HARRIS®

assuredcommunications™

RF-5833H-PA001 / RF-5833H-PA002

150 WATT HF/VHF POWER AMPLIFIERS

solid-state design, modular construction, and conservatively rated components provide a high level of reliability in a "Jerk-and-Run" package

The Harris 150-watt power amplifiers increase the output of their respective receiver-transmitters to 150 watts PEP/Average in the HF portion of the frequency range (1.6 to 29.99999 MHz) and 60 watts PEP/Average for the VHF portion (30 to 59.99999 MHz). The RF-5833H is used with the FALCON® II RF-5800H-MP and AN/PRC-150(C) radios.

The RF-5833H Power Amplifier operates in applications that require medium-power, medium-range communications. These include mobile, boat, or base station installations for general-purpose HF-SSB and VHF-FM voice and data communications.

Continuous coverage is provided over the 1.6 to 60 MHz range. Independent outputs are available for separate HF and VHF antenna configurations.

The power amplifier amplification section is a broadband design requiring no tuning or adjustment. When used with the RF-5382H and the RF-382A Series Antenna Couplers, the output of the power amplifier is automatically matched to the specified antenna and requires no special operator procedures.

Built-in self-test features permit operators or maintenance personnel to check the R/T and associated power amplifier performance down to the module level. Fault conditions are indicated on the radio's front-panel display.

Power output is adjustable via the transceiver front panel or remote control.

The RF-5833H-PA002 includes an embedded RF-5245 Pre/Postselector for collocated environments.

The robust design and construction of these power amplifiers guarantee continuous high performance and reliability in the most severe environments.

Specifications for the RF-5833H-PA

General

Frequency Range	1.600000 to 59.99999 MHz
Modes of Operations	J3E (single sideband, upper or lower, suppressed carrier telephony) H3E (compatible AM single sideband plus full carrier telephony) F3E (FM Telephone) AIA, J2A, selectable (compatible CW)
RF Input/Output Impedance	50 ohm nominal, unbalanced
RF Output	50 ohm nominal load impedance unbalanced HF connector: Type N VHF connector: Type BNC
Power Input	+28.0 VDC nominal, @20 Amps. maximum
Temperature Range	–40˚C to +70˚C
Shock/Vibration	MIL-STD-810E
Leakage	MIL-STD-810E (1 meter depth for PA without cooling fan)
Humidity	MIL-STD-810E (0 to 95%)
Size	RF-5833H-PA001: 10.4W x 15.5D x 6.6 inches (26.4W x 39.4D x 16.8H cm) RF-5833H-PA002: 12.8W x 15.5D x 6.6 inches (32.5W x 39.4D x 16.8H cm)
Weight	27 lbs (12 kg)

Power Amplifier

Power Output	150 watts PEP/average into 50 ohm ±1 dB (1.6 MHz to 29.99999 MHz) 60 watts PEP/Average into 50 ohm (30.0 MHz to 59.99999)
RF Drive Requirements	Nominal 100 mW (+20 dBm)
Intermodulation Distortion	–25 dB from either tone of a two-tone envelope at 150 watts PEP
Harmonic Output	–45 dBc below 150 watt PEP

Classification

RF-5833H-PA001	150-Watt Power Amplifier
RF-5833H-PA002	150-Watt Power Amplifier with embedded (25 dB) Pre/postselector

Accessories

RF-5245	Pre/Postselector Option for the RF-5833H-PA001
RF-5382H	150-Watt Fast Tune Antenna Coupler
RF-382A	400-Watt Fast-Tune Antenna Coupler
RF-5073VSM	Vehicular Shock Mount
RF-5833H-SK001	Site Spares Kit for the RF-5833H-PA001
RF-5833H-SK002	Site Spares Kit for the RF-5833H-PA002
RF-5051PS	Power Supply
SB-V	Whip Antenna Series
RF-398-02	VHF Vehicular Antenna
10497-0360-02	Low Pass Filter Kit
10497-0870-01	Security Locking Kit
10535-0720	RF-5833H to RF-5800H/AN/PRC-150(C) Control Cable
10181-9824	RF-5833H to RF-5800H/AN/PRC-150(C) RF Coax Cable
10181-9826	RF-5833H to Vehicle DC Power Cable
10497-5036-01	RF-5833H to Audio Cable
10181-9833	RF-5833H to RF-5051PS for DC Power Cable

Systems

RF-5800H-V001	150-Watt Vehicular Adapter
RF-5800H-V002	150-Watt Vehicular Adapter with Collocation Filter
RF-5800H-B001	150-Watt Base Station Adapter
RF-5800H-B002	150-Watt Base Station Adapter with Collocation Filter
RF-5800H-TM001	150-Watt Mini-Transit Case Adapter
RF-5800H-TM002	150-Watt Mini-Transit Case Adapter with Collocation Filter

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