



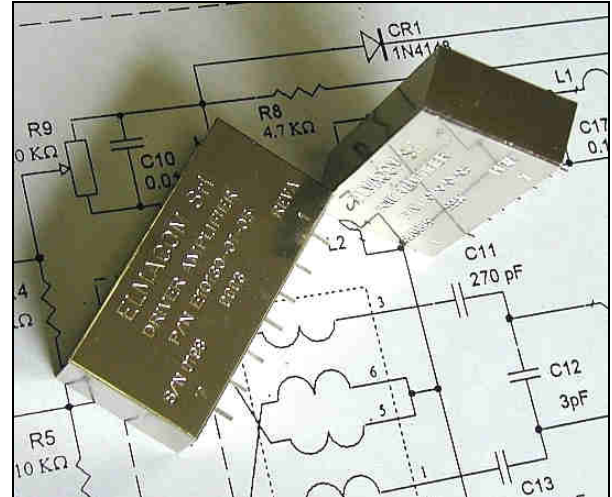
TECHNICAL BULLETIN

MINIATURE PRE-AMPLIFIER MODULE

E10420-01-05

Rev.A

This miniature, wideband VHF/UHF, power amplifier is designed for military and commercial transmitters application. This specification describes a two stage class A CW amplifier which incorporates gold-metallised, SI MOSFET transistor for high reliability and provides more than 15W CW output power over the full frequency range from 30 to 470 MHz with a typical 30dB power gain. This model accepts AM, video & pulse input modulation.



Features

- Broadband Operation 30 to 470 MHz
- Output Power : 15W CW (20W PEP)
- Gain : ≥ 30 dB
- ALC Modulation Control
- 60 dB Gain Control Range

- AM Input Bandwidth : DC to 22 KHz
- NF : 4 - 6 dB max
- Rugged Push-pull FET Design
- Built to MIL Standards
- Proprietary Design Improvement

Absolute Maximum Ratings

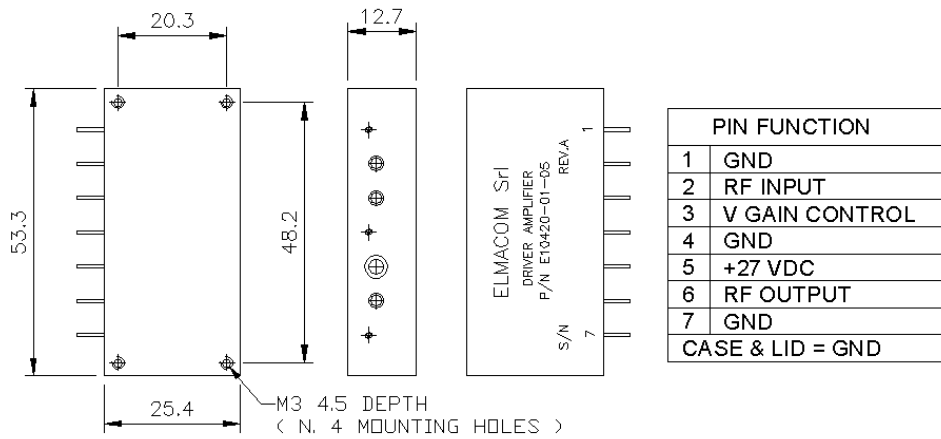
Parameter	Rating	Units
Supply Voltage	30	V
Input Power	+ 20	dBm
Gain Control Voltage	+ 4 to + 10	V
Operating Case Temperature	-40 to 110	°C
Storage Temperature	-54 to 125	°C

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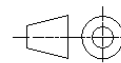
Via delle Genziane s.n.c 00012 Guidonia, Rome - Italy
Phone: +39 (0774) 379296 Fax: +39 (0774) 353442
E-mail : info@elmacom.com Website : www.elmacom.com

Electrical Characteristics at 25°C

Parameter	Units	Min	Typ.	Max	Test Conditions
Output Power (CW)	W	17	19		Vcc=27V, Pin=+13 dBm, Load=50 Ω, Vgc= adjust.
Power Gain	dB	29	31		Vcc=27V, Pin=+13 dBm, Pout=10W, Load=50 Ω
Efficiency	%	25	35		Vcc=27V, Pin=+13 dBm, Pout=15W, Load=50 Ω
Input VSWR	VSWR		1.8 :1	2.7 :1	Vcc=27V, Load=50, Ω, Vgc=adjusted for max Gain
Load Mismatch Tolerance	VSWR	3.3:1	5 :1		Tc=100°C, F=470MHz, Pout at max, all angles at min
Gain Variation With Freq.	dB		±1	±1.5	Vcc=27V, Pin=+13 dBm, Pout=13W, Load Ω =50
Even Harmonics	dBc		-30	-25	Vcc=27V, Pin=+13 dBm, Pout=2-10 W
Odd Harmonics	dBc		-16	-14	Vcc=27V, Pin=+13 dBm, Pout=2-10 W
Spurious Output	dBc		-95	-80	Vcc=27V, Pin=+13 dBm, Pout=15W, Load=50 Ω



ALL DIMENTIONS ARE IN mm



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