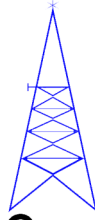


HD



Communications Corp.

HD30802

704MHz 600W Class AB Custom Amplifier

- ❖ Class AB 600W CW amplifier
- ❖ 699-709MHz bandwidth
- ❖ 21dB typical gain
- ❖ Temperature-compensated bias
- ❖ >60% typical efficiency
- ❖ Available with TTL disable



The HD30802 is a custom Class AB amplifier designed specifically for a linear accelerator application. It is conservatively designed to provide long term stable operation, and incorporates latest generation LDMOS transistors for high gain, efficiency and ruggedness.

Specifications

$V_{sup} = +36VDC$, $I_{DQ} = 2.0A$, $P_{out} = 600W$, $T_{base} = 25^{\circ}C$, $Z_{load} = 50\Omega$

Parameter	Min	Typ	Max	Units
Freq. Range	699	704	709	MHz
P_{1dB}	600			W
Input Power		37	39	dBm
Gain	19	21		dB
Gain Flatness		+/- 0.1		dB
Drain Current		27	29	A
Efficiency	57	62		%
IRL		-18	-14	dB
f_2		-40	-34	dBc
f_3		<-60	-55	dBc
Dimensions	4.50 X 7.70 X 1.26 (114.30 X 195.58 X 32.00)			inch (mm)

Maximum Ratings

Operation beyond these ratings will void warranty.

Parameter	Value
V_{supply}	34-38VDC
Bias Current	3.0 A
Drain Current	30A
Load Mismatch*	3:1
Baseplate Temperature	65°C
Storage Temp.	-40°C to 85°C

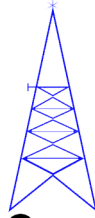
*All phase angles, 600W forward power, current limited to 30A for 5 seconds max.

Option Ordering Info

Disable

HD30802-DIS

HD

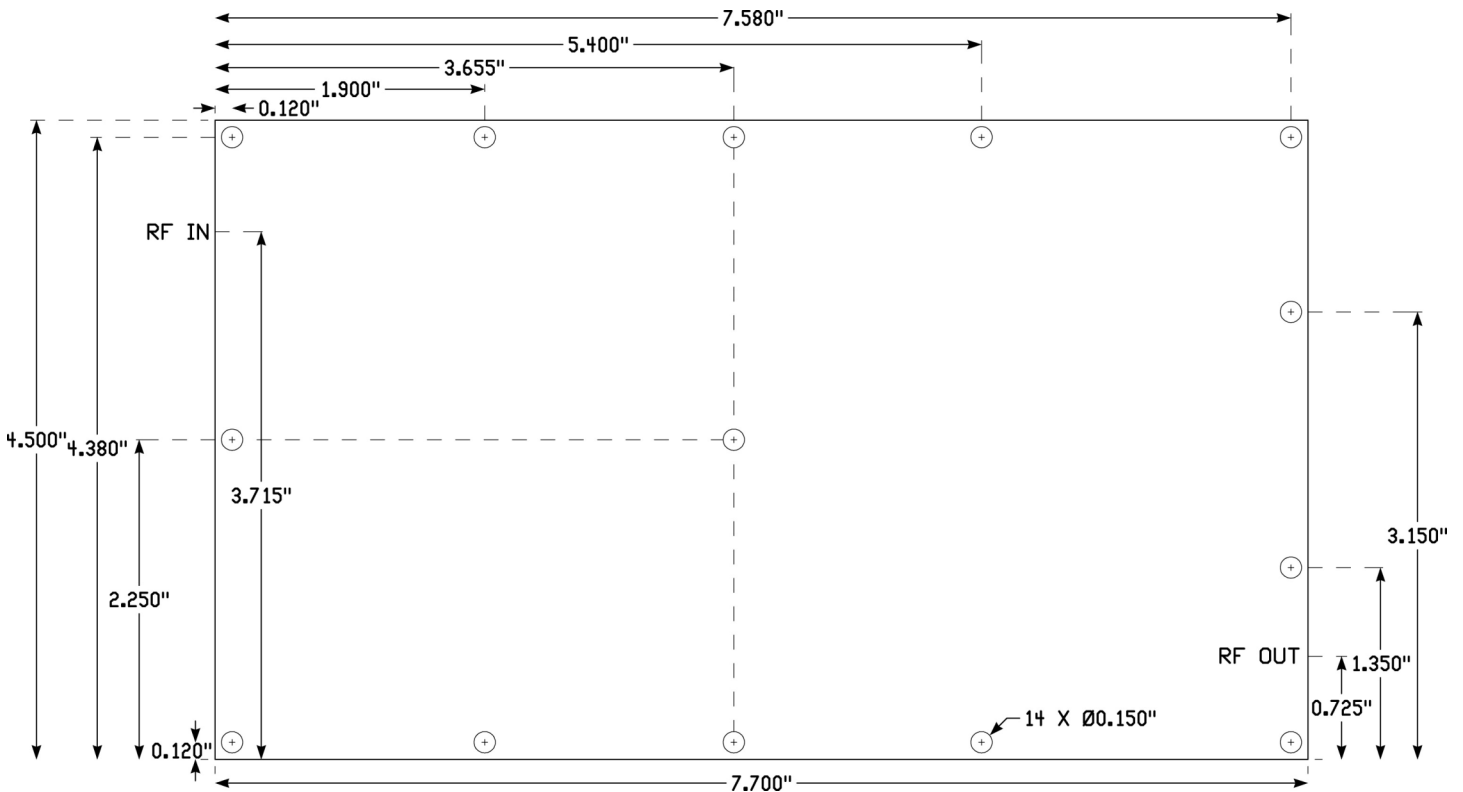


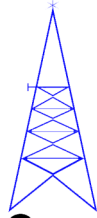
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704MHz 600W
Class AB Custom Amplifier

Amplifier Mounting Hole and RF Locations





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HD30802

704MHz 600W
Class AB Custom Amplifier

Instructions for Amplifier Use

- 1) Apply a layer of high quality thermal grease (Wakefield Type 120 or equivalent) to the underside of the amplifier housing. Thinner is better, but ensure that when mounted to your heatsink, contact across the *entire* housing base is made. Gaps and air bubbles will significantly reduce cooling, leading to possible amplifier damage. Use 14 #6-32 screws to mount the amplifier to your heatsink.
- 2) Guarantee sufficient airflow through the heatsink fins to keep the maximum baseplate temperature at or less than that specified in the Maximum Ratings section. Contact HD Communications Corp. for details on how to qualify your heatsink's performance, if needed.
- 3) Connect a proper signal source to the RF IN connector, and desired load to the RF OUT connector. Torque connectors to industry standards for the type supplied with the amplifier.
- 4) Connect DC V_{supply} and GND to the D-sub terminal provided. Ensure that the connections are of proper polarity, and within the voltage range in the Maximum Ratings section.
- 5) Apply DC power and sufficient RF drive to achieve desired output level, up to 600W CW.
- 6) To disconnect the amplifier, first remove the RF drive, then DC power, then the RF connections.

Contact us at sales@rfcomp.com with any questions, or for special options, testing requirements, and/or operating conditions not specified in this document.

Document Control

Revision	Date	Notes
A	10-28-2015	Production release.