



**Model 70-7B  
70 cm, 54 dB, 25/10/3 Watt  
RF LINEAR  
POWER AMPLIFIER**

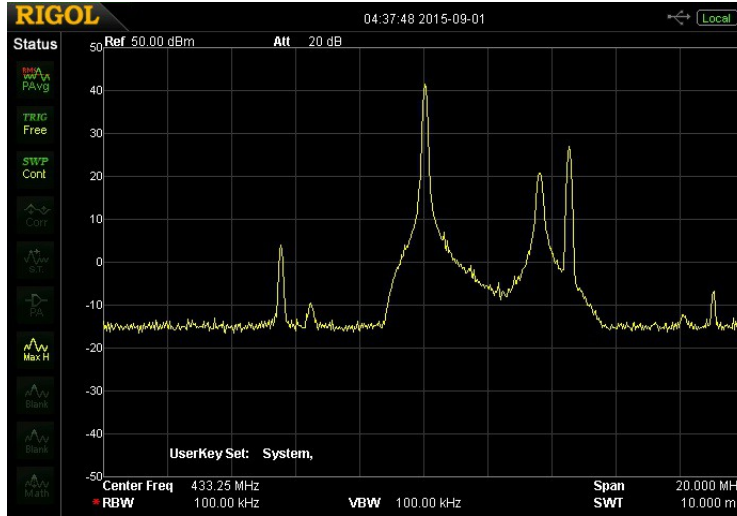


**The KH6HTV-VIDEO Model 70-7B, RF Power Amplifier is for use in the amateur radio 70cm band. It is a Class A-B amplifier designed for linear service. It can be used to produce a 10 Watt (pep), analog, TV or SSB signal. It can also produce a 3 Watt (rms), high-definition (1080p), digital TV signal. The rf power output can be lowered -5dB or -10dB for reduced DC current draw with the front panel rotary switch**

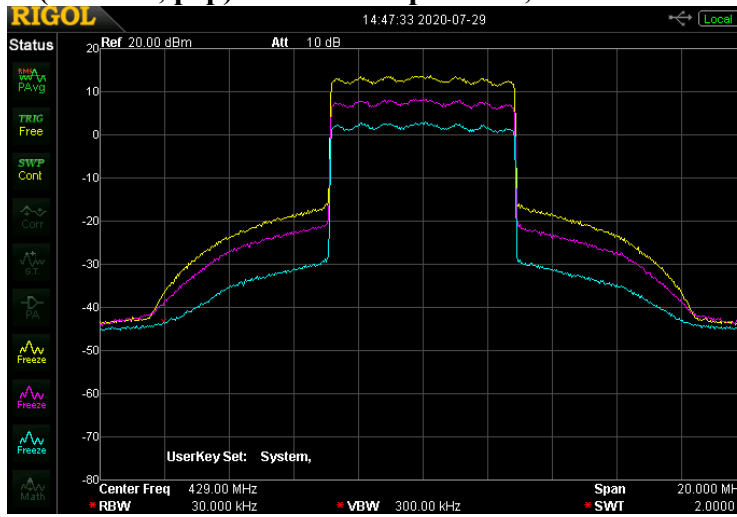
PARAMETER	Typical Performance	Notes
Output Power (analog TV or SSB)	10 Watts PEP (+40 dBm)	peak power on sync tips
Output Power (Digital TV)	3 Watts, +35dBm	rms power
Output Power (FM, CW)	20-25 Watts, +43 to +44dBm	saturated output
Output Power (-1dB comp)	12 Watts, +41dBm	
Output Power vs. Supply Voltage	+40 dBm @ 12 - 13.8 Vdc +39 dBm @ 10 Vdc	analog VUSB-TV
RF Power Amplifier Gain	54 dB, nominal	
Amplifier Gain Flatness	± 1 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 +35dBm rms	see photo
Harmonics	-55 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	3, 1 or 0.75 Amps	3 W / 1 W / 300mW (DTV)
Control - Rotary Switch	OFF - HI - MED - LOW	rf power adjustable in 5 dB steps
RF Connectors	SMA input & N output	
Dimensions & Weight	4.2" x 3.5" x 7.4"	1.5 lbs
Accessories Included	instruction manual, test report, DC power cable & 20" SMA cable	

**KH6HTV-VIDEO Boulder, CO USA [www.kh6htv.com](http://www.kh6htv.com) [kh6htv@arrl.net](mailto:kh6htv@arrl.net) 303-594-2547**

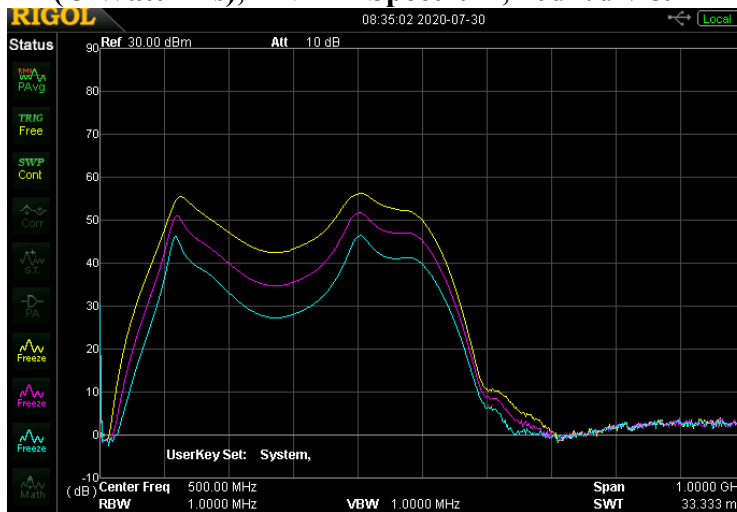
**NOTICE:** *This linear amplifier is not FCC type accepted. Therefore, the use of this amplifier is only legal in the USA, amateur radio, 70 cm band (420 - 450 MHz). Owners and operators of this amplifier must be licensed amateur radio operators.*



**+40 dBm (10 Watt, pep) VUSB-TV Spectrum, 10dB/div & 2 MHz/div**



**+35dBm (3 Watt rms), DVB-T Spectrum, 10dB/div & 2 MHz/div**



**S21 small signal gain frequency response from 0 to 1GHz 10dB/div & 100MHz/div  
Yellow trace = High Power, Magenta = Medium (-5dB) & Cyan = Low (-10dB)**