

Re: Measuring SMT device temps with Infrared thermometers

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- *From:* Roy L. Fuchs <roylfuchs@xxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Mon, 27 Mar 2006 16:21:14 GMT
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On Mon, 27 Mar 2006 08:03:40 -0800, John Larkin
<jjlarkin@xx> Gave us:

On Mon, 27 Mar 2006 09:25:13 GMT, Roy L. Fuchs
<roylfuchs@xxxxxxxxxxxxxxxxxxxxxxxx> wrote:

On Mon, 27 Mar 2006 01:10:21 GMT, "Bob"
<nimby1_NEEDSPAM@xxxxxxxxxxxxxx> Gave us:

"EE_user" <EE_user@xx>
wrote in message
[news:44272d89\\$0\\$15851\\$892e7fe2@xx](mailto:news:44272d89$0$15851$892e7fe2@xx)

Anyone have any experience with using
handheld Infrared thermometers
to measure small SMT devices? I see some
devices for \$30 and up.

It is possible to adjust for the emissivity
differences between
different materials?

What about the ability to focus on a specific
device? Like a SOT23?

We have a very expensive infrared camera
which is often used to
determine temperatures across an entire
circuit board. This is ideal
but inconvenient.

Thanks,

Re: Measuring SMT device temps with Infrared thermometers

A SOT23 is going to be tough, with the IR units I've seen.
The spot size is
a function of how far unit is away. You'd have to be pretty
damn close to be
sure you're only picking up the SOT23.

Some have close focus capacity, but not the ones in Mouser or at
Fry's

The more expensive ones have a setting for emissivity, or
you can just
calculate what the true reading is (if you know the emissivity
of the part
under test).

True.

Or, you can just paint it black (for emissivity=1).

Not true at all. First off it would have to be a matte black, not
glossy, and it will only attain about a .98 emissivity, at best.
Then, there are the conductivity issues