



**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.

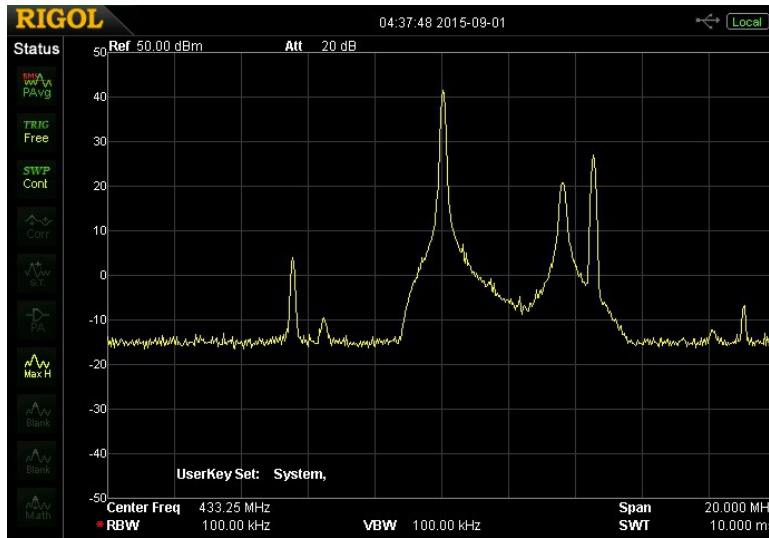
KH6HTV-VIDEO Boulder, Colorado, USA

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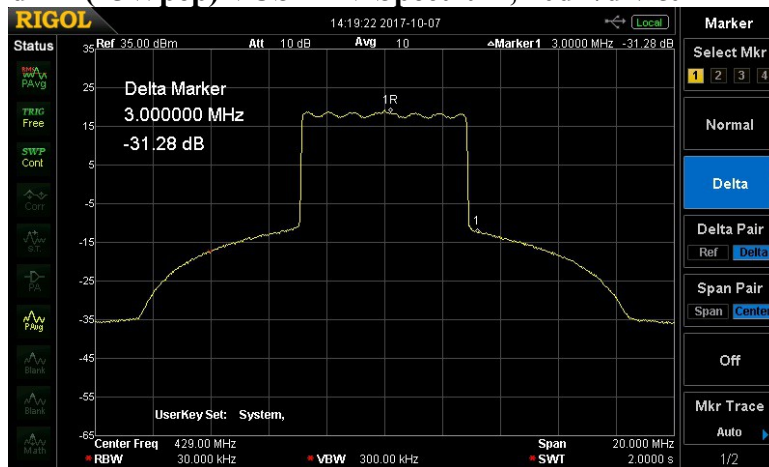
PARAMETER	Typical Performance	Notes
Output Power (analog TV) (VUSB-TV, NTSC)	25 Watts PEP (+44 dBm) also 12 or 8 Watts	peak power on sync tips adjustable -3dB & -5dB
Output Power (Digital TV)	10 Watts, (+40dBm) also 5 or 3 Watts	rms, avg. power, DVB-T service adjustable -3dB & -5dB
Output Power (FM, CW)	70 Watts, (+48 to 49dBm)	saturated output
Output Power (-1dB)	50 Watts (+47dBm)	-1dB gain compression
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	± 1/2 dB	420 - 450 MHz
Amplifier Max Input Power	50 mW, +17 dBm	
LSB Rejection (analog VUSB)	better than -20dB	LSB/USB ratio - see photo
Spectrum Regrowth (Digital TV)	-30 dB at +40dBm rms	shoulder break-point, see photo
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	8, 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	



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.



+44 dBm (25Wpep) VUSB-TV Spectrum, 10dB/div & 2 MHz/div



+40dBm (10 Watts rms), DVB-T Spectrum, 10dB/div & 2 MHz/div



S21, Gain sweep frequency response to 1GHz. 10dB/div & 100MHz/div. Yellow = HIGH power, Magenta = MED, Cyan = LOW Markers are 70cm band edges