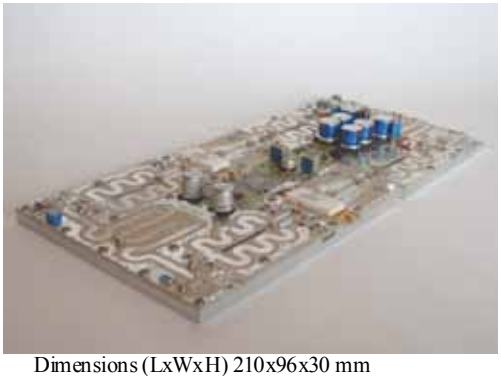
VHFAMP420-R

400W pep –27dBc Tetrafet Technology
Designed for anolog and digital TV transposers and transmitters, this amplifier incorporates microstrip technology and push-pull tetrafet to enhance ruggedness and reliability.

- **170 - 230 MHz**
- **(28÷32 Volt) 30 Nominal**
- **Input/Output 50 Ohm/50 Ohm**
- **P_{out} : 200W CW[1](Continuous Work)**
- **Gain : 14 dB min**
- **Class AB**
- **Devices: D1028UK or equivalent**
- **Connectorized version available**
- **APL corrector on board**



Dimensions (LxWxH) 210x96x30 mm

This picture is a mere example, it does not bind the provided product

ABSOLUTE MAXIMUM RATINGS (Device Flange T = 70 °C)

Symbol	Parameter	Value	Unit
V_S	**Voltage Supply**	35	**V dc**
I_S	**Current Supply**	35	**A dc**
Tstg	**Storage Temperature Range**	-30 + 100	**°C**
Tc	**Operating Base Plate Temperature**	0 + 75[2]	**°C**
ψ	**VSWR max**	3:1 all phase angle	**-**
	Max input power	See note[3]	**-**
	Output Power CW (continuous work)	200	**Watt**

ELECTRICAL SPECIFICATIONS (Base Plate T. = 45 °C, 50 Ohm loaded, Vs = 30 V)

Symbol	Parameter	Test Conditions	Value Min	Value Typ.	Value Max	Unit
BW	**Bandwidth**	P_{out} = 200 W (CW)	170		230	**MHz**
Gp	**Power gain**	P_{ref} = 200 W (CW)	14	15	-	**dB**
P_{out} – 1dB	**Power Output @ 1dB Compression**	Referred to P_{out} = 75W (CW)	360	420	-	**W**
I_q *	**Quiescent Current**	P_{out} = 0 W – Total *[4]	-	-	5	**A**
I_{tot} *	**@ P_{Max}**	300W Ps Black Level Audio + Video	-	-	20	**A**
Irl	**Input return loss**	P_{out} = 200 W CW	16	20	-	**dB**
	Load mismatch	Pref = 200 W CW, f= 230MHz, load VSWR = 2:1, all phase angles		No degradation in Pout		
Gr	**Gain Flatness**	Pref = 200 W CW, BW: 170-230MHz		±0.5	±1	**dB**
η	**Drain Efficiency**	P_{out} = 300 W[5] (CW)	40	50	-	**%**
	Pout separate ampl.	Sync. Compression < 1dB without correction	350	400		**Wps**
	Pout common ampl.	Pout 300W ps common ampl. dual sound, with Red Field sound 1 @ -13dB and sound 2 @ -20dB without precorrection	-45	-50		**dBc**
	Pout DVB-T	Pout 80Wrms without precorrection	-27			**dBc**
	Pout DAB	Pout 130Wrms without precorrection	-27	-30		**Wrms**

[1] **Warning:** Do not exceed the specified max CW Power Output
[2] **Warning:** The base plate temperature must be 75 °C max, using an appropriate Heatsink. Measure taken on point indicated in pag. 3.
[3] The input power must not exceed +6dB, for 1 microsec. , the nominal input power referred to the 1dBcp power output.
[4] The Quiescient Current is set at typical value, in factory. This parameter can be adjusted by the final user depending on the applied signal and/or frequency and output power (See Application note ING01). (**Warning:** Do not exceed the specified max Iq value).
* Depending of handling signal (analog /digital)
[5] Do not keep the amplifier working at this Pout for more than one minute.

