

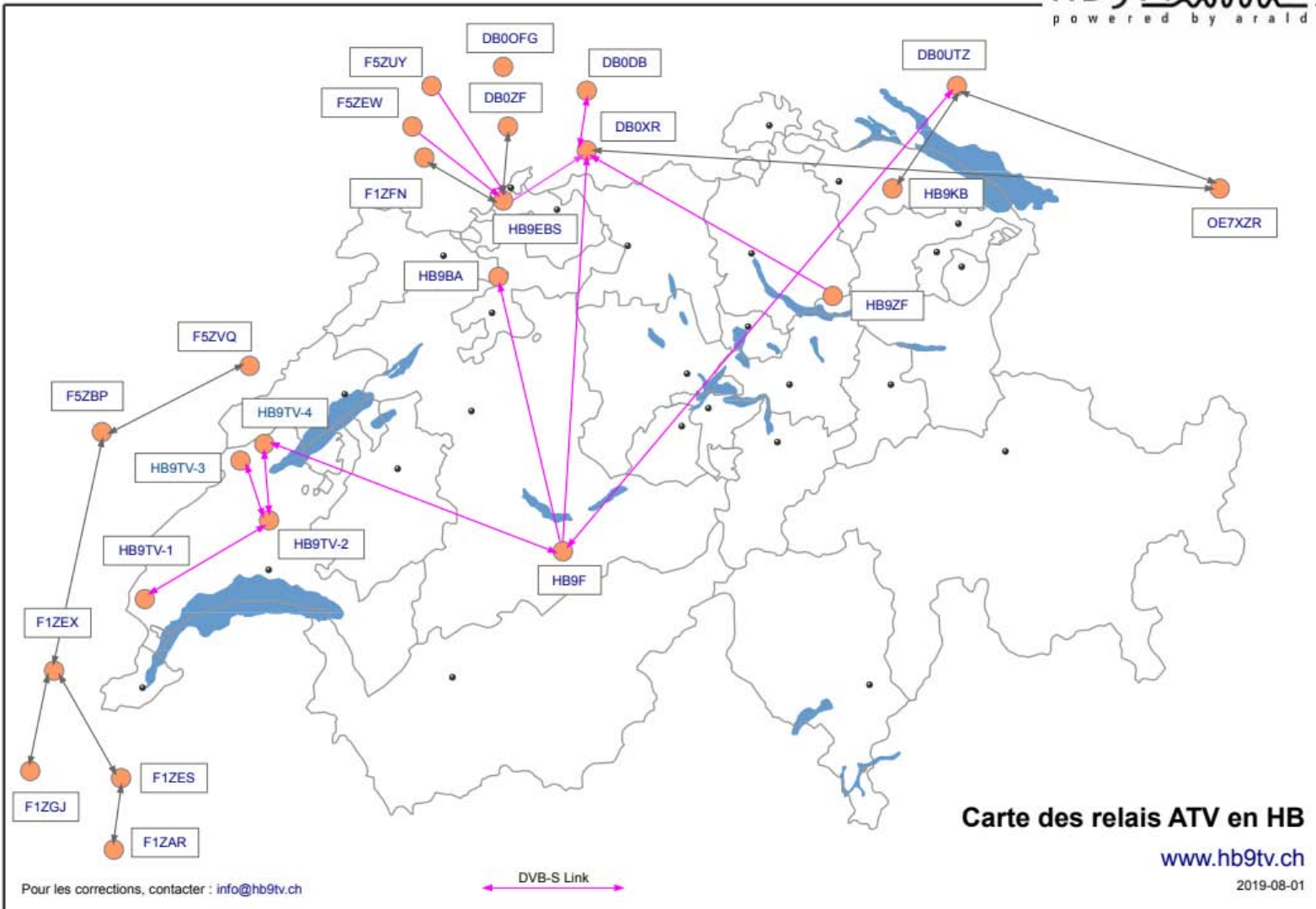
# Ampleon pallets amplifiers at 2.4 GHz

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BATC CAT 20

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CQ-TV 265 - Autumn 2019

## A 250 Watt amplifier for Es'Hail-2 DATV

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Michel

# BPC2425M9X250

Power LDMOS module

Rev. 1 — 29 March 2018

AMPLEON

Product data sheet

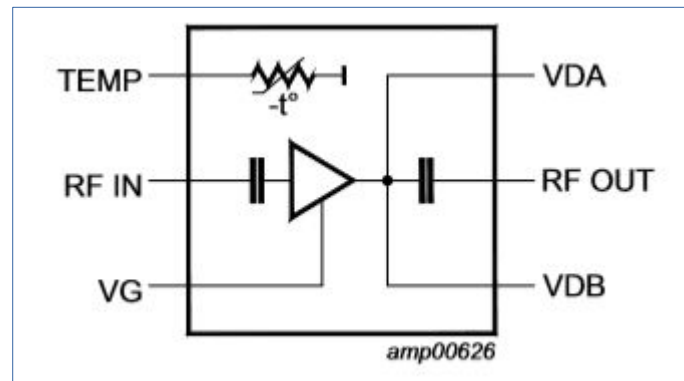
250 W LDMOS power module for Industrial, Scientific and Medical (ISM) applications at frequencies from 2400 MHz to 2500 MHz. The module is designed for high-power CW applications.

