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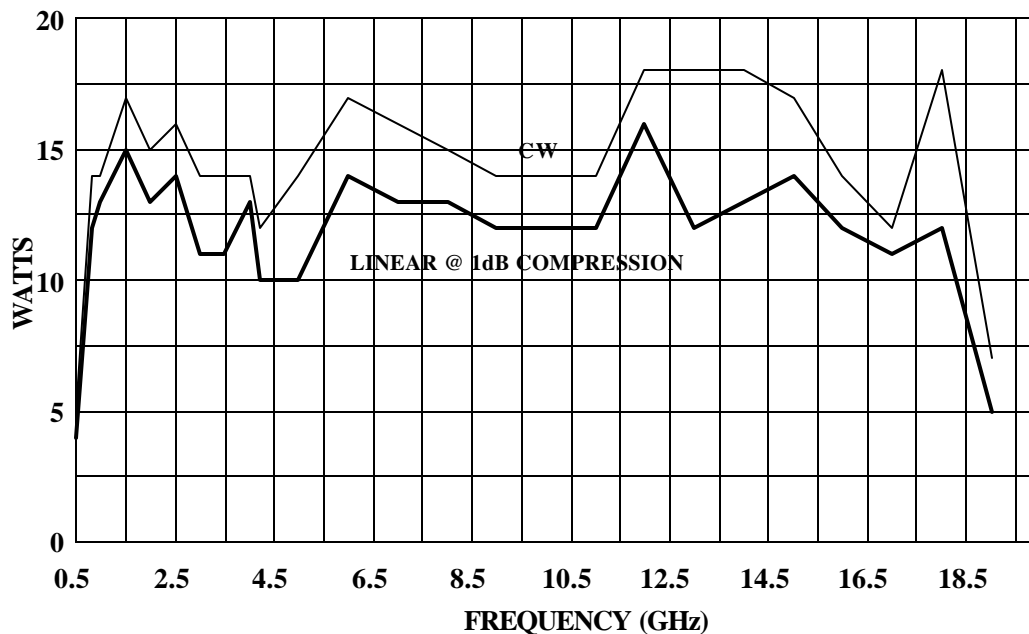
**MODEL 10ST1G18**  
**M1, M2**  
**10 WATTS CW**  
**0.8 - 18 GHz**

The Model 10ST1G18 is a self contained, forced air cooled, broadband hybrid solid state and traveling wave tube (TWT) microwave amplifier designed for applications where low harmonic content is required in sub-band ranges and where high gain and moderate power output are required. A reliable amplifier system provides a conservative 10 watts minimum at the amplifier output connector with low harmonics. Stated power specifications are at the fundamental frequency.

The amplifier's front panel digital display shows forward and reflected output plus extensive system status information accessed through a series of menus via soft keys. Status indicators include power on, warm-up, standby, operate, faults, excess reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0dBm input, gain control, RF output sample port, VSWR protection for the TWT only, plus monitoring of TWT helix current, cathode voltage, collector voltage, heater current, heater voltage, baseplate temperature and cabinet temperature. The appropriate sub-band is user selected from either the front panel menu or the GPIB interface. Modular design of the power supplies and RF components allow for easy access and repair. Use of switching mode power supplies results in significant weight reduction.

See Model Configuration for package alternatives.

**10ST1G18 TYPICAL POWER OUTPUT**



## SPECIFICATIONS Model 10ST1G18

### POWER (fundamental), CW, @ OUTPUT CONNECTOR

Nominal.....	15 watts
Minimum.....	10 watts
Linear @ 1dB Compression.....	8 watts minimum
FLATNESS.....	$\pm 3$ dB maximum, 0.8 – 4.2 GHz $\pm 9$ dB maximum, 4.2 – 18 GHz
FREQUENCY RESPONSE.....	0.8 - 18 GHz instantaneously in one of four selectable sub-bands
INPUT FOR RATED OUTPUT.....	1.0 milliwatt maximum
GAIN (at maximum setting).....	40 dB minimum
GAIN ADJUSTMENT (continuous range).....	10 dB minimum (0.8 – 4.2 GHz) 35 dB minimum (4.2 – 18 GHz)
INPUT IMPEDANCE.....	50 ohms, VSWR 2.5:1 maximum
OUTPUT IMPEDANCE.....	50 ohms, VSWR 2.5:1 typical
MISMATCH TOLERANCE.....	100% of rated power without foldback from 0.8 – 4.2 GHz. Output power foldback protection above 4.2 GHz at reflected power exceeding 10 watts. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.
MODULATION CAPABILITY.....	Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal. AM peak envelope power limited to specified power.
NOISE POWER DENSITY (from 4.2 – 18 GHz).....	Minus 80 dBm/Hz (maximum) Minus 90 dBm/Hz (typical)
HARMONIC DISTORTION (in user selectable sub-band (at 10 watts).....	Minus 20dBc maximum, Minus 30dBc typical
PRIMARY POWER.....	99-260 VAC 50/60 Hz single phase 700 VA maximum
<b>CONNECTORS</b>	
RF input.....	Type N precision female on rear panel
RF output.....	Type TNC female on rear panel
RF output sample port.....	Type N precision female on rear panel
GPIO.....	IEEE-488 (f)
Interlock.....	DB-15 female on rear panel
COOLING.....	Forced air (self contained fans), air entry and exit in rear.

### MODEL CONFIGURATION

MODEL NUMBER	DESCRIPTION	WEIGHT	SIZE (W x H x D)
10ST1G18	With removable enclosure	55 kg (120lb)	50.3 x 29.7 x 68.6 cm 19.8 x 11.7 x 27 in
10ST1G18M1	Shipped without an outer cabinet	41 kg (90lb)	48.3 x 26.7 x 68.6 cm 19.0 x 10.5 x 27 in
10ST1G18M2	Enclosure removed for rack mounting, slides and front handles installed	43 kg (95lb)	48.3 x 26.7 x 68.6 cm 19.0 x 10.5 x 27 in