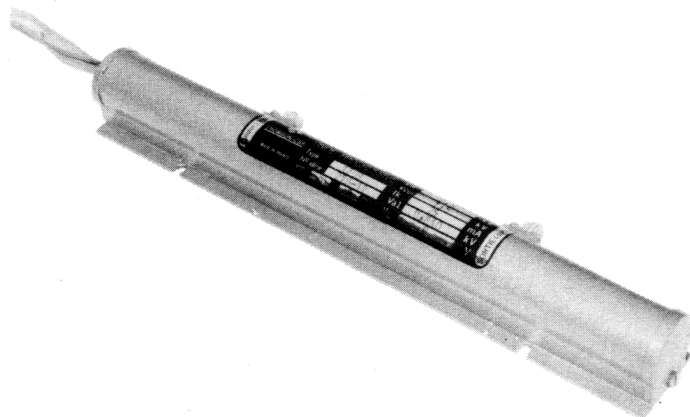


TOP.1203 TRAVELING WAVE TUBE

The TOP1203 traveling wave tube is a broadband amplifier capable of providing a minimum saturated output power of 7 W from 4.0 to 8.0 GHz. The gain for an output power of 7 W is more than 35 dB. Integral periodic permanent focusing reduces the stray magnetic field and saves weight.

The TOP1203 is cooled by natural convection and conduction. Because of its small size, light weight, and sturdy construction this tube is especially attractive for transportable and airborne equipments.

The AMP.2077A amplifier, fitted with the TOP1203 traveling wave tube is ideal for laboratory measurements, wideband amplification for radars and communications, antenna pattern measurements etc.. This amplifier incorporates a power supply, a TOP1203 traveling wave tube with its permanent magnet, a modulating circuit and security devices.



A TWTA is available including TOP1203 with its integral power supply :

The BFA.1208 is a small, light weight, compact, adjustment free microwave amplifier fitted with the TOP1203 intended for airborne and transportable equipments, radio links and space communications. (see Data Sheet TEH 4081).

GENERAL CHARACTERISTICS (1)

Electrical

	min.	max.	
Frequency	4.0	8.0	GHz
Heater voltage	6.2	6.4	V
Heater current	0.3	0.6	A
Output power	7		W
Gain for an output power of 7 W	35		dB
Helix voltage	2.4	2.8	kV
Helix current		2.0	mA
Anode voltage	0.5	1.0	kV
Anode current		1.0	mA
Collector voltage	1.2	1.6	kV
Cathode current		26	mA

(1) All voltages are referred to the cathode.



Mechanical

Operating position	any
Weight (approx).	600 g
RF connections	coaxial plugs OSM 202 (omni spectra)
Supply connections	flexible leads
Cooling	conduction

ABSOLUTE RATINGS

(non simultaneous values)

	min.	max.	
Heater voltage	6.0	6.6	V
Heater surge current	—	1.2	A
Warm-up time	3	—	mn
Ambient temperature	—	100	°C
Vibrations	—	1 mm between 10 to 50 10 g between 50 to 2000	Hz
shocks	—	100 g — 11	ms
Helix voltage (1) nominal voltage	−200	+200	V
Helix current	—	2.5	mA
Anode voltage (1) nominal voltage	—	+200	V
Anode current	—	2.0	mA
Collector voltage (1) nominal voltage	−200	+200	V
Cathode current	—	28	mA
Load VSWR	—	3 : 1	