Table 1. Test information

Typical RF performance at  $V_{DS} = 32\text{ V}$ ;  $T_{mb} = 25\text{ }^{\circ}\text{C}$ ;  $I_{Dq} = 50\text{ mA}$ .

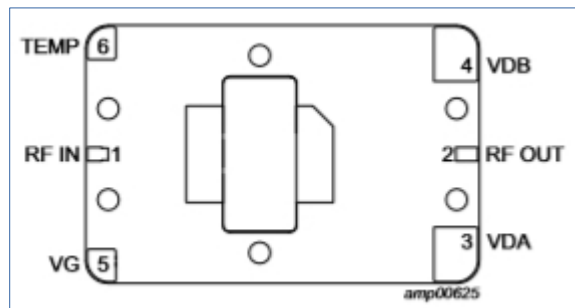
Test signal	f	$V_{DS}$	$P_L$	$G_p$	$\eta_D$
	(MHz)	(V)	(W)	(dB)	(%)
CW	2450	32	300	17	61
CW pulsed [1]	2450	32	300	17.5	63

[1] Pulse width is 300  $\mu\text{s}$ ; duty cycle is 50 %.



## Features and benefits

- High efficiency
- Small size: 52 × 34 mm
- Input/output 50  $\Omega$  matched
- Designed for broadband operation (2400 MHz to 2500 MHz)
- Built-in temperature sensor
- Built-in temperature compensation networks
- 100 % RF testing in production



## AN10900

AMPLEON

Assembly and Usage Guidelines of RF Pallets

v1.0 – May 11, 2018

Application Note

## R\_10032

AMPLEON

CA-330-11; LDMOS bias module

Rev. 2 — 1 September 2015

Report

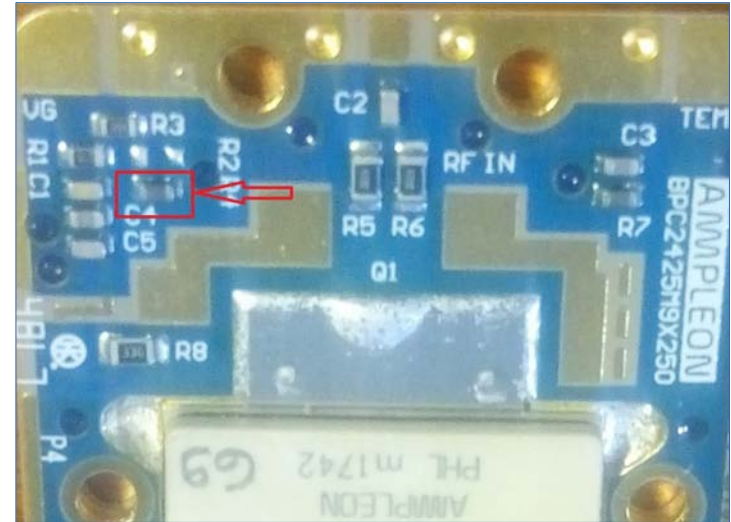
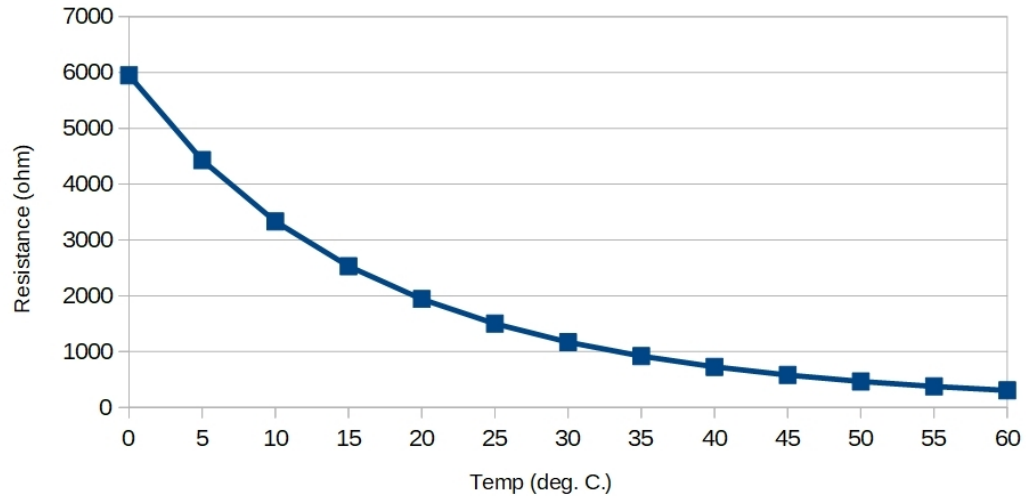


