



VHFAMP15-R

W Class A VHF Amplifier

Designed for TV transposers and transmitters, this amplifier incorporates microstrip technology and discrete linear transistor and mosfet with gold metallization and diffused emitter ballast resistors to enhance ruggedness and reliability.

174 - 230 MHz

28 Volts

Input/Output 50 Ohm/Ohm

P_{out} : 15W d. A

Gain : 32 dB typ.

Devices: MS1277 or equivalent



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

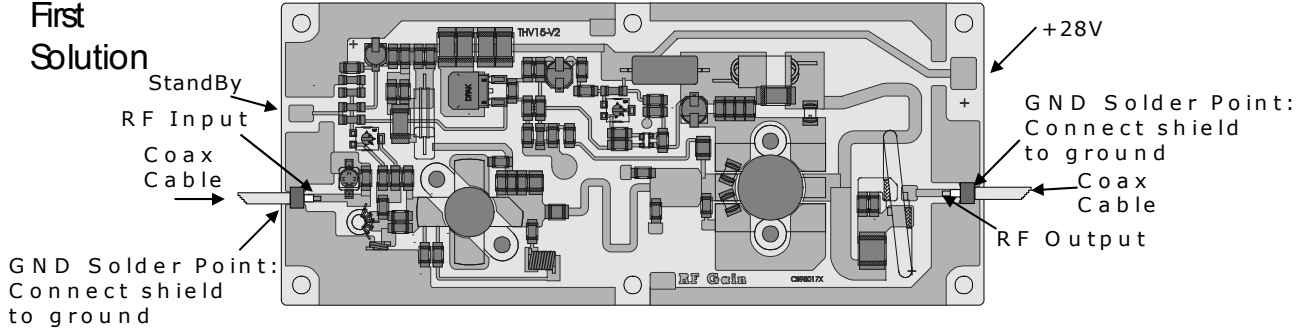
Symbol	Parameter	Value	Unit
V_S	Collector Voltage Supply	30	V dc
I_S	Supply Current	3.4	A dc
T_{stg}	Storage Temperature Range	-30 + 100	°C
T_c	Operating Case Temperature	-20 + 55	°C

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

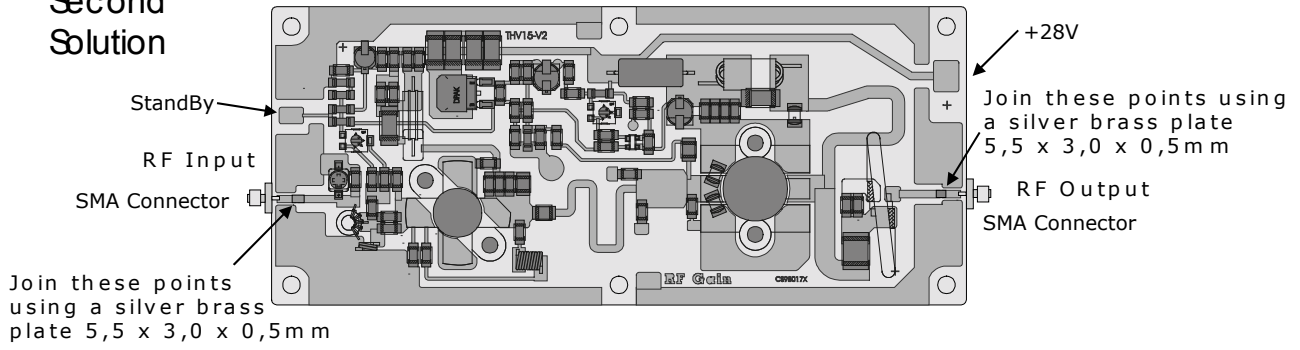
Symbol	Parameter	Test Conditions	Value			Unit
			Min.	Typ.	Max.	
BW	BW & Flatness	$P_{out} = 15W$ (CW $\pm 0.5dB$)	174		230	MHz
G_p	Power gain	$P_{ref} = 15W$	30	32		dB
P_{in}	Power Input	Reference to $P_{out} = 15 W$		15	20	mW
I_{rl}	Input return loss	$P_{in} = 10 W$	15	20		dB
VSWR	VSWR	$\infty:1$ all phase angles	-	15	-	W
$I_{md A}$	Intermodulation Distortion - 3 tones	Vision carrier: -8 dB Sound carrier: -7 dB Croma carrier: -16 dB $f = 230 MHz$ $V_S = 28V$ $P_{ref} = 15 W$	-	-54	-	dBc