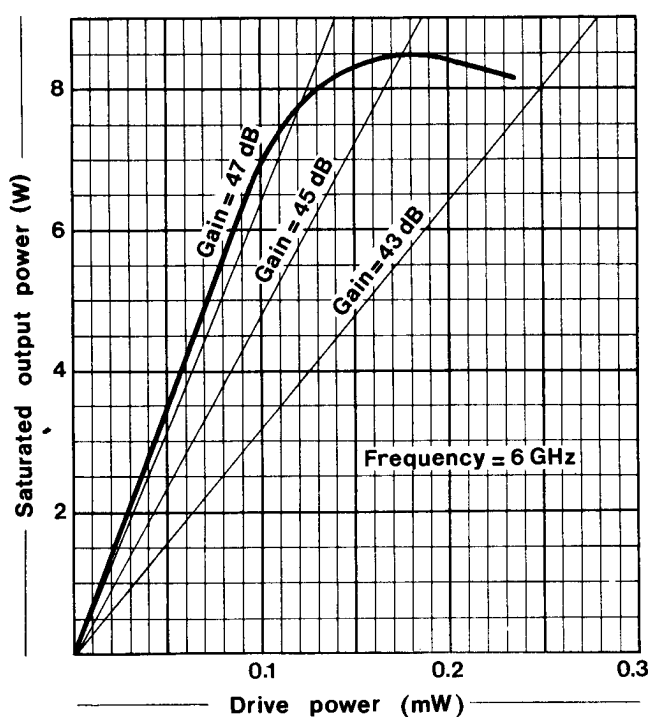
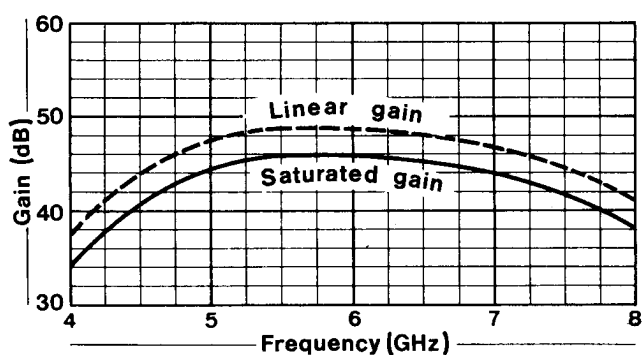
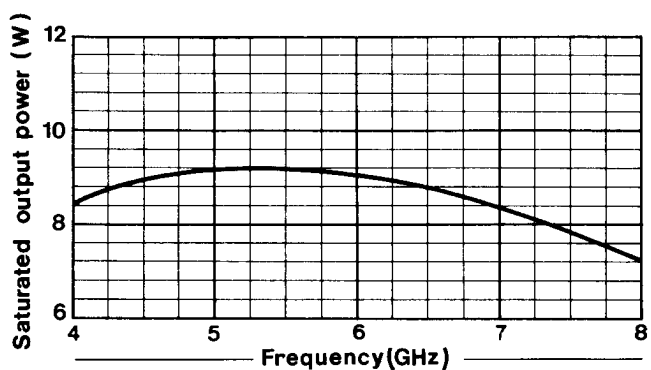
(1) The nominal voltage is indicated for each tube on the test Data Sheet.

TYPICAL OPERATION

Frequency	6	GHz
Heater voltage	6.3	V
Heater current	0.48	A
Drive power	0.15	mW
Output power	8.2	W
Gain	45	dB
Helix voltage	2.55	kV
Helix current	300	μA
Anode voltage	0.85	kV
Anode current	0	
Cathode current	25	mA
Collector voltage	1.5	kV

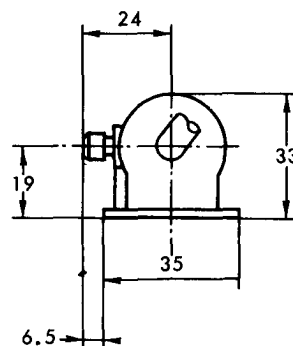
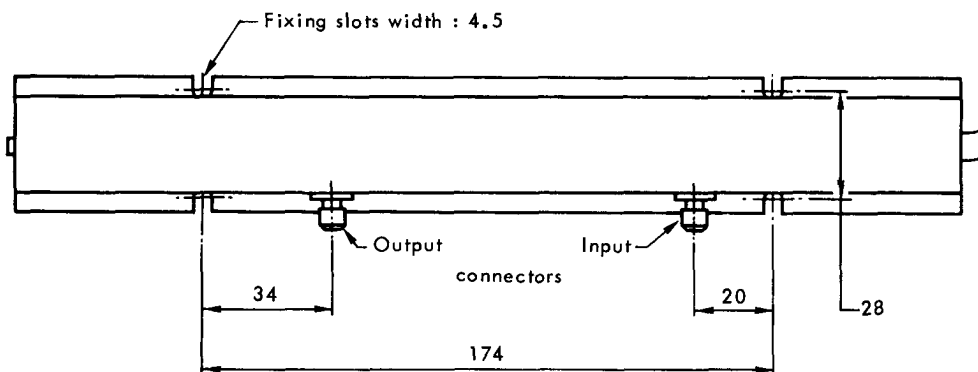
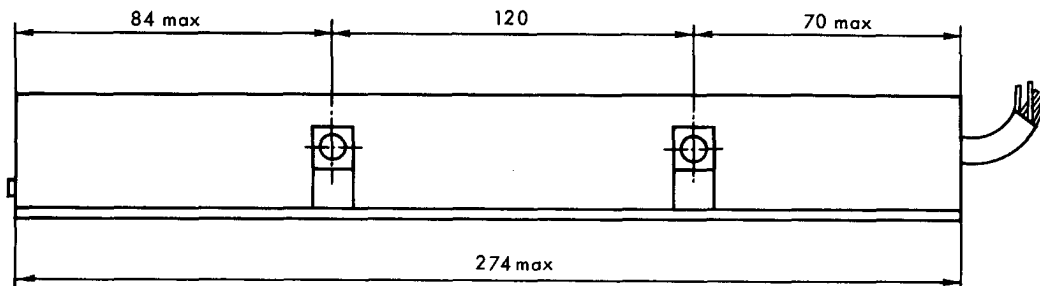


Typical characteristics





OUTLINE DRAWING



Connections	
Brown	Heater-cathode
Yellow	Cathode
Green	Wehnelt
Blue	Anode
Red	Collector
Orange	Ground-helix

