

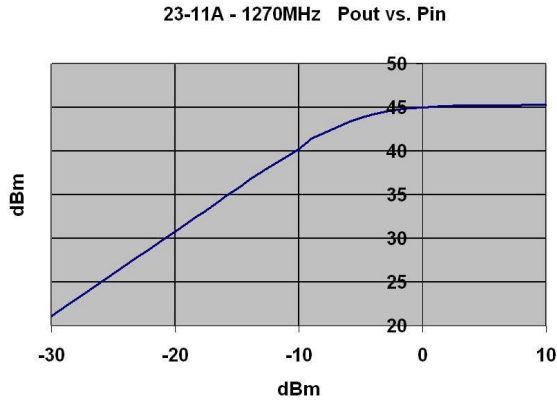


Model 23-11A
23 cm, 49 dB, 30/15/4.5 W
RF LINEAR
POWER AMPLIFIER

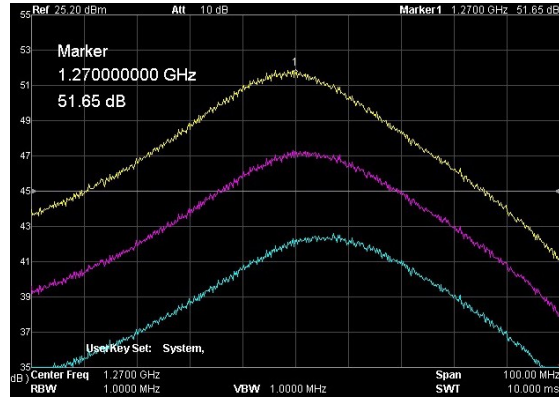


The KH6HTV-VIDEO Model 23-11A, RF Linear Power Amplifier is for use in the amateur radio 23 cm band (1240-1300 MHz). It can produce a 4.5 Watt (avg), high-definition (1080p), digital TV signal. It can also be used to produce a 30W, FM/CW signal or 15 Watt (pep), analog, TV signal. The rf power output can be lowered -5dB or -10dB for reduced DC current draw with the front panel rotary switch. Provision is included for external PTT control, useful for repeaters.

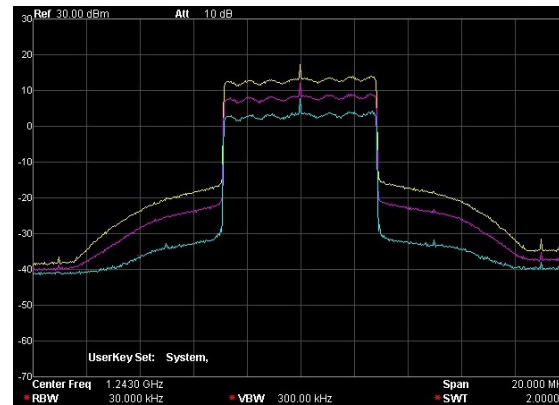
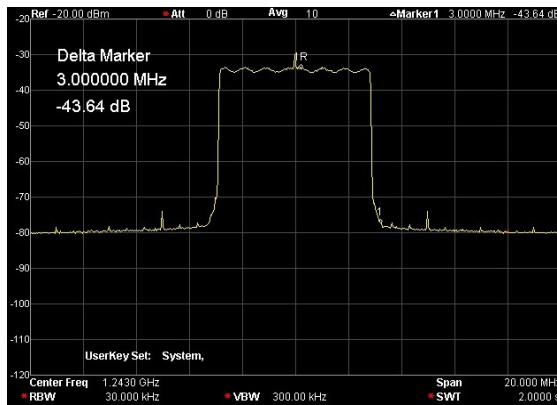
PARAMETER	Typical Performance	Notes
Output Power (analog TV) (VUSB-TV, NTSC)	15 Watts PEP (+42 dBm) also 5 Watt or 1.5 Watt	peak power on sync tips adjustable in 5dB steps
Output Power (Digital TV)	4.5 Watts (+36.5dBm), 1.4W & 0.4W	rms, avg. power,DVB-T service -5dB & -10dB
Output Power (FM, CW)	25-30 Watts	saturated output
Output Power (SSB)	18 Watts PEP	
Output Power (AM)	5 Watts	
Output Power, P(-1dB)	18 Watts	-1dB gain compression
Output Power vs. Supply Voltage	+36.5 dBm @ 12 - 13.8 Vdc +35.5 dBm @ 10 Vdc	DTV
RF Power Amplifier Gain	49 dB, nominal	
Amplifier Gain Flatness	± 2.5 dB	1240 - 1300 MHz
Amplifier Max Input Power	50 mW, +17 dBm	
LSB Rejection (analog VUSB)	-20dB	LSB/USB ratio
Spectrum Regrowth (Digital TV)	-30 dB at +36.5dBm avg.	shoulder break-point
Duty Cycle	100 %	heat sink & cooling fan included
DC Supply Voltage	13.8 Vdc	10 to 15 Vdc
DC Current @ 13.8 Vdc	6.9, 4, or 2.5Amps (DTV) 9 Amps (FM/CW)	HI / MED / LO power
Controls - Rotary Switch	OFF - HI - MED - LOW	rf power adjustable in 5 dB steps
Control - Mini Toggle Switch	Xmit ON - Stand-By - Ext PTT	
RF Connectors	SMA input & N output	
Rear Panel Terminal Strip	GND,+12Vdc,PTT IN, PTT OUT	PTT provided for repeater control
Dimensions & Weight	5.5" x 4.5" x 5.0", 2 lbs	
Accessories Included	instruction manual & test report	



