



◀ Mute This Topic (https://groups.io/g/Datron-Wavetek/ft/81910532?csrf=5513314409256117711&mute=1&p=Created%2C%2C%2C20%2C1%2C0%2C0%3A%3Arecentpostdate%2Fsticky%2C%2C%2C20%2C0%3A%3Arecentpostdate%2Fsticky%2C%2C%2C20%2C0%2C81910532%2Cprevid%253D1638900892987141496%2Cnextid%253D1605715392278630737)

Wavetek/topic/81910532?

4808 100V&1kV failure #4808 #DATRON 4808

#datron ▾



Mariusz Marchwiński

2021-04-07 (https://groups.io/g/Datron-Wavetek/message/183)

hello, I have a problem with datron 4808.
when I try to turn on the 100v or 1000v range, calibrator displays fail 7.
At the same time, two lamps informing about the presence of + 400V and -400V voltage and the LED "400V enable" on "POWER AMPLIFIER ASSEMBLY" blink twice.
After switching the 400V / 50V switch, I can turn on the ranges 100 and 1000V, but the output shows -18VDC Regardless of the voltage set.
I suspect damaged transistors in "OUTPUT POWER AMPLIFIER". Does anybody have an idea?

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David C. Partridge (/g/Datron-Wavetek/profile/@perdrix)

2021-04-07 (https://groups.io/g/Datron-Wavetek/message/184)

Can I safely assume that you have the Service Manual (both parts)? If not they are in the "Files" section:

<https://groups.io/g/Datron-Wavetek/files/Datron%204808>

David

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Mariusz Marchwiński

2021-04-07 (https://groups.io/g/Datron-Wavetek/message/185)

Yes i Have the both parts. I'm looking at schematics right now. Unfortunately, I don't know where to look for a failure. A constant negative output voltage suggests damage to the Output Power Amplifier. I know that the 100v DC is created directly, while 1kV is created using a 16kHz converter and a high frequency transformer.
A negative output voltage is present on output for both ranges. which makes me diagnose damaged transistors in "negative heatsink assembly".
Any suggest?

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David C. Partridge (/g/Datron-Wavetek/profile/@perdrix)

2021-04-07 (https://groups.io/g/Datron-Wavetek/message/186)

Look in part one (Maintenance Handbook) Section 7.7 and following describe the High Voltage output sections. FAIL 7 Says the 400V PSU is overloaded (see page 7-13).

David

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Mariusz Marchwiński

2021-04-07 (https://groups.io/g/Datron-Wavetek/message/187)

OK. i Think i found a problem. Transistors Q3 and Q4 in Negative heatsink assembly have a few ohm between drain-Source...
they are "VP0350N1" P-CHANNEL DMOS FETs. I will be looking if they are available for purchase. Possibly I will look for replacements.

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Mariusz Marchwiński

2021-04-07 (https://groups.io/g/Datron-Wavetek/message/188)

ok. Only one transistor have short between Drain-source.
Because they are connected in parallel, I ran the calibrator without a broken DMOS and it works. !!!!!!!!
the only problem is finding a replacement...

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David C. Partridge (/g/Datron-Wavetek/profile/@perdrix)

2021-04-07 <https://groups.io/g/Datron-Wavetek/message/189>

Congratulations – I'd guess any FET with equal or higher voltage and current ratings that fits will work fine.

David

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z1vfo

2021-04-07 <https://groups.io/g/Datron-Wavetek/message/190>

I found one on Aliexpress - possibly other places have them too, but I've yet to stumble upon them. <https://www.aliexpress.com/item/4000890423168.html> (<https://www.aliexpress.com/item/4000890423168.html>)
Just be aware that they offer the VPxxxx and VNxxxx variants - so you select the right one.
-Ian ZL1VFO

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Mariusz Marchwiński

2021-04-07 <https://groups.io/g/Datron-Wavetek/message/191>

of course, the problem is that it is a 500V P-channel mosfet ...
fortunately I found them on ebay :)

I still have a problem with mV AC. There is a lot of noise, the voltages are unstable and have large errors. Is it possible that the resistive attenuator would hum like that? Or will it be a capacity problem on the AC board?

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david wong

2021-04-07 <https://groups.io/g/Datron-Wavetek/message/192>

for Datron calibrators repairing is always a good idea to check all the power supply rails first. especially, check the tantalum capacitors on +/- 15 Power rails.

David

Mariusz Marchwiński <marchwinski.mariusz@gmail.com (mailto:marchwinski.mariusz@gmail.com)> 于2021年4月8日周四 上午4:37写道:

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