PC BOARD LAYOUT AND CONNECTION SOLUTIONS

First Solution



Second Solution



HEATSINK MOUNTING/HARDWARE

1.HEATSINK TOOLING

- Planarity: typical value 0.8
- Roughness: better than 0.03mm

2.THERMAL COMPOUND

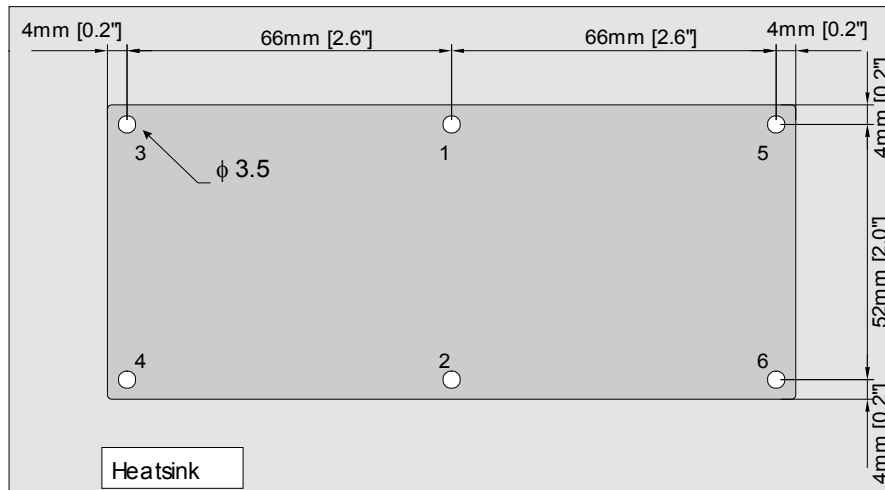
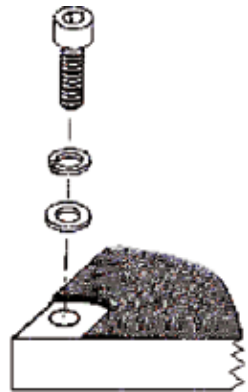
- Paste with silicones
- Thickness: optimum between 0.06 mm and 0.15 mm, on the whole back surface of the amplifier.

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:





VHFAMP15-R

IMPORTANT NOTICE

ONAIR RESERVE THE RIGHT TO MAKE CHANGES TO THE PRODUCT(S) OR INFORMATION CONTAINED HEREIN WITHOUT NOTICE. ONAIR ASSUMES NO RESPONSIBILITY FOR ANY ERRORS WHICH MAY APPEAR IN THIS DOCUMENT.

WARRANTY INFORMATION APPLICABLE TO THE PRODUCT IDENTIFIED HEREIN IS AVAILABLE UPON REQUEST. NOTHING CONTAINED HEREIN SHALL CONSTITUTE A WARRANTY, REPRESENTATION OR GUARANTEE OF ANY KIND. ONAIR EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS AND/OR IMPLIED INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, AND OF FITNESS FOR A PARTICULAR PURPOSE, USE OR APPLICATION.

No part of this document may be copied or reproduced in any form or by any means without the prior written consent of ONAIR.

WARNING

ONAIR PRODUCTS ARE NOT INTENDED FOR USE IN LIFE SUPPORT APPLIANCES, DEVICES OR SYSTEMS. USE OF ONAIR PRODUCT IN ANY SUCH APPLICATION WITHOUT WRITTEN CONSENT IS PROHIBITED.