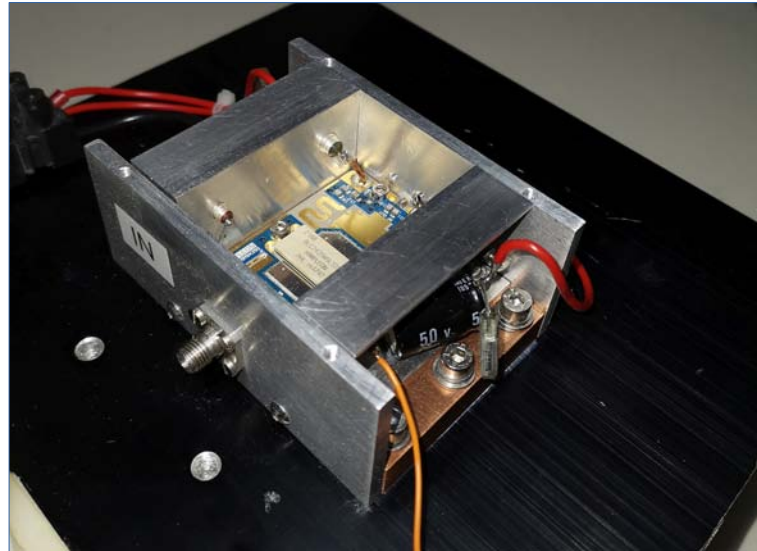
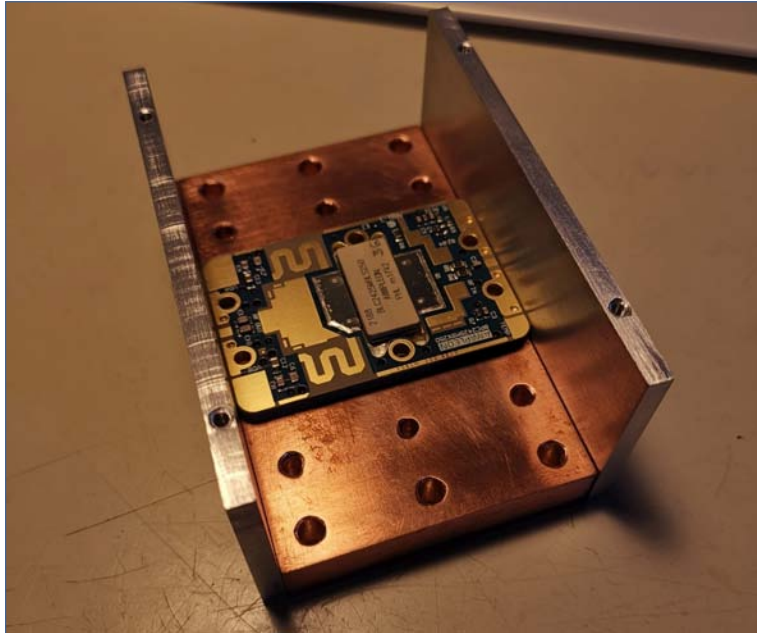
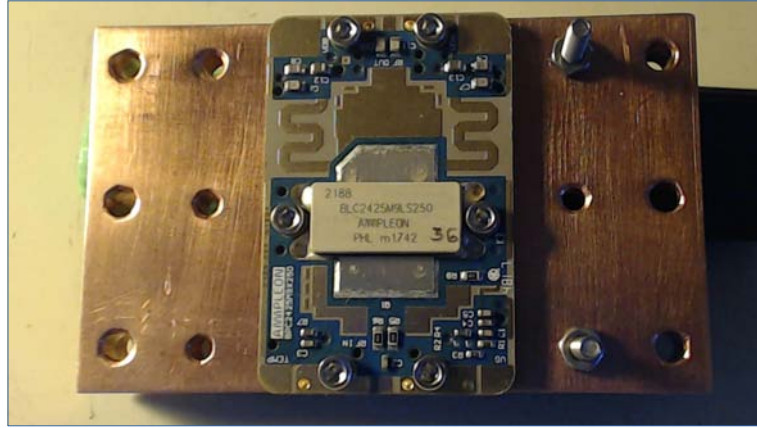
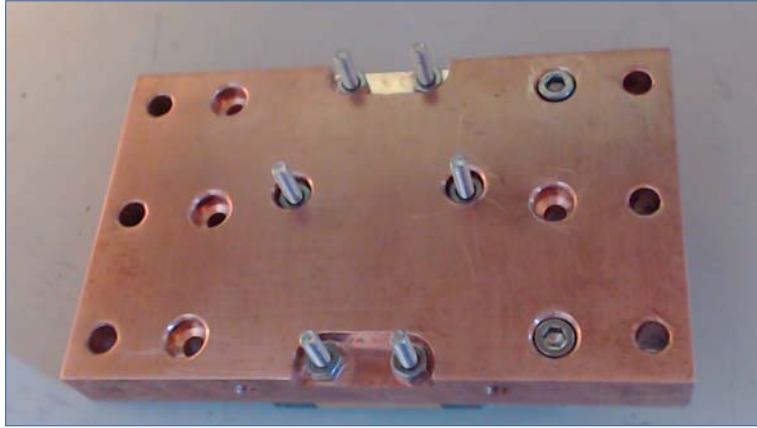


