

**Model 35ST1G18,  
M1 through M5  
35 Watts CW  
0.8-18 GHz**

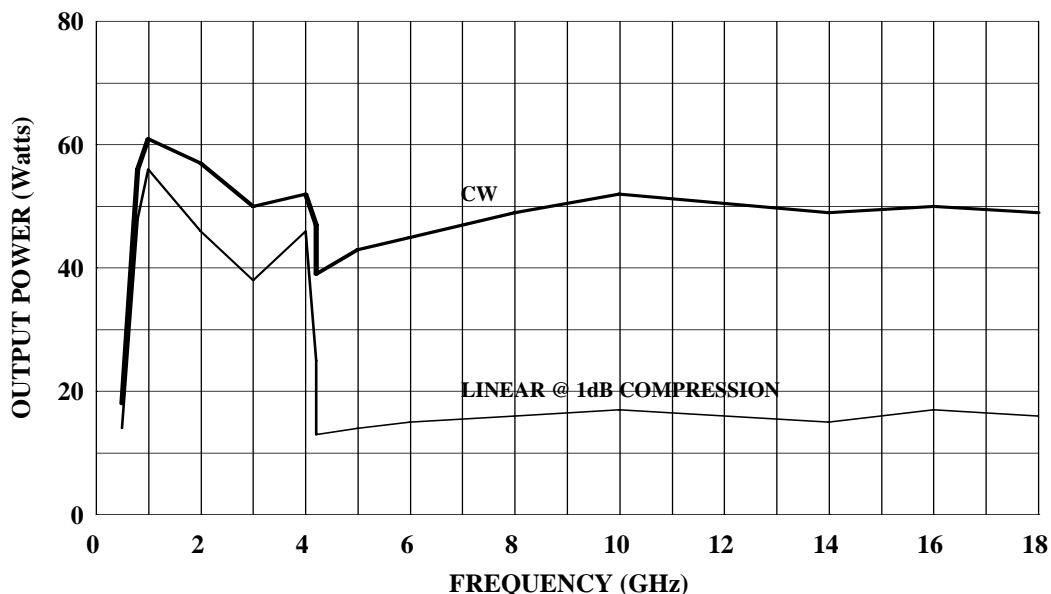
The Model 35ST1G18 is a self contained, forced air cooled, broadband hybrid solid state and traveling wave tube (TWT) microwave amplifier designed for applications where low harmonic content is required in sub-band ranges and where high gain and moderate power output are required. A reliable amplifier system provides a conservative 35 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.

Housed in a stylish contemporary cabinet this unit is designed for bench top use but can be removed from the cabinet for rack mounting. The Model 35ST1G18 provides readily available RF power for a variety of applications in Test and Measurement, (including EMC RF susceptibility testing), Industrial and University Research and Development, and Service applications.

See Model Configurations for package alternatives.

**Model 35ST1G18 Typical Performance**



## SPECIFICATIONS, MODEL 35ST1G18

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

Nominal .....	50 watts
Minimum .....	45 watts from 0.8 to 4.2 GHz 35 watts from 4.2 to 18 GHz
Linear @ 1dB Compression .....	10 watts minimum
FLATNESS .....	±3 dB maximum, 0.8 – 4.2 GHz ±10 dB maximum, 4.2 – 18 GHz
FREQUENCY RESPONSE .....	0.8 - 18 GHz in one of four selectable sub-bands
INPUT FOR RATED OUTPUT .....	1.0 milliwatt maximum
GAIN (at maximum setting) .....	45 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 20 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 35 watts) .....	Minus 20dBc maximum, Minus 30dBc typical
PRIMARY POWER .....	99-260 VAC 50/60 Hz single phase 1400 VA maximum
<b>CONNECTORS</b>	
RF input .....	Type N precision female on rear panel
RF output .....	Type N precision female on rear panel
RF output sample port .....	Type N precision female on rear panel
GPIB .....	IEEE-488 female
Interlock .....	DB-15 female on rear panel
COOLING .....	Forced air (self contained fans), air entry and exit in rear.
SIZE (W x H x D) .....	19.8 x 19 x 29 in., 50.3 x 48 x 74 cm.
WEIGHT (approximate) .....	185 lbs, 84 kg

### MODEL CONFIGURATIONS

- E**     **Package Alternatives.** May select an alternative from the following [E1C or (E1C and E2S) and/or E3H]:
- E1C**   **Cabinet:** Without outer enclosure, size 49 x 45 (10U) x 74 cm, 19 x 17.5 (10U) x 29 in., Subtract approximately 16 kg, 35 lbs, for removal of outer enclosure.
- E2S**   **Slides:** slides installed, add approximately 5 lbs, 2 kg.
- E3H**   **Handles:** Front handles installed.

### MODEL NUMBERS FOR 35T1G18

Model Number	Features
<b>E</b>	
<b>35ST1G18</b>	Base model
<b>M1</b>	E1C
<b>M2</b>	E3H
<b>M3</b>	E1C & E3H
<b>M4</b>	E1C & E2S
<b>M5</b>	E1C & E2S & E3H

Model number example: Model 35ST1G18M2 would have option E3H front handles installed.