

## RF-5833H SERIES

### 150 watt HF/VHF power amplifiers

The L3Harris 150 watt power amplifiers (PAs) 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 RF-7800H-MP, RF-5800H-MP, AN/PRC-150(C) and AN/PRC-160(V) radios. The RF-7800H-MP or AN/PRC-160 requires use of the RF-7800H-AD150 adapter (ordered separately) to facilitate mounting in the RF-5833H-PAs.

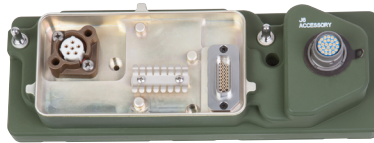


RF-5833H

The RF-5833H Series Power Amplifiers operate 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 PA 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 power is automatically matched to the specified antenna and requires no special operator procedures.



ADAPTER

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 and PA004 include an embedded RF-5245 Pre/Postselector for collocated environments.

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



### VERSATILE SOLUTION FOR VEHICULAR, MARITIME OR AT-THE- HALT OPERATIONS

#### KEY BENEFITS

- > **Reliable Performance Anywhere:**  
Designed for harsh conditions, the RF-5833H Series ensures consistent and dependable operations in extreme environments
- > **Seamless Operation:**  
Features like automatic antenna matching and no manual tuning simplify usage, reducing setup time and operator effort
- > **Versatile Communication:**  
Offers continuous coverage from 1.6 to 60 MHz with independent outputs for HF and VHF, making it suitable for vehicular, maritime and base station applications
- > **Enhanced Durability:**  
Solid-state design, modular construction and rugged components offer unparalleled reliability in demanding "Jerk-and-Run" scenarios

SPECIFICATIONS	
Dimensions	RF-5833H-PA001: 6.6 H x 10.4 W x 15.5 D in (16.8 H x 26.4 W x 39.4 D cm) RF-5833H-PA002: 6.6 H x 12.8 W x 15.5 D (16.8 H x 32.5 W x 39.4 D cm)
Weight	27 lbs (12 kg)

GENERAL	
Frequency Range	1.60000 to 59.99999 MHz
Modes of Operation	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 at 20 amps., maximum
Temperature Range	-40°C to +70°C (-40°F to +158°F)

ENVIRONMENTAL	
Shock/Vibration	MIL-STD-810E
Leakage	MIL-STD-810E (1-meter depth for PA w/o cooling fan)
Humidity	MIL-STD-810E (0 to 95%)

POWER AMPLIFIER	
Power Output	150 watts PEP/average into 50 ohm $\pm 1$ 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

CONFIGURATION OPTIONS	
RF-5833H-PA001	150 watt power amplifier
RF-5833H-PA002	150 watt power amplifier with embedded (25 dB) pre/postselector
RF-5833H-PA003	150 watt power amplifier with low pass filter
RF-5833H-PA004	150 watt power amplifier with low pass filter and embedded (25 dB) Pre/postselector

ACCESSORIES	
RF-7800H-AD150	RF-7800H-MP adapter for RF-5833H 150 watt PA
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
RF-5245	Pre/Postselector option for the RF-5833H-PA001
10497-0360-01	Low pass filter kit option for the RF-5833H-PA001
10497-0870-01	Security locking kit
10535-0720	RF-5833H to RF-7800H-AD150/RF-5800H/AN/PRC-150 control cable
10181-9824	RF-5833H to RF-7800H-MP/RF-5800H/AN/PRC-150 RF coax cable
10181-9826	RF-5833H vehicle DC power cable
10497-5036-01	RF-5833H to audio cable
10181-9833	RF-5833H to RF-5051PS DC power cable

SYSTEMS	
RF-7800H-V001 <sup>1</sup>	150 watt vehicular adapter
RF-7800H-V004 <sup>1</sup>	150 watt vehicular adapter with collocation and low pass filter
RF-7800H-B001 <sup>1</sup>	150 watt base station adapter
RF-7800H-B004 <sup>1</sup>	150 watt base station adapter with collocation and low pass filter
RF-7800H-TM001 <sup>1</sup>	150 watt mini-transit case adapter
RF-7800H-TM004 <sup>1</sup>	150 watt mini-transit case adapter with collocation and low pass filter

<sup>1</sup>RF-7800H systems listed include RF-7800H-AD150 adapter

## RF-5833H Series

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