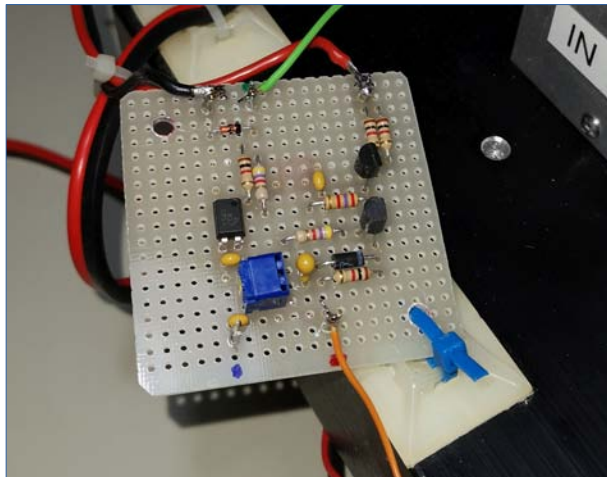
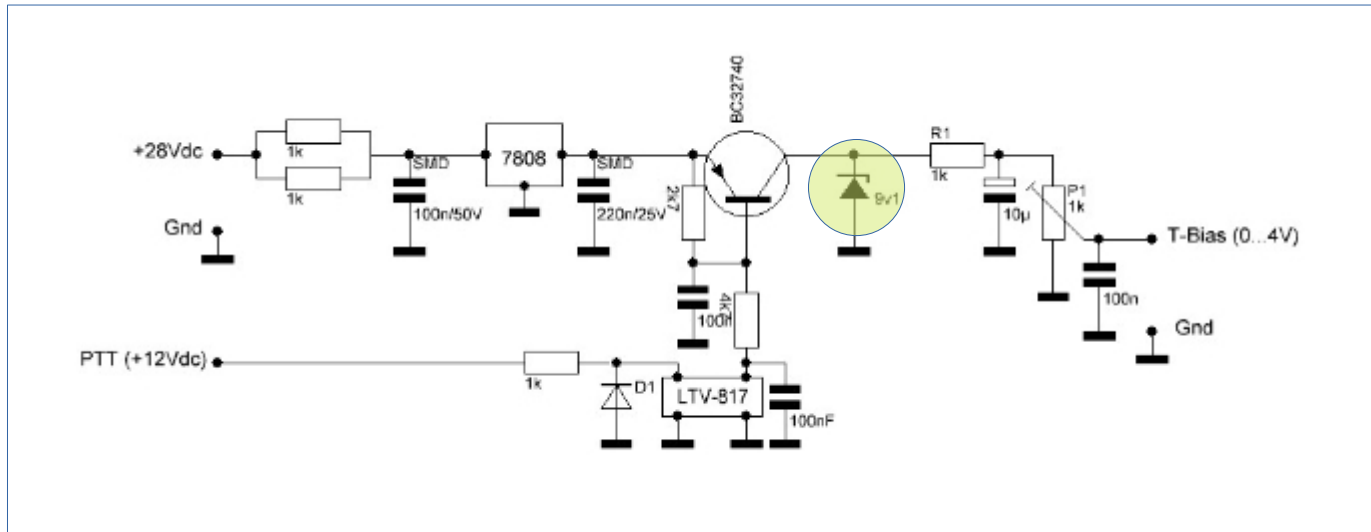
## AMPLEON 250W PALLET

