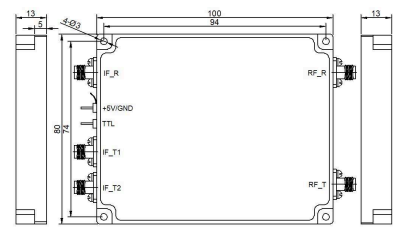


6–8.3 GHz Up/Downconverter with Dual IF Transmit Inputs

Mode-selected converter for 6–8.3 GHz RF and 3.2–5.5 GHz IF, with 30 dB typical downconversion gain and 2 dB maximum noise figure.



Electrical specifications

Parameter	Value	Unit	Notes
RF frequency range	6–8.3	GHz	-
IF frequency range	3.2–5.5	GHz	-
Downconversion gain	30	dB	Typical: 30 dB.
Downconversion noise figure	2	dB	Maximum: 2 dB.
Saturated output power (Psat)	≤5	dBm	Upper bound stated in the source; not minimum output capability. Maximum: 5 dBm.
Output spurious	–40	dBc	At RF output power 0 dBm. Typical: –40 dBc.
Leakage level / source rejection value	40	dBc	Typical: 40 dBc.
Supply voltage	+5	VDC	Stated +5 V supply; 6 V maximum. No typical qualifier is inferred. Maximum: 6 VDC.
Supply current	600	mA	Typical: 600 mA.
Internal LO frequency	11.5	GHz	-
Internal reference frequency	50	MHz	-

Environmental limits

Parameter	Value	Unit
Operating temperature	–40–+70	°C
Storage temperature	–40–+85	°C

Interfaces and contacts

Parameter	Value	Unit
Receive RF input	RF_R: SMA	-
Receive IF output	IF_R: SMA	-

Interfaces and contacts

Parameter	Value	Unit
Transmit IF inputs	IF_T1, IF_T2: SMA (Two IF inputs combine in the source block.)	-
Transmit RF output	RF_T: SMA	-
Power interface	+5 V / GND (Supply uses a feed-through capacitor; ground uses a metal grounding tab.)	-

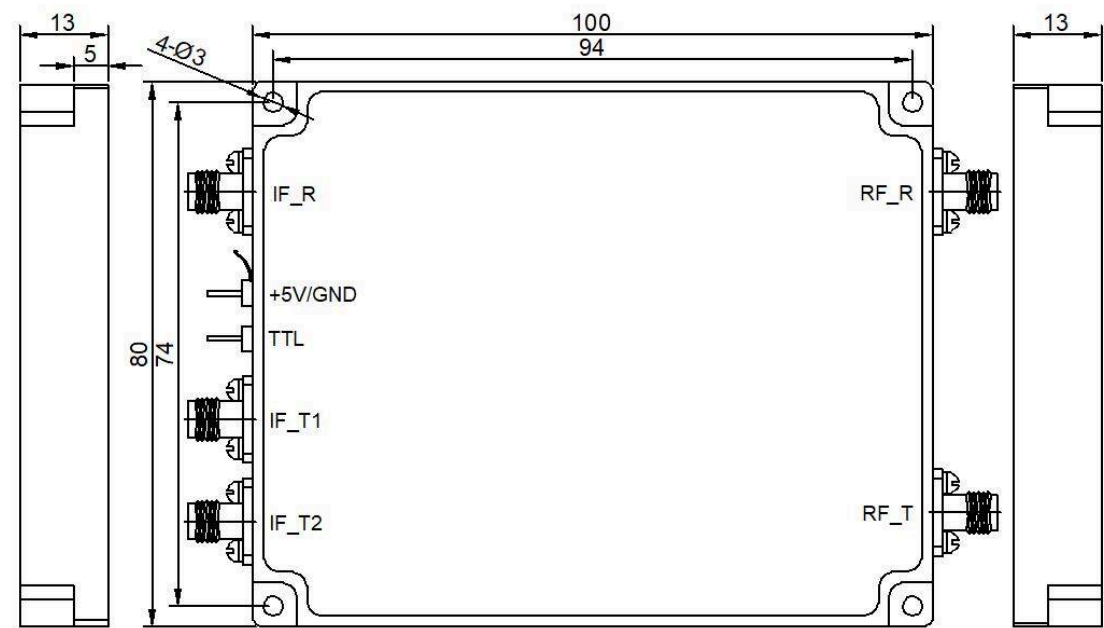
Control and filter selection

Parameter	Value	Unit	Notes
Mode control interface	TTL	-	Control through a feed-through capacitor.
TTL high mode	3.3 V	-	Upconversion on; downconversion off.
TTL low mode	0 V	-	Downconversion on; upconversion off.
TTL default state	Internally pulled low.	-	-

Mechanical specifications

Parameter	Value	Unit
Body dimensions	100 × 80 × 13	mm
Mounting-hole center spacing	94 × 74	mm
Mounting holes	4 × Φ3	mm

Mechanical Outline



All dimensions are in mm [in].

Integration guidance

Parameter	Value	Unit
Recommended upconversion input	−15 (Matching guidance; not an absolute rating or P1dB.)	dBm

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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.