

VM-70X Transmitter notes

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RF Output settings - Dec 20, 2010

434 MHz, 13.8Vdc, no video,

RF pot CCW =240 mA

6W = 1.6A, pot 3.75K/ 2.4V

5W= 1.5A, pot 3.6K/ 2.2V

4W=1.38A, pot 3.45K/ 2.17V

3W=1.15A, pot 3.3K/ 2.05V

2W=.99A, pot 3.1K/ 1.92V

1W=.78A, pot 2.9K/ 1.78V

.5W=.65A, pot 2.8K/ 1.7V

.25W=.5A, 2.7K/ 1.6V

<.1W pot 2.15K

439 MHz full CW 5.8W=1.62A

426 MHz full CW 6.8W=1.7A

Set 439 to .5W, 426=.75W

427 set to 1W at 13.8V, .5W at 9.4V

47K Thermistor should equalize heat dissipation limit

Feb 16, 2011

Thermistor test.

Mouser/Vishay 71-07C5002JP 50k measured 40K at 84 degrees soldered between DC ground next to cover and RF pot trace.

Open pot at max =5W on 434.

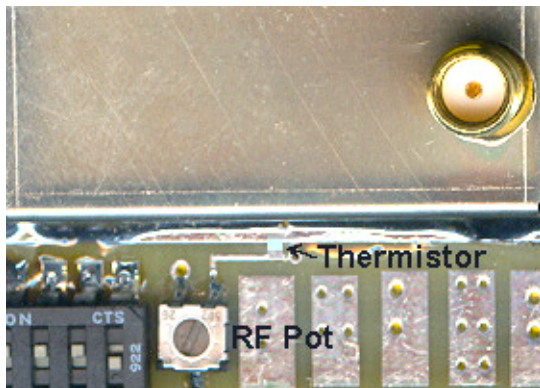
3.0W with thermistor.

100 deg 2.4W 27K

110 deg 1.7W 20K

120 deg 1.05W 18K

125 deg .9W 17K



Feb 18, 2011

Time test, thermistor directly connected. RF out pot at max. Clamped in vice (provided some heatsinking).

Time	deg	Watts
0	80	3.25
1	86	3.0
2	93	2.6
3	100	2.0
4	106	1.6
5	110	1.3
6	112	1.1
7	114	1.0
8	115	.9
9	115	.9
10	115	.9

Unclamped and put rubber bumper at minute 11.

12	114	.7
15	140	.25

Needs larger heat sink surface to top out at 1W.

August 2, 2011

6x8" aluminum sheet with VM-70X. 5oz total Cut 1" long in 6" sides, 1.5" in.

Bend up 1.5" in from 8" side. Bend down 1" 6" sides.

13.8Vdc applied. Tenma multimeter for temp and DC Amps. IFR for PEP.

Set to 1.8Wpep grey scale at 81 degrees.

Half hour 2.26W 132deg .8A vid/1.0A no vid

Set to 2.8W 115 deg, 3.0W 139deg half hour .98/1.2A

Set to 4.0Wpep 113 deg, 149 deg half hour 1.16/1.4A

Next try 80mmx15mm 12V fan. Mouser 664-D8015MX1-12VLF \$10.73