



**Model 70-9B
70 cm
53 dB, 70/25/10 Watt
RF LINEAR
POWER AMPLIFIER**



The KH6HTV-VIDEO Model 70-9B, RF Power Amplifier is for use in the amateur radio 70cm band (420-450 MHz). It is a Class A-B amplifier designed for linear service. It can be used to produce a 70 Watt FM signal or 25 Watt (pep), analog, TV signal. It can also produce a 10 Watt (rms), high-definition (1080P), digital TV signal. The rf power output can be lowered -3 dB or -5 dB for reduced DC current draw with the front panel rotary switch. Provision is included for external PTT control. It is ideal for use as the final amplifier in a digital ATV repeater.

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| PARAMETER | Typical Performance | Notes |
|---|--|--|
| Output Power (FM, CW) | 70 Watts, (+48 to 49dBm) | saturated output |
| Output Power (-1dB) | 50 Watts (+47dBm) | -1dB gain compression |
| Output Power (analog TV) (VUSB-TV, NTSC) | 25 Watts PEP (+44 dBm) also 12 or 8 Watts | peak power on sync tips adjustable -3dB & -5dB |
| Output Power (Digital TV) | 10 Watts, (+40dBm) also 5 or 3 Watts | average power, DVB-T service adjustable -3dB & -5dB |
| Output Power vs. Supply Voltage | +44 dBm @ 12 - 13.8 Vdc +43 dBm @ 10 Vdc | analog VUSB-TV |
| RF Power Amplifier Gain, S21 | 53 dB, nominal | |
| Amplifier Gain Flatness | ± 1 dB, nominal | 420 - 450 MHz |
| Amplifier Max Input Power | 50 mW, +17 dBm | |
| LSB Rejection (analog VUSB) | better than -20dB | LSB/USB ratio |
| Spectrum Regrowth (Digital TV) | -30 dB at +40dBm avg better than -35dB, medium power | shoulder break-point |
| Harmonics | > -65 dBc typical | |
| Duty Cycle | 100 % | heat sink & cooling fan included |
| DC Supply Voltage | 13.8 Vdc | 10 to 15 Vdc |
| DC Current @ 13.8 Vdc | 7, 3.3 or 2.5 Amps 12 Amps | 10W / 5W / 3 W (DTV service) 70W sat. output, FM/CW |
| Control - Rotary Switch | OFF - HI - MED - LOW | rf power adjustable -3dB & -5dB |
| Control - Mini Toggle Switch | Xmit ON - Stand-By - Ext PTT | |
| RF Connectors | SMA input & N output | |
| PTT In Connector | RCA | |
| Rear Panel Terminal Strip | GND, +12Vdc, PTT OUT | |
| Dimensions & Weight | 5.5" x 4.5" x 5.0", 2 lbs | |
| Accessories Included | instruction manual, test report, 3 ft DC power cord, 20" SMA cable | |

(effective with s/n 153, Nov. 2023)



NOTICE: This linear amplifier is not FCC type accepted. Therefore, the use of this amplifier is only legal in the USA, amateur radio, 70 cm band (420 - 450 MHz). Owners and operators of this amplifier must be licensed amateur radio operators.