

## TECHNICAL BULLETIN

250 W AGC RF POWER AMPLIFIER

**E10150-01-05**

**Rev.B**

Designed with the end-user in mind. The AGC Power Amplifier series provides a perfect environment for Elmacom power amplifiers range of power modules. The module provides an integral convection cooled heat sink and control function in a 2.45" high x 13.5" deep x 5" mechanical chassis. By use of a directional coupler and AGC circuitry, power leveling to +/- 0.2 dB can be maintained over the full frequency range. Additionally, protection is provided by gently reducing power output as load VSWR increases. Remote control is standard with all monitoring outputs (RF IN alarm, OUT VFWD and VREV, AGC fail, V temperature, VSWR alarm) available together with ON/STANDBY , BATTLE-SHORT (shut-down protection bypass) controls. In addition, the unit is available custom tuned for optimum performance over specific frequency bands within the 225 - 400 MHz frequency range.

### Features

- Linear Class AB Amplifier +65 dBm IP3
- Broadband Operation 225 to 400 MHz
- Five Step Output Power 12.5 to 250 W
- High Efficiency 50%
- High Dynamic Range : 2 to 10 W input
- Very Low Gain Ripple :  $\leq \pm 0.2$  dB
- Low Harmonics & Spurious Contents
- Variable PIN Attenuator for Low Distortion
- Easily Combined for Higher Powers
- Rugged Push-pull FET Design
- Built to MIL Standards
- High Reliability

### Absolute Maximum Ratings

Parameter	Rating	Units
Supply Voltage	32	Vdc
Input Power (Peak)	15	W
Output Power (Max Adjustable)	300	W
Operating Temperature	- 40 to + 80	°C
Storage Temperature	-54 to +125	°C

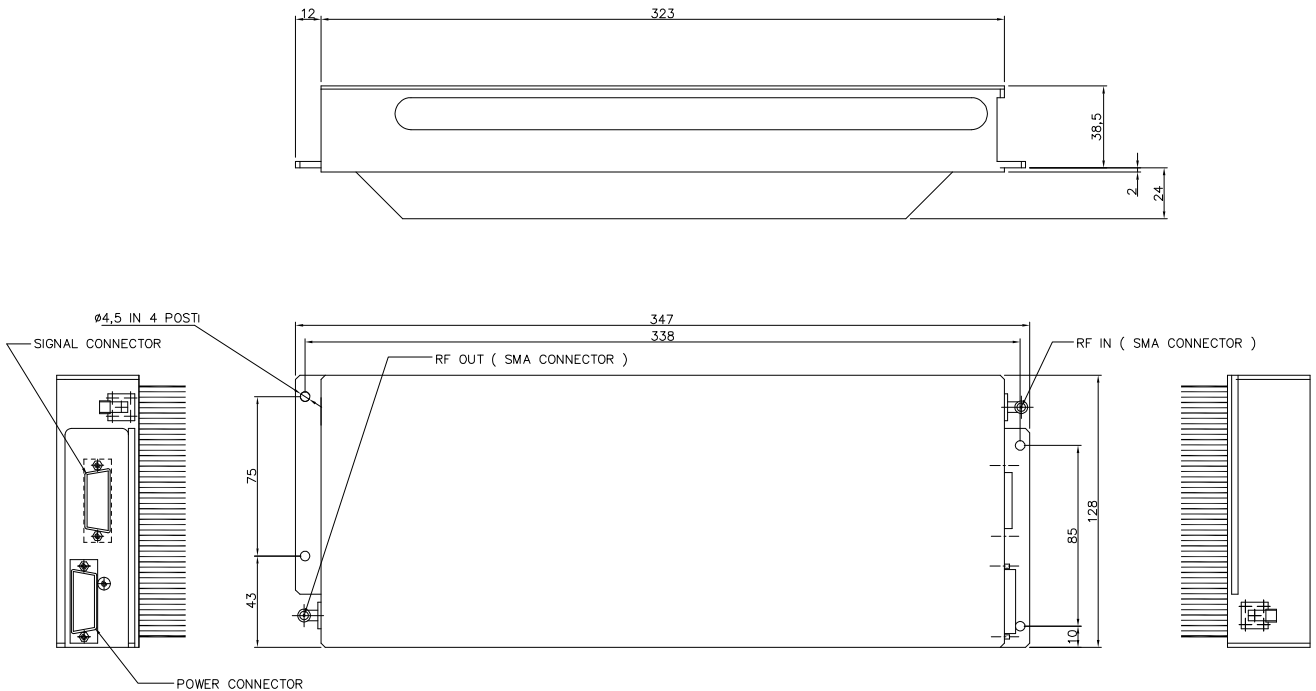
#### ELMACOM srl

Via delle Genziane s.n.c 00012 Guidonia, Rome - Italy  
Phone: +39 (0774) 379296 Fax: +39 (0774) 353442  
E-mail : [info@elmacom.com](mailto:info@elmacom.com) Website : [www.elmacom.com](http://www.elmacom.com)

### Electrical Characteristics at 25°C

Parameter	Units	Min	Typ.	Max	Test Conditions
Output Power (higher step)	W CW	240	250	270	Vcc=28V, Pin = 4 W, Load=50 Ω, F = 400 MHz
Input Power Window	W CW	2	4	10	Vcc=28V, Load=50 Ω, F = 400 MHz
Power Gain	dB	20	22		Vcc=28V, Load=50 Ω, F = 400 MHz
Efficiency	%	45	55		Vcc=28V, Pout=250W, Load=50 Ω, F = 400 MHz
AGC Set time (rise / fall time)	msec		1.5	2	Vcc=28V, Load=50 Ω, Pout=0 to 98%, F=400MHz
Load VSWR Tolerance	VSWR		2.5:1	2:1	Vcc=28V, Pout=250 W, all phases
Output Ripple	dB		0.25	0.4	Vcc=28V, Pout=250 W, Load = 50 Ω
Even Harmonics	dBc		-40	-35	Vcc=28V, Pout=250 W, Load=50 Ω, F =225 MHz
Odd Harmonics	dBc		-27	-24	Vcc=28V, Pout=250 W, Load=50 Ω, F =225 MHz
Spurious Output	dBc			-80	Vcc=28V, Pout=250 W, Load=50 Ω,
Input Signal					CW/FM optional AM/PM/PULSE (ext. mod. Sign.)

### PACKAGE OUTLINE ( adequate air cooling required )



Dimensions in mm