IZ4RYB - Aug 22nd 2019

NTC Characteristics

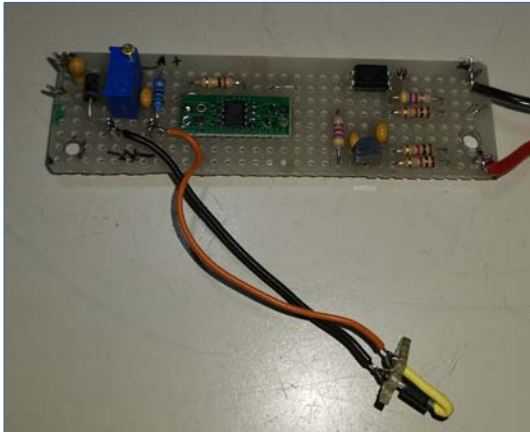
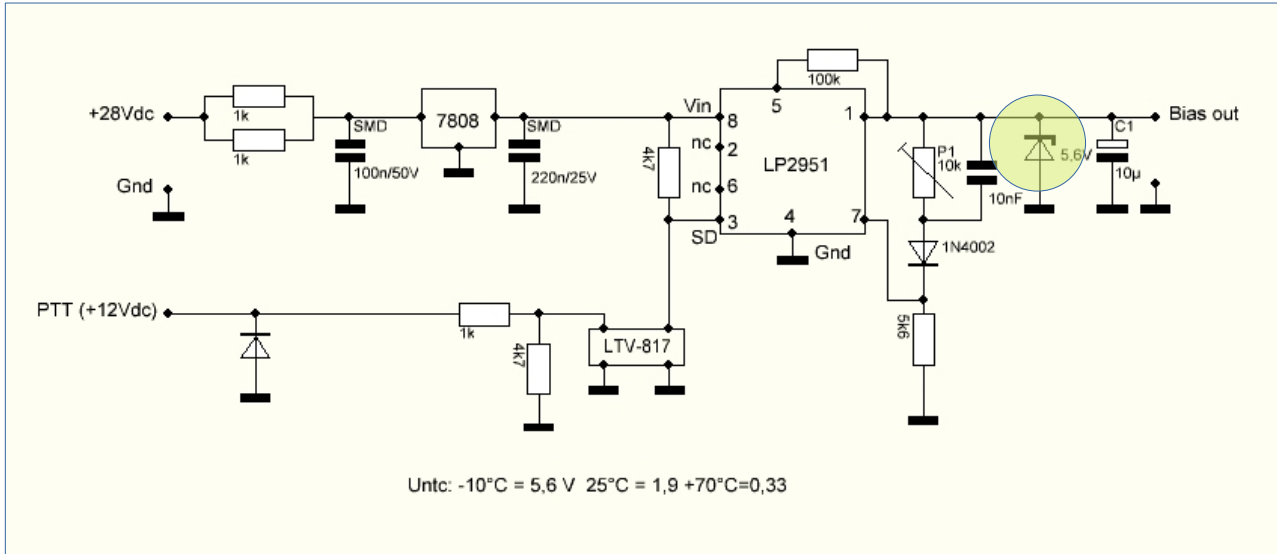




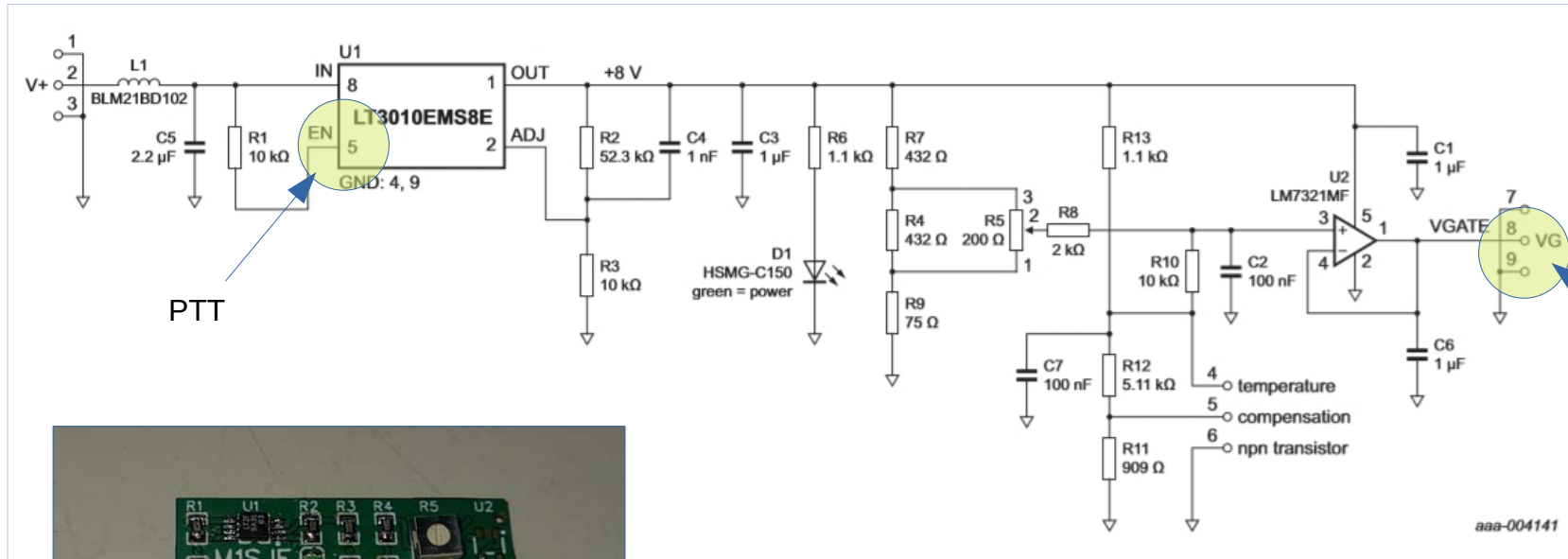


Based on a design by  
ON1BTE





Based on a design by ?