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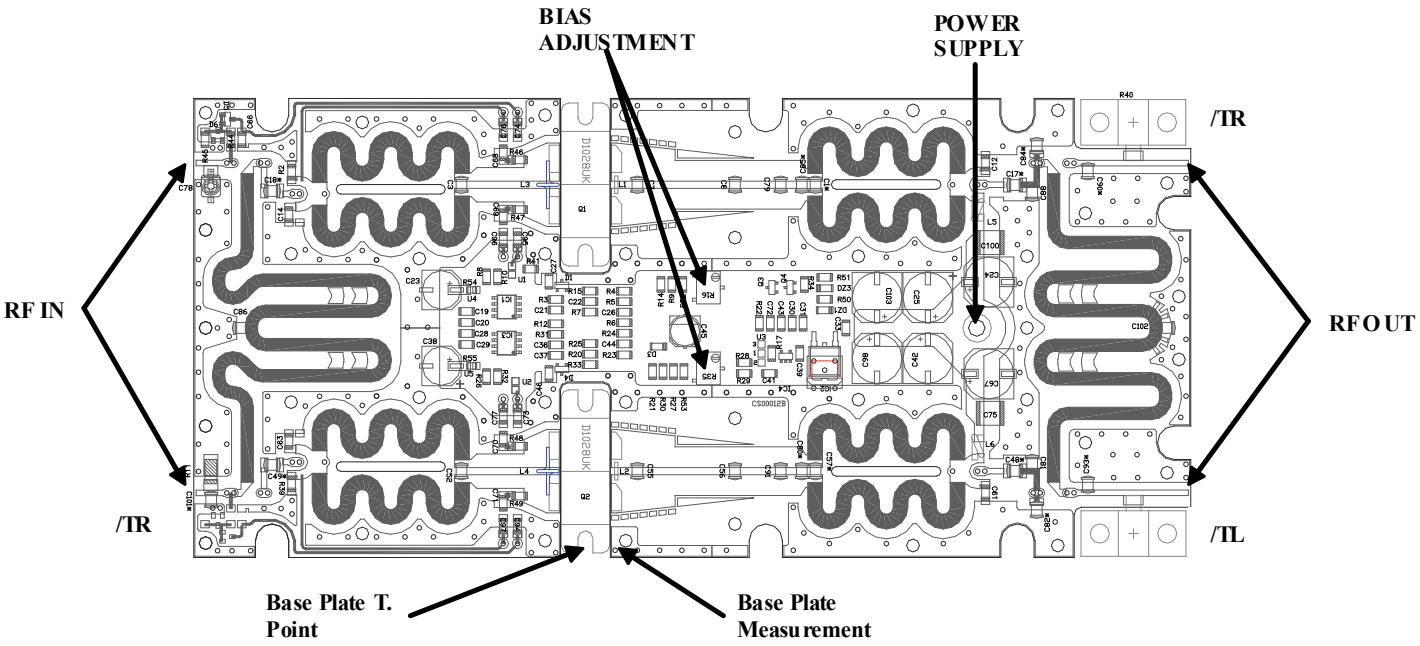
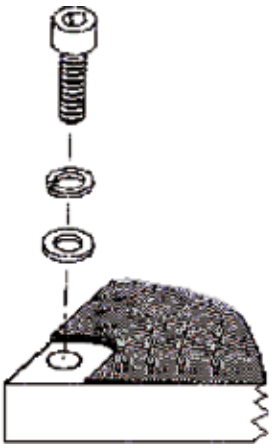


NOTE. In response to customer request, this pallet has been designed to allow two different positions of IN/OUT connections: **/TL** = connection on the left side, **/TR** = connection on the right side.

