

Re: Carbon Comp: Aging Causes Out Of Tol?

Source: <http://sci.tech-archive.net/Archive/sci.electronics.components/2005-05/msg00137.html>

- *From:* Jim Adney <jadney@xxxxxxxxxxxx>
 - *Date:* Tue, 17 May 2005 22:38:34 -0500
-

On Mon, 16 May 2005 18:30:32 -0700 "Watson A.Name - \"Watt Sun, the Dark Remover\"" <NOSPAM@xxxxxxxxxxxx> wrote:

>Thanks for the info. The four I put on the soldering iron were probably
>overheated and won't be salvageable. The rest haven't been exposed to
>water or high humidity, generally it's low humidity most of the time
>here. So I don't see why they could've changed. I'm thinking that I
>might be able to put them inside a ziplock bag with a dessicant and
>leave them out in the sun for awhile, and it might help. Can't hurt
>much since they're already nearly worthless.

I don't think it takes anything extreme to make this moisture absorption happen. Try baking them. I think you'll be surprised.

>> I did this test on a batch of 27k, 2W carbon comp resistors a number
>> of years ago. They were all high, and most of them were out of
>> tolerance, this was immediately as purchased from Newark. But they all
>> came back into tolerance after heating in my home-made oven for about
>> a week.

>
>But at what temperature? I've got a bunch of old 1- and 2-watt
>resistors and I don't think I'll ever use them because I'll never need a
>(for example) 27k 2W resistor since it takes a couple hundred volts to
>get up to 2W and I don't do tubes anymore.

I wrapped them up in alum foil with a 25W light bulb and stuck them in a metal wastebasket for a week. As an experiment, I actually took them out once a day and measured R for each one every day and recorded it. I suspect the temps were 150-175F. This reduces the RELATIVE humidity to something really small. A dessicant would do the same thing, but the heat increases the mobility of the absorbed water, so it's much more effective.

In a week's time, each resistor was back within tolerance.

As I noted before, however, this will not work with resistors which have been heated to soldering temps. Allen-Bradley did not explain the mechanism for this and I don't have any idea what it might be.

Jim Adney jadney@xxxxxxxxxxxxx
Madison, WI 53711 USA

- *Follow-Ups:*

- ◆ *Re: Carbon Comp: Aging Causes Out Of Tol?*

- ◆ *From:* Watson A.Name – \"Watt Sun, the Dark Remover\"

- *References:*

- ◆ *Carbon Comp: Aging Causes Out Of Tol?*

- ◆ *From:* Watson A.Name – \"Watt Sun, the Dark Remover\"

- ◆ *Re: Carbon Comp: Aging Causes Out Of Tol?*

- ◆ *From:* Jim Adney

- ◆ *Re: Carbon Comp: Aging Causes Out Of Tol?*

- ◆ *From:* Watson A.Name – \"Watt Sun, the Dark Remover\"

- Prev by Date: *CK722 Apps Manual went for \$29*

- Next by Date: *Re: Carbon Comp: Aging Causes Out Of Tol?*

- Previous by thread: *Re: Carbon Comp: Aging Causes Out Of Tol?*

- Next by thread: *Re: Carbon Comp: Aging Causes Out Of Tol?*

- Index(es):

- ◆ *Date*

- ◆ *Thread*