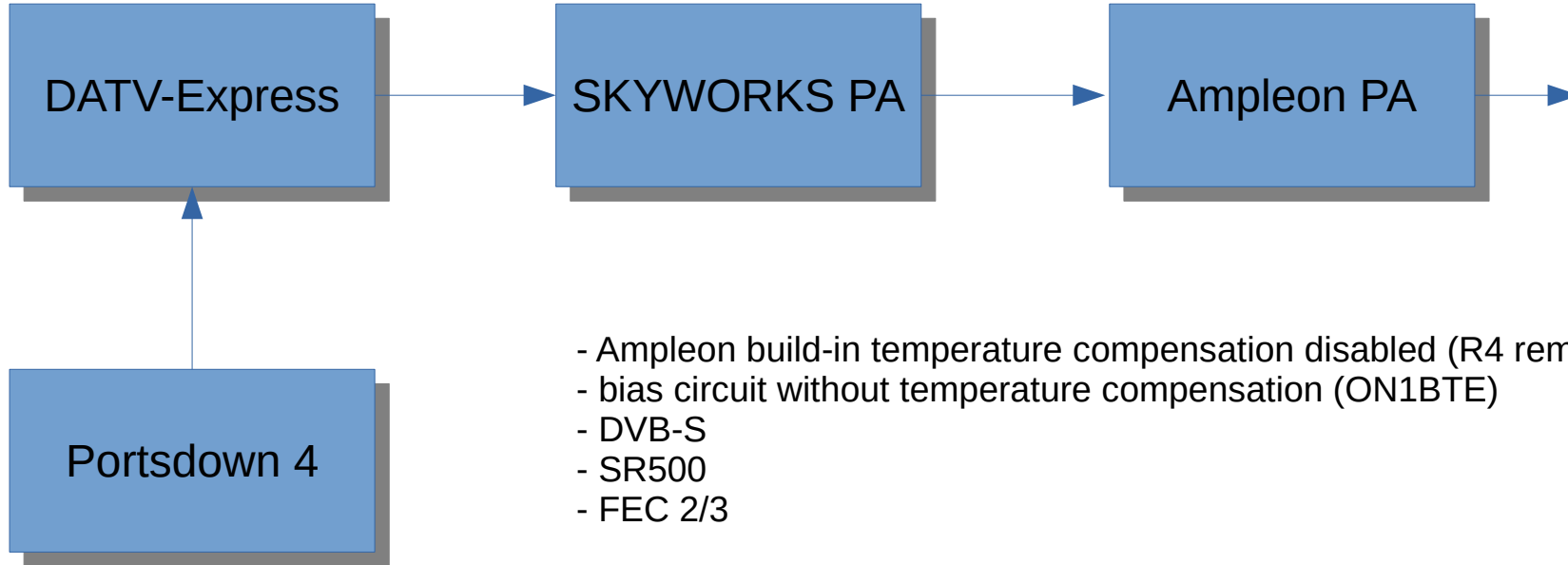


Zener ?



