



# IMPROVIZED DATASHEET WJ3500 TWT

Expected working conditions normal operation (voltages w.r.t. cathode):

UNIT	VALUE	DEV	RMS MAX RIPPLE
$F_h$	1.0 - 2.0 GHz		
$P_{out}$ @ 1 mW or less $P_{in}$	1 W		
$A_{out}$ @ 1 mW or less $P_{in}$	30 dB		
$A_{variation}$ @ 1 W $P_{out}$	> 6 dB		
$A_{variation}$ @ small $P_{out}$	> 12 dB		
$A_{variation}$ @ small $P_{out}$ across 10% of bandwidth	> 5 dB		
$A_{variation}$ @ $\pm 10\%$ driving voltage	> 1 dB		
$P_{in max}$	100 mW		
$X_{in}$	50 $\Omega$		
SWR @ startup	1:2.5		
Noise figure	> 30 dB		
$V_k$ Cathode	yellow	GND	
$V_f$ Filament	brown	6.3 V	REG.
$V_c$ Collector	red	844 V	$\pm 5$ 10 mV
$V_h$ Helix	orange	844 V	$\pm 5$ 10 mV
$V_g$ Grid	green	-9.3 V	$\pm 2$ 10 mV
$V_a$ Anode	blue	592 V	$\pm 5$ 25 mV
$I_k max$	~20 mA		
$I_f max$	~0.4 A		
$I_c max$	~20 mA		
$I_h max$	~1 mA		
$I_g max$	??		
$I_a max$	~.2 mA		
$f_g$ small signal	500 KHz - DC		
$f_g$ large signal	100 KHz - DC		
$V_g$ when modulated	-300 - -40V		

Note: When filament current should be well regulated and not exceed max voltage to prevent burning up. The helix current may not be exceeded either. A trip circuit should be installed to protect the capsule.

These values are not the actual datasheet. These are estimations made by looking at the HP 489A's schematics and calibration guide, comparing with other TWT's from the same manufacturer and era, and the data on the capsule itself. These are broad indications and should be used together with common sense. Take the values listed with a grain of salt!