

## Re: trends in op-amp packages

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Hello Jim,

I'm wondering what will happen to the size of the common op-amp in the next 5 years or so. Now, many new op-amps are no longer available in DIP, and some recent devices are not even available in SOP (1.27mm pin pitch), although at present this seems to be the most universal op-amp package. The use of TSSOP/MSOP (0.65mm pitch) are on the increase and singles in a SOT23-5 (0.95mm pitch) or SC70-5 (0.65mm pitch) appeared to be more preferred.

Is it wise for new designs to avoid SOP packages ?

I often have 40-50 OpAmps in ONE of my packages ;-)

Could have really used that in the design I am wrapping up right now. 13 functions in five chips, plus lots of discretes and it all has to go onto half a square inch double-sided. I sure hope the assemblers don't misplace any parts because it'll be a bear to find out with all those 0201 packages in there.

As to Adam's question, I'd just make sure to pick true "jelly-bean" parts. LPV324 or whatever. Avoid high-priced boutique parts that might go obsolete. Heck, my old work horse LM324 is still available in DIP and that thing almost dates back to the days of Methusaleh. But it does slowly migrate towards smaller packages. For a new design I believe TSSOP is a good bet. By the time that package might be discontinued we'll all be retired.

Sales guys are often quick to announce the demise of a certain technology. We have to take that with a grain of salt. In the 90's they told me the CD4000 series would be history in a couple years. Duh. None of this happened. Also, lots of "modern" electronics use through-hole. Open a newer TV set and you'll see a huge phenolic (!) circuit board which is often single-sided. These are full of classic through-hole parts.

Regards, Joerg

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