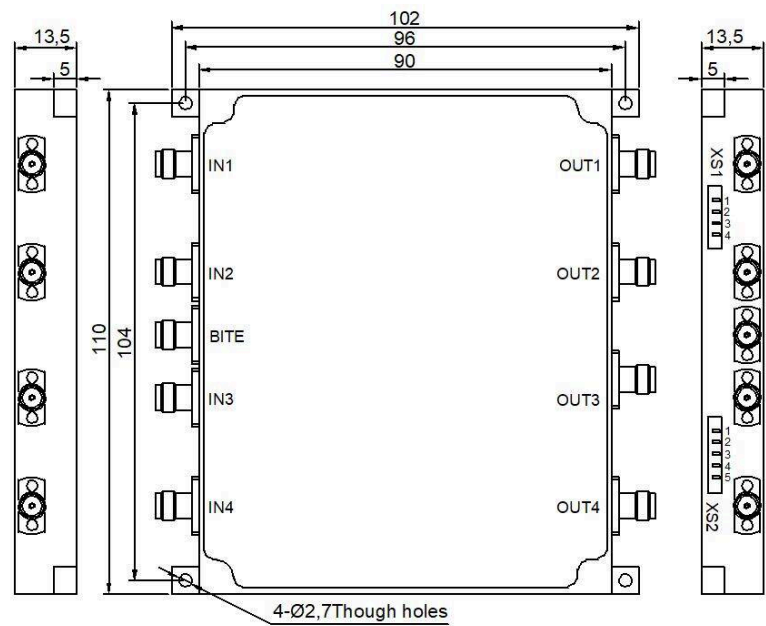
Control and filter selection

| Parameter                 | Value          | Unit | Notes |
|---------------------------|----------------|------|-------|
| SPI filter-selection bits | 25:C1; 24:C0   | -    | -     |
| Filter code 00 passband   | 00 → 3000–4200 | MHz  | -     |
| Filter code 01 passband   | 01 → 4000–5200 | MHz  | -     |
| Filter code 10 passband   | 10 → 5000–6000 | 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 × Ø2.7 (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.