EITEL-McCULLOUGH, INC.
SAN CARLOS, CALIFORNIA

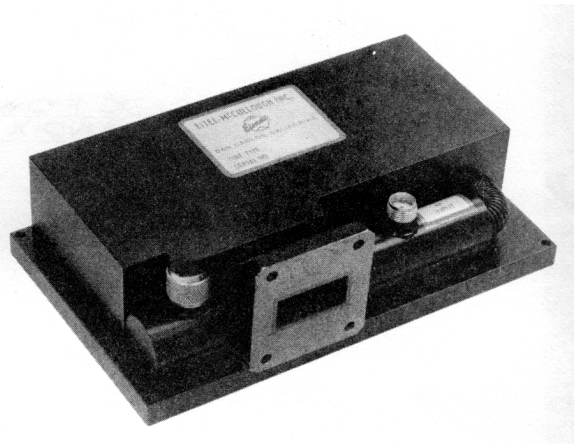
X1132

TRAVELING WAVE TUBE - POWER SUPPLY PACKAGE

7.0 - 8.0 Gc
3.0 WATTS
36 db GAIN

TENTATIVE DATA SHEET
TRAVELING WAVE TUBE AMPLIFIER POWER SUPPLY PACKAGE X1132

The X1132 is a long life, highly reliable amplifier package consisting of a PPM focused ceramic-metal TWT amplifier (X1131) and integral solid state power supply designed for space applications. Over the frequency range of 7.0 to 8.0 Gc, 2.5 Watts of rf power are produced at a saturated gain of 36 db.



ELECTRICAL SPECIFICATIONS:

Absolute Ratings	Maximum	Minimum
Power Supply Voltage	40	20 V
Power Supply Power	16	- W
Duty Cycle	100	- %
Input Power, rf	100	0 mw
Power Reflected From Load	3.0	- W
Temperature, Collector	+150	- 40° C
Ambient Temperature	+80	- 40° C
Altitude	Any	
Operating and Performance Data		
Power Supply Voltage	28	V
Power Supply Current	0.48	A
Duty Cycle	100	%
Frequency Range	7.0-8.0	Gc
Small Signal Gain-Minimum	40	db
-Typical	43	db
Saturated Power-Minimum	2.5	W
-Typical	3.0	W
Saturated Gain-Minimum	36	db
-Typical	38	db
Output VSWR (Cold)	1.5:1	
Input VSWR (Cold)	1.5:1	
Input and Output Impedance	50	ohms
Noise Figure-Maximum	30	db
-Typical	28	db

ENVIRONMENTAL SPECIFICATIONS:

Vibration	20 g's to 2000 cps
Shock	100 g's
Acceleration	20 g's, sustained
Temperature	−20° C to +50° C
Altitude	Any

MECHANICAL SPECIFICATIONS:

Operating Position	Any
Input Coupling, rf	TNC Coax Fitting
Output Coupling, rf	TNC Coax or UG 51/U Waveguide
Focusing	PPM, shielded
Cooling	Conduction through heat sink
Dimensions	See outline drawing
Weight	4.0 lbs
Power Supply Connections	Bendix PTIH - 3P

APPLICATION NOTES:

1. Full rf performance will be obtained for input voltages between 24 and 30 volts dc.
2. Six telemetry outputs are available for monitoring of TWTA performance.
3. DC operation may be programmed by use of 20 V control signal (draws 10 mW).
4. Especially useful in long unattended mission applications, MTTFF 50,000 hours, rated.
5. Magnetic shield minimizes interference with sensitive components, permits dense packing. Two units may be mounted and operated as close as mechanical outline permits.

DATA SHOULD NOT BE USED FOR FINAL EQUIPMENT DESIGN