

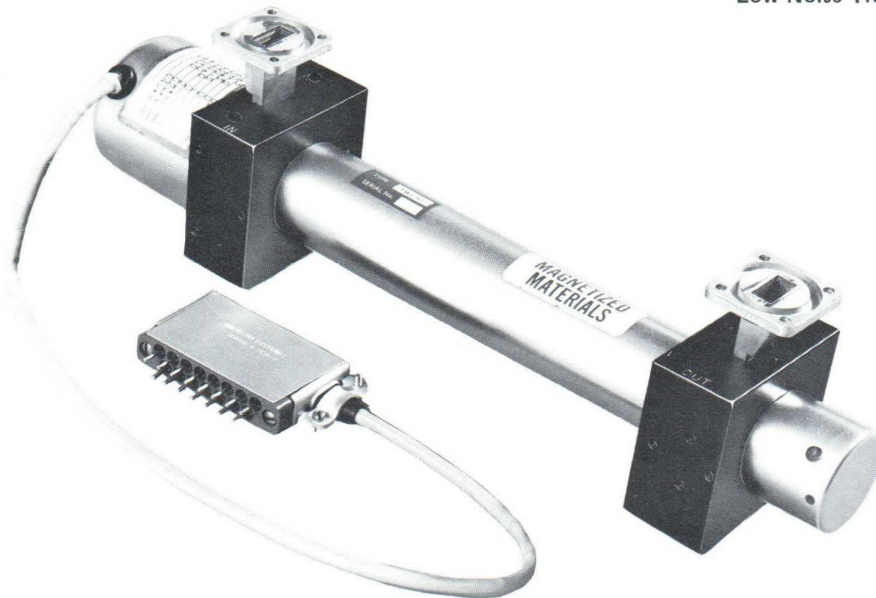
EEV Travelling Wave Tube Amplifiers and Power Supplies

Type	Description
	A high voltage, solid state power supply designed specifically to provide the required voltages for the following tubes operating with collectors at ground potential:— N1071 N1072 N1073 N1095
N4173	The power supply has adequate built-in metering facilities, comprehensive over-voltage and over-current protection and provision for adjustment and control of output voltages. Two low voltage outputs of -24 V d.c. are provided to supply power to the receiver and low level transmitter section of microwave relay equipment.
	A high voltage, solid state power supply designed specifically to provide the required voltages and cooling for the following tubes; the tube is mounted within the N4178. N1077 N1080A N1081 N10021
N4182 N4183	Travelling wave tube amplifiers providing a minimum output power of 1 W. Frequency range of N4182 is 5 to 10 GHz with minimum gain of 34 dB; N4183 covers 8 to 16 GHz with minimum gain of 32 dB. The amplifiers are suitable for bench or rack mounting and contain adequate monitoring and protective facilities.
	A high voltage, solid state power supply designed specifically for use in high capacity microwave communication systems. It can be either rack or bench mounted. It provides the voltages required for the following tubes:—
→ N4184 N4184A	N10022 N10023 N10018 N10019

M-OV Travelling Wave Tubes - Low Noise

Frequency range (GHz)	Type	Saturated output power (mW)	Noise factor (dB)	Low level gain (dB)†	Collector		R.F. connectors	Focus system
					Voltage (kV)	Current (mA)		
2.0–4.1	TWS17 § ■	20	11	38.5	0.7	0.8	Coaxial	PPM
4.0–8.0	TWC18 § ■	20	11	38.5	1.05	1.0	Coaxial	PPM
7.0–12.0	TWX19 §	10	11	37	1.5	1.0	Coaxial	PPM
12.0–18.5	TWJ30 §	3.0	13.5	35	1.5	0.6	Waveguide	PPM

Low Noise Travelling Wave Tube TWJ30



EEV Travelling Wave Tubes - Low Noise

Frequency range (GHz)	Type	Saturated output power (mW)	Noise factor (dB)	Low level gain (dB)†	Collector		R.F. connectors	Focus system
					Voltage (V)	Current (μA)		
2.7–3.2	N1047M (CV8908)	1.5	4.0	24	800	130	Coaxial	N4041e ■
2.7–3.5	6861 (CV5362)	1.0	6.5	25	400	150	Coaxial	N4004e ■

EEV Travelling Wave Tubes - X-Band

Frequency range (GHz)	Type	Saturated output power (W)	Noise factor (dB)	Low level gain (dB)¶	Collector		R.F. connectors	Focus system
					Voltage (kV)	Current (mA)		
7.1–8.4	N10022	12	25	47	1.3	40	SMA	Integral†★ ←
7.0–8.5	N1071	16	24	44	2.0	45	Waveguide	N4134★☆
10.7–11.7	N10012**	12	25	40	1.5/0.6**	14/16**	SMA	Integral★
10.7–13.25	N1095	16	25	40	1.7	40	Waveguide	Integral★☆

M-OV Travelling Wave Tubes - X-Band

Frequency range (GHz)	Type	Saturated output power (W)	Noise factor (dB)	Low level gain (dB)	Collector		R.F. connectors	Focus system
					Voltage (kV)	Current (mA)		
7.0–11.5	TWX8	1.0	30	35¶	2.7	8.0	Waveguide	PPM▲
7.0–11.5	TWX22	1.0	30	35¶	2.6	8.0	Waveguide	PPM▲
7.0–11.5	TWX34	1.0	30	35¶	2.6	8.0	Waveguide	PPM▲
8.0–9.3	TWX16	5.0–20 kW (peak)	–	47–53	15–23	3–6 A (peak)	Waveguide	SMX16®

EEV Pulsed Travelling Wave Tubes, Coupled Cavity - X-Band

Frequency range (GHz)	Type	Bandwidth (MHz)	Peak output power (kW)	Duty cycle	Gain (dB)	Beam voltage (kV)	Beam current (A)	Focus system
X-Band	N10502 §	500	50	0.015	42	31	7.5	Integral PPM
8.6–9.5	N10503 §	900	28	0.01	50	25	6.0	Integral PPM
X-Band	N1061 ■	450	900	0.005	33	100	31	N4115®

EEV Broadband Travelling Wave Tube Amplifier Chains

Broadband power amplifier chain assemblies consisting of two cascaded travelling wave tubes and passive r.f. components necessary for required r.f. performance. The amplifier chains are ruggedly designed and packaged and are conduction cooled through the baseplate. They may be fitted with alternative coaxial r.f. connectors, control and modulation connections to meet specific customer requirements.

Frequency (GHz) ‡	Type	Tubes	C.W. output power (W)	Drive power (µW)	Collector		R.F. connectors	Focus system
					Voltage (kV)	Current (mA)		
4.5–10	N10500	N1078 driver	–	50	2.0	21	SMA input TNC output	Integral Integral ←
		N1077 output	170	–	3.5	200		
8.0–16.5	N10501	N1082 driver	–	25	2.1	16	SMA input WG output	Integral Integral ←
		N1081 output	140	–	4.5	200		

Microwave Tubes

Duplexer Devices
Noise Generators
Pressure Windows
Monitor Diodes
Klystrons
Magnetrons
Travelling Wave Tubes
Backward Wave Oscillators