
Subject: Diode or capacitor that clips to metal transistor board

Posted by [jimi](#) on Wed, 19 Aug 2009 18:47:11 GMT

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It is a very small metal can with 2 clear sheathed leads going to bottom of PC 900 board and it sits in a metal clip. Does any body know of a replacement for this? The leads pulled out of it waxed? bottom end and the #'s are gone.

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [jimi](#) on Wed, 19 Aug 2009 20:07:28 GMT

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It clips on the metal transistor platform on the chassis floor. (Attempt at clarification)-Jimi

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [chicagobill](#) on Wed, 19 Aug 2009 21:58:12 GMT

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The diode is an RCA 1N3754. It hasn't been made in at least 20 years. It's job is to alter the bias to the output stage as the output transistors heat up.

You can try and substitute a standard 1N914 type diode, but you will have to find some way to mount the glass body of the diode so that it is in contact with the chassis.

Use a little heatsink grease to ensure good thermal contact between the diode and the chassis and be sure to watch out for the polarity when installing the new diode.

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [jimi](#) on Wed, 19 Aug 2009 22:07:41 GMT

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Thank you for this info,you guys rock as always! I'll give it a try-Jimi

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [C4ster](#) on Thu, 20 Aug 2009 13:54:15 GMT

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ChicagoBill and Steve, couldn't a metal can transistor in a TO-18 or TO-72 be used as a replacement for that diode? Just use the Base-Emitter junction and cut off the collector lead short. I know the thermal characteristics might be slightly different but it just might suffice. Is the original diode that you mentioned a single or dual diode, 0.7V or 1.4V? That would solve the physical size and lead position issues.

Conrad

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [steven](#) on Thu, 20 Aug 2009 16:06:15 GMT

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Yes, a metal case transistor can be used to replace the diode and in fact this morning when I read the post I made a mental note that over the weekend I would try out some type that I have at in stock at home in a amp and report back on Monday with a post.

I did find a surplus semiconductor supplier that carries the original RCAs, and I am waiting for a email back on pricing that we all know will be bordering on rape!

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [chicagobill](#) on Thu, 20 Aug 2009 16:13:05 GMT

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Conrad:

I would think that a transistor junction would work there as well as any other diode. The original is a single junction (.7 volt) silicon diode.

If there was another silicon diode or transistor that came in that original style case, the replacement would be so much simpler.

I've thought about getting some 1/4" aluminum tubing and building a replacement diode by gluing in a standard glass case diode with some epoxy. Maybe when I get some free time I'll build one as a test and run some heat tests to see how it works compared to an original diode.

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [steven](#) on Fri, 21 Aug 2009 10:18:07 GMT

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I was thinking about it some last night and I had this thought as I purused around my shop for what I had on hand to get it done.

Take a TO5 case transistor and tack solder on a 1/16" to 1/8th" thick 3/8ths to 1/2" square of brass plate(which can be found in many hardware and craft/ hobby shops)to the flat top of the case, than remove the original diodes hold down clamp and make a spacer for it sio it can be stacked and find a longer bolt, nut and some washers(4-40 I think would be best) to have the clamp be tall enough to hold down the transistor, and of course all the transistors leads would need to be heat shrinked to keep the clamp from shorting to the leads.

Ad some thermal compound, stck it all up and bolt it down and it should be a done deal!

What do you think bill?

Subject: Re: Diode or capacitor that clips to metal transistor board
Posted by [stevem](#) on Fri, 21 Aug 2009 10:20:29 GMT
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Sorry, that post should have ended with "add some thermal compound and stack it all up"

Subject: Re: Diode or capacitor that clips to metal transistor board
Posted by [chicagobill](#) on Fri, 21 Aug 2009 20:03:02 GMT
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Steve:
That sounds like way more work than it's worth.

If you use a TO-5 case transistor, why not just push it into the clip as is? The clip should expand enough to hold it. I guess I should measure one and see.

Subject: Re: Diode or capacitor that clips to metal transistor board
Posted by [stevem](#) on Mon, 24 Aug 2009 09:50:20 GMT
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On second thought, I guess a TO-220 type will bolt down easy enough.

Subject: Re: Diode or capacitor that clips to metal transistor board
Posted by [Roboburger](#) on Thu, 10 Sep 2009 06:35:15 GMT
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What a trip. A non-working K100-5 was just dropped in my lap with a broken 1n3754.

I was just trying to see what the conventional wisdom was for the replacement... The NTE cross reference page returned this diode:

NTE 5801 http://www.ntefinc.com/specs/5800to5899/pdf/nte5800_09.pdf

I'm gonna look-see over this thread again and see if I can figure out what's up.

Subject: Re: Diode or capacitor that clips to metal transistor board
Posted by [davohilts](#) on Sun, 31 Mar 2013 16:32:18 GMT
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Just an update, I'm working on a K400 which has two 200 boards in stereo and I replaced both 1N3754 diodes with NTE5801 diodes. Some heat grease on the diode and it popped right into the metal clip and worked fine. I have only tested it on one board as I haven't hooked up the second

board because of multiple problems with the transistors.

Dave

Subject: Re: Diode or capacitor that clips to metal transistor board

Posted by [steven](#) on Mon, 01 Apr 2013 11:44:03 GMT

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Let us know how you progress and kepp in mind that if that diode is insatlled wrong or not in circuit the result will be alot of blown out transistors.
