

A-301-150

UHF SATCOM, Two Channel, Radio Combiner, 150 Watt
Control Systems, Couplers and Diplexers



Features

- Simultaneous 2-channel transmit and receive
- Up to 150 watts per channel
- LNA Gain +25 dBm
- No T/R switching (full duplex)
- Wired remote control capable
- 3 modes of operation optimise RF performance

Overview

Ultralife's A-301-150 satellite radio combiner (diplexer) enables simultaneous transmission and reception of any two military UHF satellite radio channels operating in the 243 - 318 MHz SATCOM band on a single antenna. Designed for continuous operation in tactical environments, the A-301-150 is packaged in a compact rugged, weatherproof housing. Flexibility extends to fixed site locations, boats, aircraft, vehicles, shelters and racks.

The A-301-150 is ideal for SATCOM on the move (SOTM) requirements where limited antenna availability may hinder operations (maritime surface craft, vehicles, aircraft, and submarines). The satellite radio combiner incorporates extensive transmit and receive filtering to ensure no performance degradation in either channel during simultaneous transmit and receive operations. Multiple modes of operation provide users with flexibility while configuring communications networks. The A-301-150 satellite radio combiner allows users to interface their own RF power amplifiers (up to 150 watts per channel).

Technical Specifications

Size	Height 142.24 mm Width 209.55 mm Depth 279.40 mm
Weight	7.26 kg
Frequency Range	<ul style="list-style-type: none"> • Transmit 292 - 318 MHz • Receive 243 - 270 MHz
Primary Power	8 - 36 V DC @ 20 W (maximum)
Input / Output Impedance	50 Ω (nominal)
Radio Port-to-Port Isolation	50 dB
VSWR	< 2.0:1
Environmental	MIL-STD-810G
Shock / Vibration / Crash Safety	D0160F (Rotary Wing)
Reliability	19,000 hours
Operating Temperature	- 30°C to + 60°C
Finish	FED-STD 959B, Black

Transmit Performance

	Bypass Mode (Off)	Single Mode	Dual Mode
Frequency	200 - 400 MHz	292 - 318 MHz	292 - 318 MHz
Impedance	50 Ω	50 Ω	50 Ω
VSWR	2:1 maximum	2:1 maximum	2:1 maximum
Insertion Loss	0.35 dB (typical)	1.6 dB (typical)	4.7 dB (typical)

Receive Performance

	Bypass Mode (Off)	Single Mode	Dual Mode
Frequency	200 - 400 MHz	243 - 270 MHz	243 - 270 MHz
Impedance	50 Ω	50 Ω	50 Ω
VSWR	2:1 maximum	2:1 maximum	2:1 maximum
Insertion Loss	0.35 dB (typical)	-	-
PIdB	-	- 25 dBm	- 25 dBm
Gain	-	+ 28 dBm (typical)	+ 25 dBm (typical)
Noise Figure	-	4.3 dB (typical)	7.2 dB (typical)

Indicators

Active Forward Power Meter

Protection

VDC Input Under / Over Voltage

VDC Input Over Current

LNA - I/P and O/P

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All specifications are subject to change without notice
The information contained herein is for reference only and does not constitute a warranty of performance

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