

Brochure

VIAVI

UC-584S

Top Mount Transponder Antenna Coupler

Designed for the top L-Band “shark fin” transponder antenna that can be safely placed with a pole.

The UC-584S Top Mount Transponder Antenna Coupler solves the problem of reliable FAR Part 43 Appendix ‘F’ ERP (Effective Radiated Power) and transponder MTL (Minimum Trigger Level) testing in multi-path environments. The coupler is designed for use on the upper antenna and can be safely placed with a pole, eliminating the need to climb onto the fuselage and harness in for safety purposes. The UC-584S top mount coupler can easily be placed over the upper antenna from the ground or scaffolding, depending upon the size of the aircraft.

The UC-584 provides >20 dB of attenuation and minimizes the chance that airborne TCAS systems and air traffic controllers will see UUT transponder altitude replies under test conditions. The innovative design of the UC-584S includes an integral positioning slot, ensuring a high level of measurement repeatability is achieved, saving test time. The UC-584S can be connected to the VIAVI IFR6000, IFR6015, and APM-424 flight line test sets or to the VIAVI IFF-45TS bench test set, or to any suitable transponder test set.



Features

- ☒ Effective solution to FAR Part 43 Appendix ‘F’ ERP and MTL testing in multi-path environments
- ☒ Provides >20 dB of isolation
- ☒ Provides shielding for ADS-B performance testing UUT parametric tests
- ☒ Hook for easy top mount, pole placement
- ☒ Dual antenna kit configuration
- ☒ Rugged design for ramp use
- ☒ Fits most ‘Shark Fin’ L-Band antennas

Benefits

- ☒ Design eliminates the need to climb onto the aircraft for placement
- ☒ Reduces false intruders and interference with air traffic control tower¹
- ☒ High level of measurement repeatability is achieved, saving test time
- ☒ Universal design allows coupler to be used with any suitable transponder test set

General Specification

Transponder Antenna Coupler	
Frequencies	1030 MHz, 1090 MHz
Return Loss	>7.71 dB at both the antenna under test input and coupler input
Insertion Loss	0.6 dB \pm0.5 dB typical
Repeatability	<1 dB
Isolation	>20 dB
Connector	TNC Female

Physical Characteristics

Dimensions	8.2 in x 5.75 in x 5.25 in (20.9 cm x 14.6 cm 13.3 cm)
Weight	2 lbs (0.9 kg)

Maximum aircraft antenna size accommodated

UC-584S		
Width	3.9 in (9.9 cm)	
Thickness	0.25 in. (0.635 cm)	
Height	3.75 in. (9.52 cm)	

Ordering Information

Versions and Options






Order Number	Description
142094	UC-584S Top Mount Transp. Antenna Coupler

This item can be ordered separately or is included with the UC-584 Coupler Kit. See kit options below.

Optional Accessories

90106	Kit, Antenna Coupler Pole, 8 ft. w/ D Ring
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Kit Contents

		Single Antenna Coupler Kit (112350)		Dual Antenna Coupler Kit (112349)	
Item	Part No.	Qty	Qty	Qty	Qty
 UC-584 L-Band Coupler (w/ clamping)	87431	1		1	
 UC-584s L-Band Coupler (top mount)	142094	0		1	
 Coaxial Cable (25 ft) (TNC-TNC)	62462	1		1	
 Coaxial Cable (25 ft) (TNC-TNC, right angle)	141131	0		1	
 Soft Case	88846	1		1	
ID Card	139823 (single) 139824 (dual)	1		1	
Application Notes	89148	1		1	
Instruction Sheet	92715	1		1	

1. Effectiveness of the coupler is dependent on the distance of the ADS-B ground station to your test site and any shielding in your hanger.



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