HEATSINK MOUNTING/HARDWARE

1.HEATSINK TOOLING
-Planarity: typical value 0.8
-Roughness: better than 0.03 mm
2.THERMAL COMPOUND
-Paste with silicones
-Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.
3.SCREWS
-M3 -Cross head screws
- The recommended Torque is 12 Kg/cm for M3 type screws and 10 Kg/cm for M2.5 type screws.
4.TIGHTENING ORDER
-See next figure:



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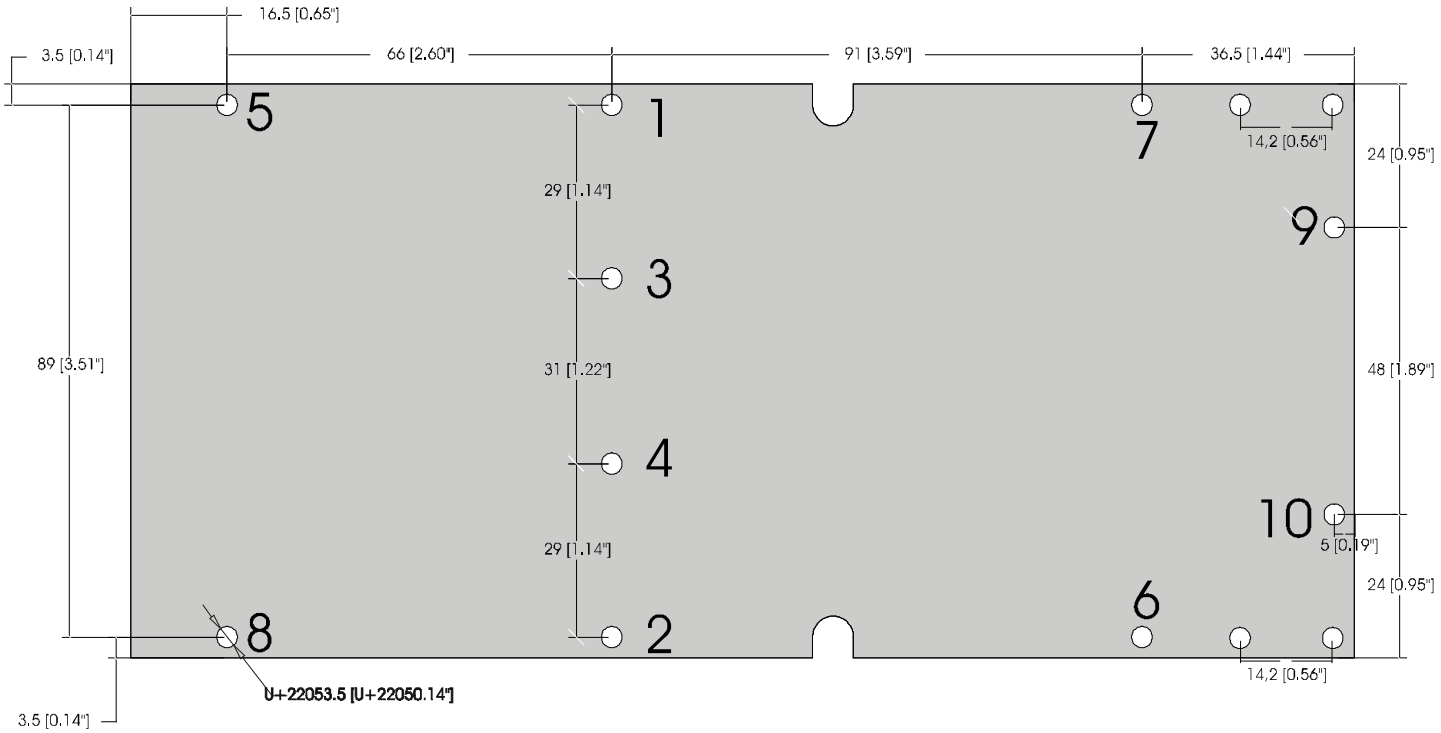
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10
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6
8
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14,2 [0.56"]
U+22053.5 [U+22050.14"]
3.5 [0.14"]

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