Ampleon LDMOS bias module R\_10032  
Gerber files provided by Sarah M1SJE

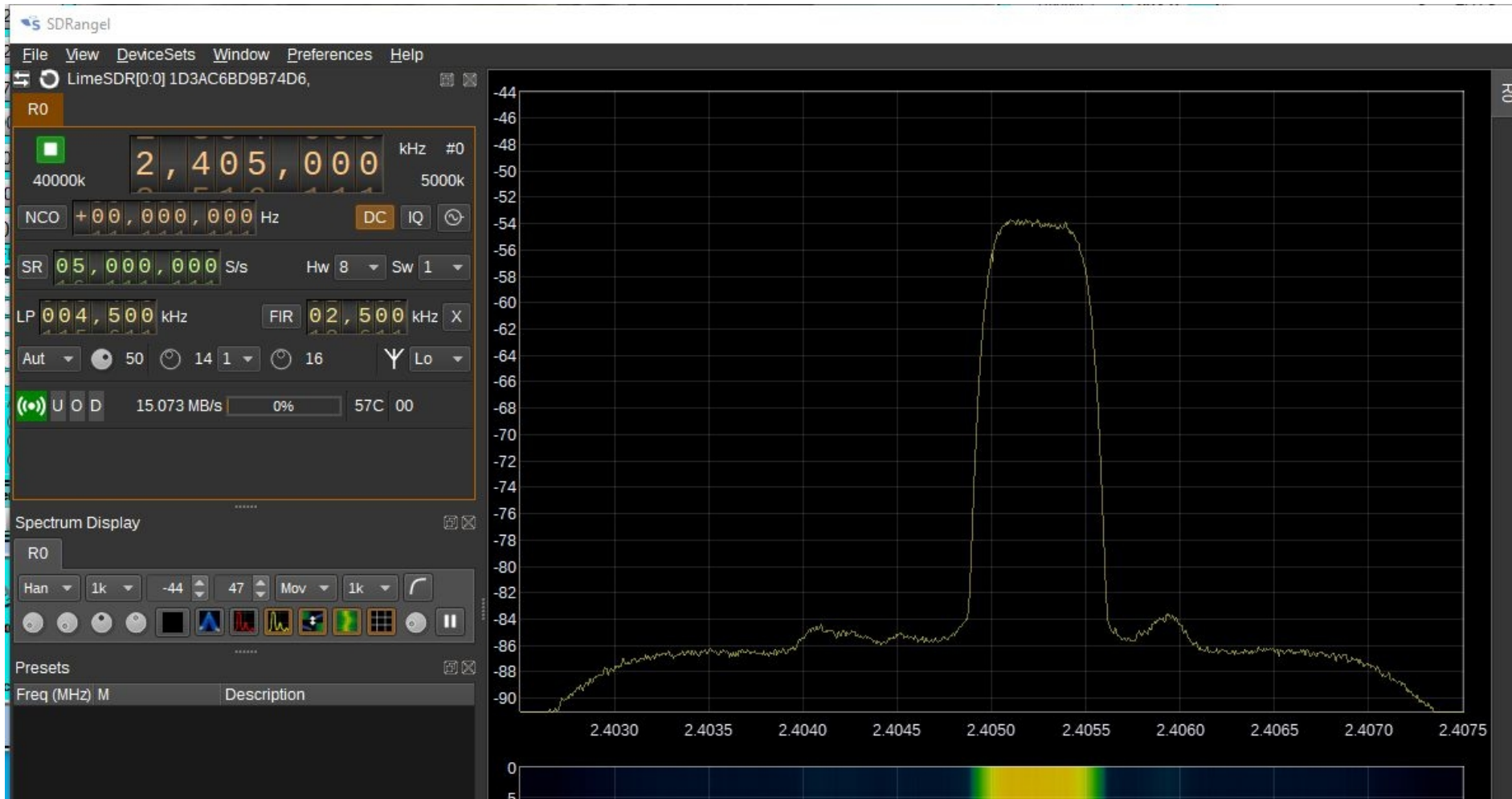




- Ampleon build-in temperature compensation disabled (R4 removed)
- bias circuit without temperature compensation (ON1BTE)
- DVB-S
- SR500
- FEC 2/3

