



TECHNICAL BULLETIN

HIGH GAIN BROADBAND RF POWER AMPLIFIER

E10470-01-05

Rev.C

Designed for Wide-band High Gain application in the V-UHF range. This high reliability amplifier utilizes class AB Silicon RF Power LDMOSFET devices that provide high broadband gain, wide dynamic range and good amplitude modulation characteristics. The amplifier includes an internal circuit that provides the external Voltage Control of Gain (for AM modulation or external ALC features). Also included automatic protection circuits for overtemperature and load mismatch on the output port. The amplifier provides auxiliary signals for output power monitoring (forward and reflected power) and failure alarm. High efficiency, reliable operation and flat gain are being achieved by employing unique broadband RF networks.

Absolute Maximum Ratings

Parameter	Rating	Units
Supply Voltage	30	Vdc
Operating Temperature	-40 to +75	°C
Storage Temperature	-54 to +125	°C

Electrical Characteristics @ T = 25 °C & VDD = 28.0 Vdc

Parameter	Values		Units
Frequency Range	10 - 500	min	MHz
Output Power @ 1 dB comp.	9	min (1)	W
Output Power @ saturation	16	min (2)	W
Small Signal Gain	40	min	dB
Gain Flatness	+/- 3	max	dB
Third Order Intercept Point	+ 50	min	dBm
2 nd Harmonic @ 1 dB comp	- 25	min	dBc
3 rd Harmonic @ 1 dB comp	- 15	min	dBc
V AGC Input @ 50 mA	0 - 10		V
Gain Control Dynamic Range	60	min	dB
Noise Figure	10	max	dB
Input/Output VSWR	3 : 1	max	

(1) The Output Power @ 1 dB comp., becomes 4 Watts from 10 to 20 MHz

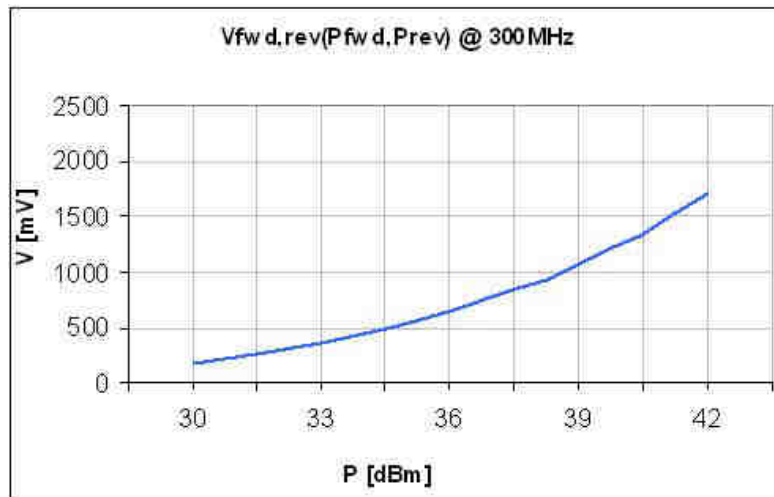
(2) Output Power @ saturation, becomes 9 watts from 10 to 20 MHz

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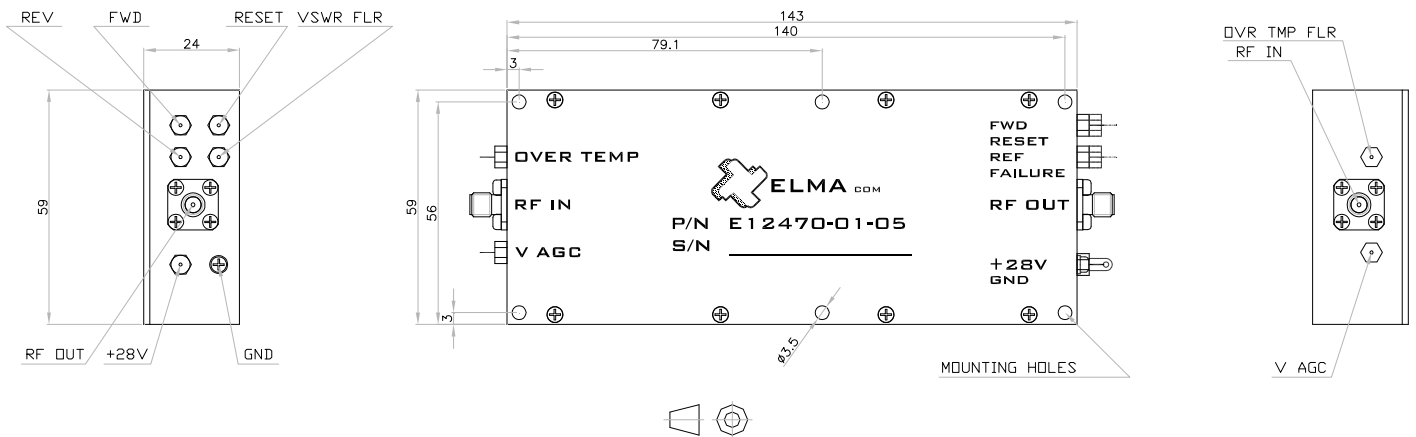
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Detector Voltage-Power characteristic



OUTLINE DRAWING (Adequate Heatsink Required)



(dimensions in mm)

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