

Motorola P7208 Dummy Load

I was looking through some old boxes I had in the garage and came across this 50 Ohm dummy load. The age of this one is unknown. It looks like they were available in the early 1950's.



It is made up of 16, 220 Ohm 10% 2 Watts resistors in a parallel series arrangement. It also has a DC output jack where the power could be sampled with a dc microamp meter. The dummy load came with a calibration chart (that I don't have) where the meter current readings could be converted into Watts. The dummy load was advertised as being able to handle 25 Watts continuous and 60 Watt intermittent. The resistors add up to 32 Watts but they are packed close together and I would be reluctant to run 25 Watts continuous into it.

What surprised me was how good it is especially on VHF and UHF. I checked it with my NanoVNA-H4 and found the SWR was less than 1.25 to 1 between 150 and 450 mHz. Between 1 and 150 mHz it was less than 1.16 to 1. I compared a 75 and a 100 Ohm termination on the NanoVNA with the dummy load to provide addition confidence in the readings obtained. The terminations provide known SWR.

Not sure how useful the dummy load is because of the low power capability. It would be fine for use with an HF QRP radio or with the typical 2 meter or 450 mHz mobile radios.

Additional information on the dummy load can be found in this Motorola document.

<https://www.repeater-builder.com/motorola/test-sets/pdfs/p8501a-54891690-b.pdf>

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UPDATE February 13, 2025

I found another one of these in a box of junk. It looked in good shape, nothing seemed burnt. It did not test as good as the one above but it wasn't too bad. The SWR was 1.2 to 1 or lower up to 335 mHz. The 1.5 to 1 frequency was at 440 mHz. The SWR went higher from there.