## TENTATIVE

## **GENERAL**

The F-2516 is a voltage-tunable, wide-band oscillator with a minimum output power of 20 milliwatts over its rated operating frequency range. This permanent magnet focused, highly stable device finds applications as a swept signal source in signal generators; master oscillators for frequency diversity transmitters; or typically as a local oscillator in radar or ECM receivers. The tube features a bifilar helix contained in a rugged envelope of simple mechanical design thus providing a highly reliable, compact unit. No cooling is required when the environment is below +60°C ambient temperature.

## ELECTRICAL

	TYPICAL	ABSOLUTE	UNITS		TYPICAL	ABSOLUTE	UNITS
Frequency Power Output	5.3 - 10.3 25 - 200	Note 1 20 min.	Gcs mw	*Grid Voltage for no Oscillation (RF Cutoff)			
Power Output Variation	9	10 max.	db	(with respect to cathode)	-20	-30 max.	Volts
Fine Grain Variation, Note 2 VSWR	2.5:1	±2.5 3.5:1	db/500 mc -	*Collector Voltage (with respect to Helix)	+100	+150 max.	Vdc
Output Impedance Heater Voltage	50 6 <b>.</b> 3	50 6.0 min./	Ohms Volts	Capacitance, Cathode to all Electrodes	40	50 max.	$\mu\mu$ fd.
Heater Voltage	0.5	6.6 max.	VOILS	Capacitance, Grid to		oo max	
Heater Current	0.96	1.2 max.	Amps	all Electrodes	30	45 max.	$\mu\mu$ fd.
Anode Voltage (with respect to Cathode)	200	250 max.	Volts	Capacitance, Helex to all other Electrodes and			
Anode Current	.25	1.0 max.	Ma	Capsule	120	200 max.	$\mu\mu$ fd.
Cathode Current	10	15 max.	Ma	Spurious Output below			
*Helix Voltage	Zero	Zero	Volts	Signal	50	40 min.	db.
Helix Current	4.0	6.0	Ma				
*Cathode Voltage (with respect to Helix)	-245 to -2400	-200 to -2500	Volts				

<sup>\*</sup>The above data shows tube operation with helix at ground potential (Zero Volts). If desired as an alternate, any one of the asterisked elements may be operated at ground potential, provided the other electrode potentials are set at the appropriate relative levels.

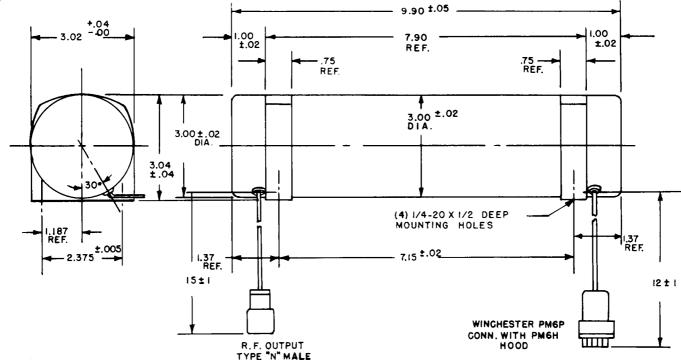
- NOTE 1 The F-2516 will operate over the frequency range of 5,247 to 10.4 Gcs, with a 3 db reduction in rated minimum output power.
- NOTE 2 This value is determined by selecting the 500 mc region of the frequency range which has the greatest difference in power output. The difference between these power levels is divided by two and the plus or minus sign affixed to denote the difference from an average power level.

## MECHANICAL

Package Length Package Diameter Package Weight Power Cable Length (to end of Win- chester PM6P Con-	9.90 3.00 9 lbs14 oz.	9.95 max. 3.02 max. 10 max.	Inches Inches Pounds	Output Cable Length (to end of Type "'N" Connector)	15	14 min./16 max.	Inches
nector)	12	11 min./13 max.	Inches				

Additional information for specific applications can be obtained from the

Electron Tube Applications Section ITT Electron Tube Division Post Office Box 104 Clifton, New Jersey



A-COLLECTOR B-HELIX C-HEATER D-HEATER, CATHODE E-ANODE F-GRID (FOCUS)