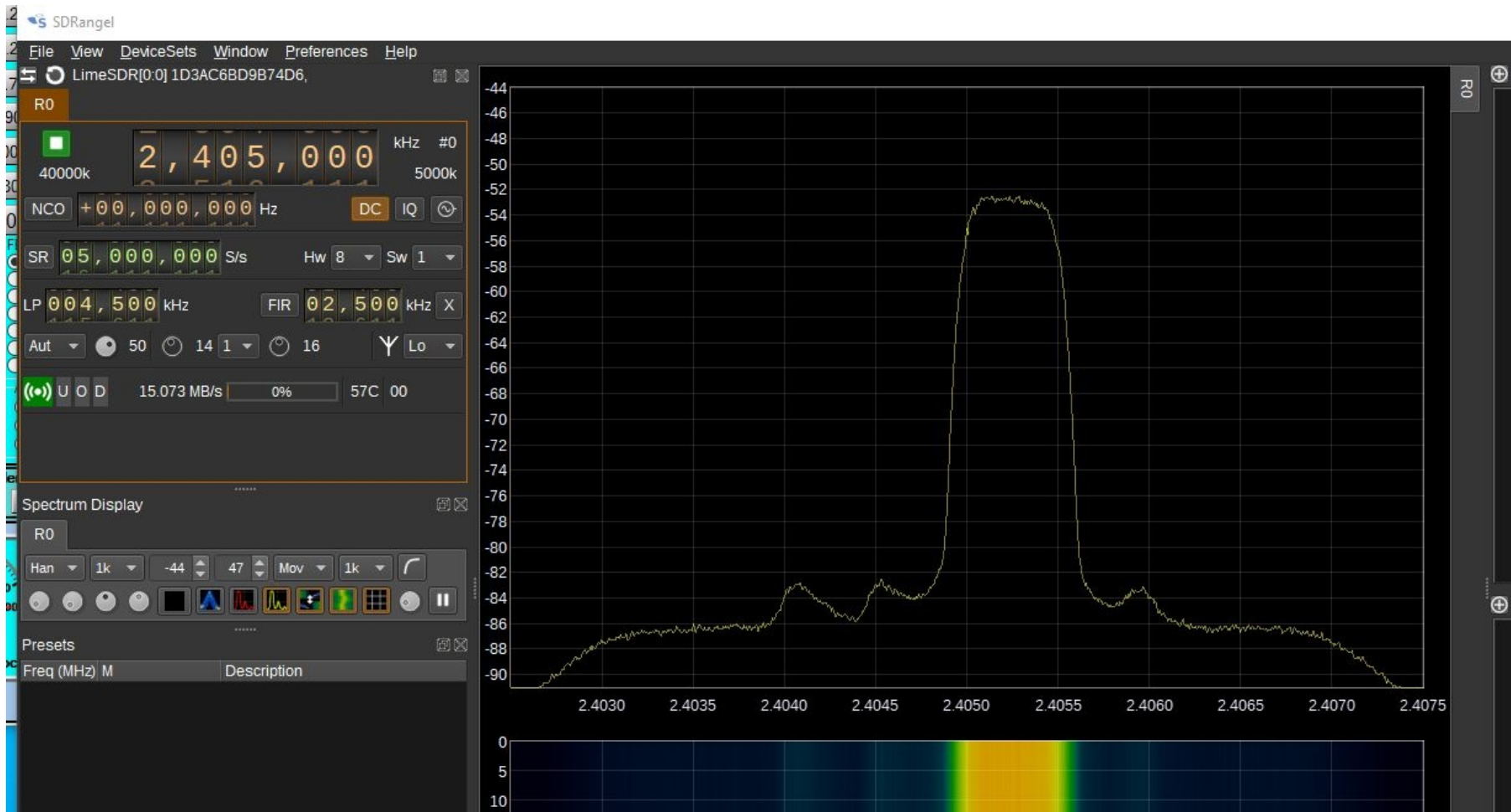
Ampleon 28 volts bias 500 mA

$P_{in} = 0.53 \text{ W}$     $P_{out} = 50 \text{ W}$

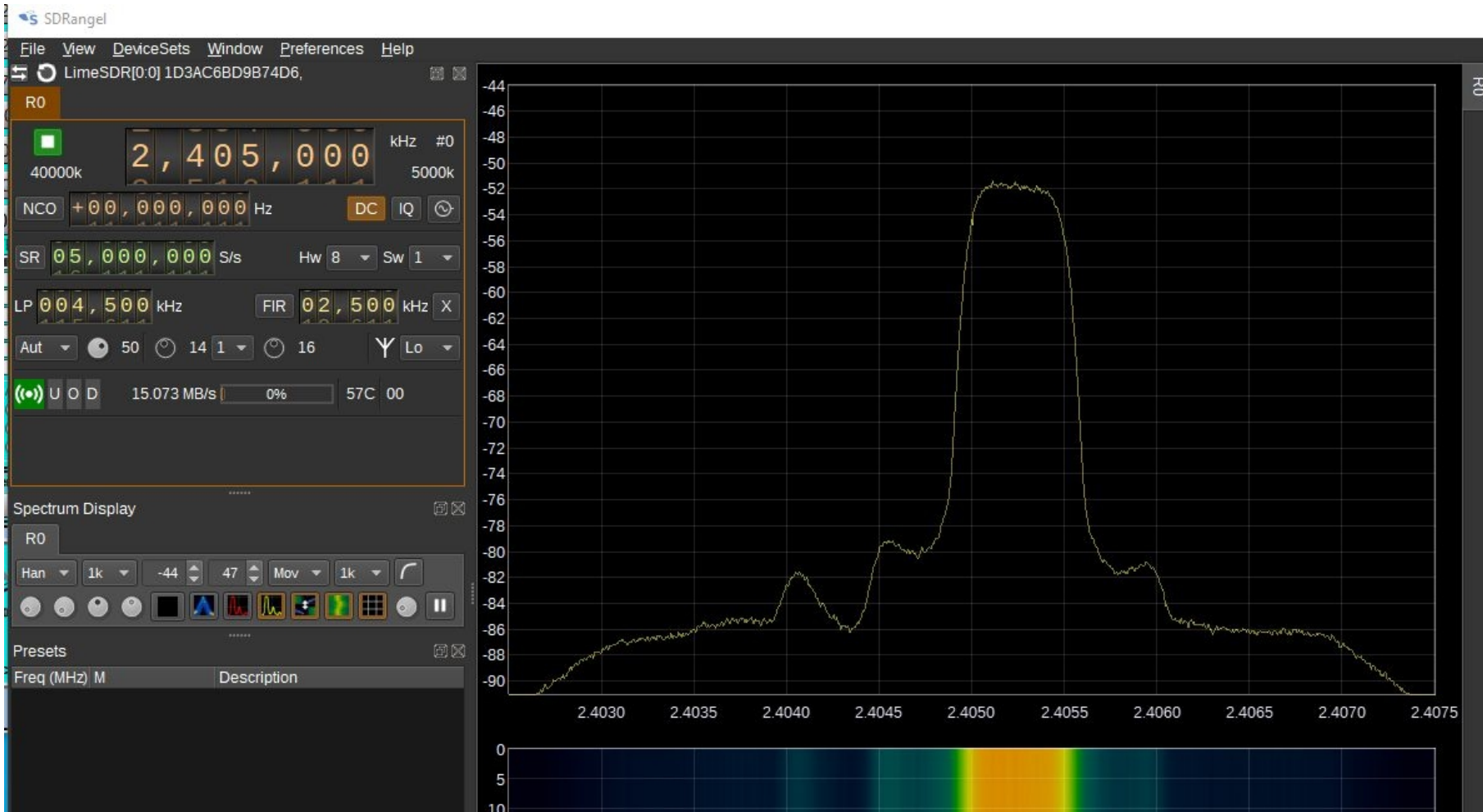




$P_{in} = 0.74 \text{ W}$     $P_{out} = 70 \text{ W}$



$P_{in} = 1.03 \text{ W}$     $P_{out} = 100 \text{ W}$





## References

<https://www.ampleon.com/products/matched-ism-cooking-defrosting/pallets-and-modules/BPC2425M9X250.html>

<https://www.skyworksinc.com/en/Products/Amplifiers/SKY66292-11>

<https://forum.amsat-dl.org/index.php?thread/2894-ampleon-250w-pallet/>