



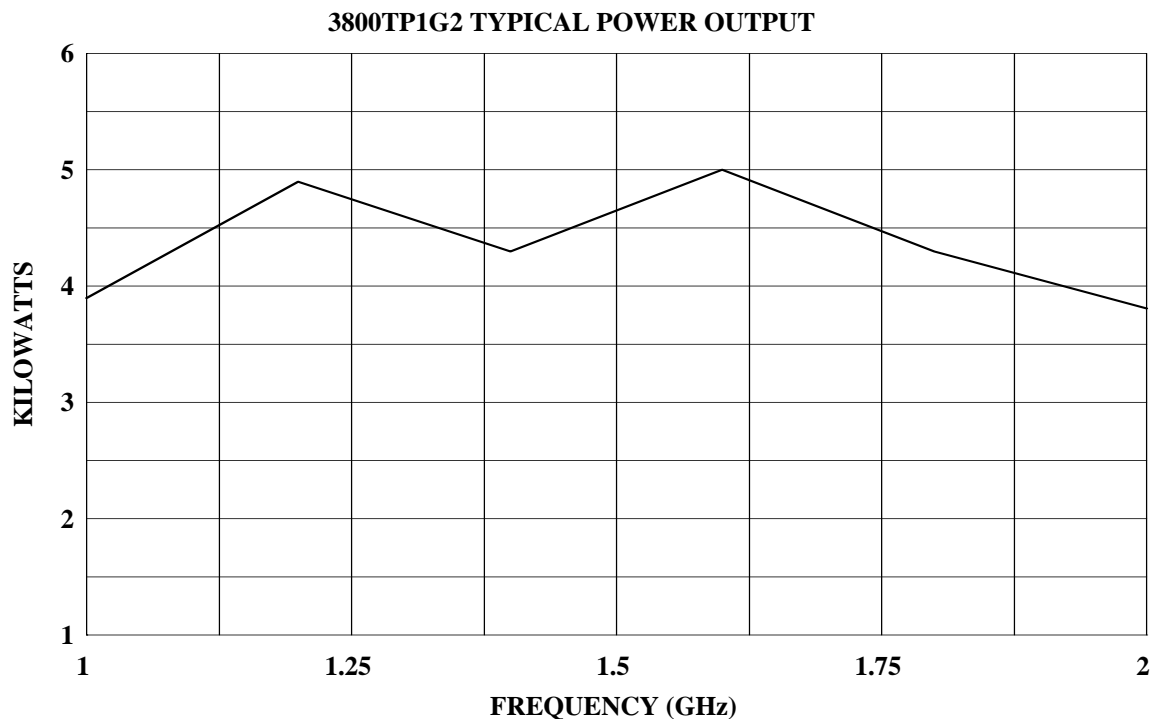
**Model 3800TP1G2,
M1 through M5
3,800 Watt Pulse Amplifier
1GHz–2GHz**

The Model 3800TP1G2 is a self contained, forced air cooled, broadband traveling wave tube (TWT) microwave amplifier designed for pulse applications at low duty factors where instantaneous bandwidth and high gain are required. A reliable TWT provides a conservative 3800 watts minimum peak RF pulse power at the amplifier output connector. Stated power specifications are at the fundamental frequency.

The amplifier's front panel digital display shows forward and reflected average power output or forward and reflected peak power, 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 average or peak reflected power warning and remote. Standard features include a built-in IEEE-488 (GPIB) interface, 0dBm input, TTL Gating, VSWR protection, gain control, RF output sample ports, auto sleep, plus monitoring of TWT helix current, cathode voltage, collector voltage, heater current, heater voltage, baseplate temperature and cabinet temperature. Modular design of the power supply 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, the amplifier provides readily available pulsed RF power for a variety of applications in Test and Measurement, (including EMC RF pulse susceptibility testing), Industrial and University Research and Development, and Service applications. AR also offers a broad range of amplifiers for CW (Continuous Wave) applications.

See Model Configurations for alternative packaging.



SPECIFICATIONS, MODEL 3800TP1G2

POWER (Fundamental), Peak Pulse, @ Output)	
Nominal	4,500 watts
Minimum	3,800 watts
FLATNESS	±6 dB maximum
FREQUENCY RESPONSE	1-2 GHz
INPUT FOR RATED OUTPUT	1.0 milliwatt maximum
GAIN (at maximum setting)	66 dB minimum
GAIN ADJUSTMENT (continuous range)	35 dB minimum
INPUT IMPEDANCE	50 ohms, VSWR 2.5:1 maximum
OUTPUT IMPEDANCE	50 ohms, VSWR 2.5:1 typical
MISMATCH TOLERANCE	Output pulse width foldback protection at peak reflected power exceeding 2000 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.
PULSE CAPABILITY	
Pulse Width	0.07 – 100 microseconds.
Pulse Rate (PRF)	100 kHz maximum
Duty Cycle	4% maximum.
RF Rise and Fall.....	30 ns max (10% to 90%).
Delay.....	300 ns maximum from pulse input to RF 90%
Pulse Width Distortion.....	±30 ns maximum (50% points of output pulse width compared to 50% points of input pulse width)
Pulse Off Isolation	80 dB minimum, 90 dB typical
Pulse Input	TTL level, 50 ohm nominal termination
NOISE POWER DENSITY	
(pulse on)	Minus 60 dBm/Hz maximum; Minus 65 dBm/Hz typical
(pulse off)	Minus 140 dBm/Hz (typical)
HARMONIC DISTORTION	Minus 3 dBc maximum, minus 5 dBc typical
PRIMARY POWER	190-260 VAC, 50/60 Hz single phase, 2 KVA maximum
CONNECTORS	
RF input	Type N female on rear panel
RF output	Type DIN 7-16 female on rear panel
RF output forward and reflected sample ports	Type N female on rear panel
Pulse input	Type BNC female on rear panel
GPIB	IEEE-488 female on rear panel
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)	50.3 x 26 x 94 cm, 19.8 x 10.3 x 37 in
WEIGHT (approximate)	57 kg, 125 lbs

MODEL CONFIGURATIONS, 3800TP1G2

- E Package Alternatives.** May select an alternative from the following [E1C or (E1C and E2S) and/or E3H]:
- E1C Cabinet:** Without outer enclosure for rack mounting, size (W x H x D) 49 x 22 (5U) x 94 cm, 19 x 8.75 (5U) x 37 in., Subtract approximately 11 kg, 25 lbs, for removal of outer enclosure.
- E2S Slides:** slides installed, add approximately 2 kg, 5 lbs.
- E3H Handles:** Front pull handles installed.

Model Number	Features
3800TP1G2A	Base model
M1	E1C
M2	E3H
M3	E1C & E3H
M4	E1C & E2S
M5	E1C & E2S & E3H

Model number example: Model 3800TP1G2M2 would have option E3H front pull handles installed.