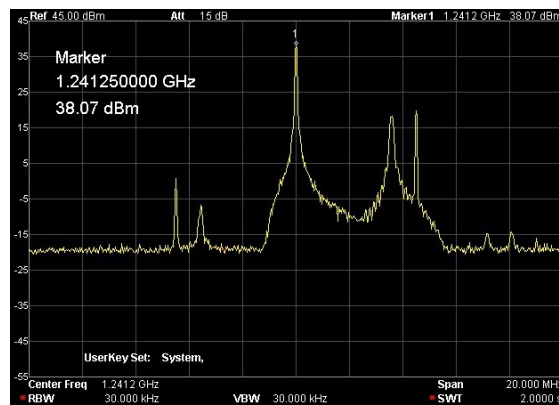
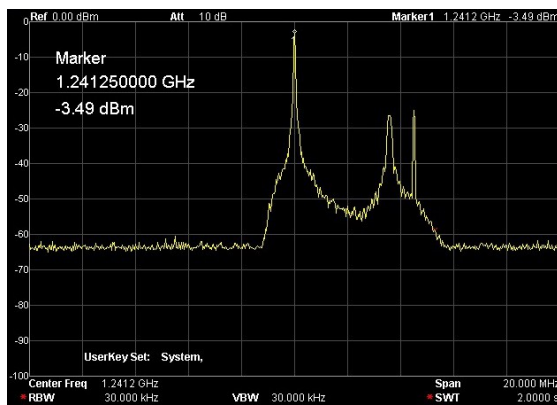
Note: slightly lower gain and power output at band edges



S21, 2dB/div & 10MHz/div, 1270MHz center
Yellow=HIGH, Magenta=MED, Blue=LOW



RF Spectrum in DVBC-T service. Modulator output (left) & Amplifier output (right)
10dB/div & 2MHz/div. Yellow = HIGH, Magenta = MED, Blue = LOW RF Power



RF Spectrum in NTSC, VUSB-TV service. Modulator output (left) & Amplifier
output (right) 10dB/div & 2MHz/div.

NOTICE: This linear amplifier is not FCC type accepted. The use of this amplifier is only legal in the USA, amateur radio, 23cm band (1240-1300MHz). Owners and operators of this amplifier must be licensed amateur radio operators.