Hi David,

Please find my reply as below blue inserted.

Feel free to let me know if you have further question.

*Best Regards,*

*Will Lin*  
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**From:** Stephen Hwang   
**Sent:** Saturday, September 10, 2016 1:34 AM  
**To:** David Riedell <[driedell@silego.com](mailto:driedell@silego.com)>; Will Lin <[wlin@silego.com](mailto:wlin@silego.com)>  
**Cc:** David Chow <[dchow@silego.com](mailto:dchow@silego.com)>; Frank Chen <[fchen@silego.com](mailto:fchen@silego.com)>  
**Subject:** RE: Package drawing and dimensions

Hi, David,

Let assembly engineer to feedback your questions.

Will,

Please help David.

Best Regards

Stephen Hwang

Silego Technology Inc.,

Managing Director

Operation & Process

Office: 408-327-8809

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**From:** David Riedell   
**Sent:** Friday, September 09, 2016 9:49 AM  
**To:** Stephen Hwang <[shwang@silego.com](mailto:shwang@silego.com)>  
**Cc:** David Chow <[dchow@silego.com](mailto:dchow@silego.com)>  
**Subject:** Package drawing and dimensions

Hi Stephen,

I’m trying to understand the specifications in the “Package Drawing and Dimensions” section of our datasheets and I have a few questions:

* Is STQFN-14 a standardized specification, or is it specific to Silego products? [Will] Silego products.
* Do we have a different identifier for our different shaped 14 pin chips? (534, 535, 536 / 140 / 116, 117) [Will] Yes, we can identify it through package type & you can find release POD drawing for each PKG type from the G drive (Path: G:\MFG\PKG\PKG OUTLINE DRAWING\Silego\PODs)
  + i.e. is the 140 a STQFN-14, while the 534/5/6 are STQFN-14L?
  + If so, what is the identifier for 116, 117? [Will] Pls refer example table as below.

|  |  |
| --- | --- |
| Package Type | Base die |
| STQFN 14L 1.6x2mm 0.4P FC Green | PA14 |
| STQFN 14L 1.6X2.5mm 0.4P FC Green | PG13 (PA11+GA13) |
| STQFN 14L 2x2.2mm 0.4P COL Green | PA72 / PA73 |

* David Chow said that JEDEC is a standardizations organization, but I’m having trouble finding documentation on the below specifications. I pulled the values in the chart below from our base die datasheets. Can you verify their accuracy?

|  |  |
| --- | --- |
| JEDEC MO-220, Variation WECE | 531/532/533/534/535/536/620/621/721/722 |
| JEDEC MO-220 | 110/120/121 |
| JEDEC MO-252 | 116/117 |
| No Specification | 140/108 |

   [Will] pls find latest JEDEC MO information with SILEGO’s QFN/DFN packages as following.

|  |  |  |  |
| --- | --- | --- | --- |
| Package Type | Base die | JEDEC MO# | Variation |
| ETDFN 4L 1x1mm 0.4P FC Green | GA07/GA12/GA13 | MO-287 | X2AAE |
| ETDFN 6L 1x1.45mm FC Green | SA31B (RDL 6L) | MO-287 | X2145AE |
| ETDFN 8L 1x1.6mm 0.4P FC Green | GA06 | MO-287 | X2GAE |
| ETDFN 8L 1.5x2mm FC Green | MA03/GA03/GA03B | MO-287 | X220FE |
| ETQFN 8L 1x1.2mm 0.4P FC Green | PA82 | MO-288 | X2CAE |
| ETQFN 12L 1.6x1.6mm 0.4P FCA Green | PA12 | MO-288 | X21616E |
| ETQFN 14L 1.6x2mm 0.4P FC Green | PA14 | MO-288 | X2G16E |
| STDFN 4L 0.9x0.9mm 0.4P FC Green | GA07/GA12/GA13 | MO-287 | U0909E |
| STDFN 4L 1x1mm 0.4P FC Green | GA07/GA12/GA13 | MO-287 | UAAE |
| STDFN 4L 1.3x1.3mm 0.7P Green | GA07 | MO-287 | U131307 |
| STDFN 6L 1x1.4mm 0.4P FC Green | GA14 | MO-287 | UEAE |
| STDFN 6L 1x1.4mm 0.4P FCA Green | GA14C / GA14E | MO-287 | UEAE |
| STDFN 6L 1x1.45mm FC Green | SA31B (RDL 6L) | MO-287 | U145AE |
| STDFN 8L 1x1.6mm 0.4P FC Green | GA06/GA08 | MO-287 | UGAE |
| STDFN 8L 1x1.6mm 0.4P FCA Green | GA05 | MO-287 | UGAE |
| STDFN 8L 1x1.6mm 0.4P FCB Green | SA31 (RDL 8L) | MO-287 | UGAE |
| STDFN 8L 1x1.6mm 0.4P FCD Green | GA16 | MO-287 | UGAE |
| STDFN 10L 1x2mm 0.4P FC Green | SA35 (RDL 10L) | MO-287 | U20AE |
| STDFN 10L 2x2mm 0.4P COL Green | TA03/TA04 | MO-287 | U2020E |
| STDFN 14L 1x3mm 0.4P FC Green | GA09 | MO-287 | U30AE |
| STDFN 14L 2x3mm 0.4P FC Green | GA09 | MO-287 | U3020E |
| STQFN 8L 1x1.2mm 0.4P FC Green | PA82 | MO-288 | UCAE |
| STQFN 12L 1.6x1.6mm 0.4P FC Green | PA11 | MO-288 | U1616E |
| STQFN 12L 1.6x1.6mm 0.4P FCA Green | PA12 | MO-288 | U1616E |
| STQFN 14L 1.6x2mm 0.4P FC Green | PA14 | MO-288 | UG16E |
| STQFN 14L 1.6X2.5mm 0.4P FC Green | PG13 (PA11+GA13) | MO-288 | UJ16E |
| STQFN 14L 2x2.2mm 0.4P COL Green | PA72 / PA73 | MO-288 | UKFE |
| STQFN 16L 1x3mm 0.4P FC Green | GA14E (dual) | MO-288 | U30AE |
| STQFN 16L 1.6x2.5mm 0.4P FCA Green | GA17 | MO-288 | UJ16E |
| STQFN 16L 2x2.5mm 0.4P FC Green | TA02 | MO-288 | UJFE |
| STQFN 17L 1.6x3mm 0.4P FC Green | PG14 (PA11+GA14E) | MO-288 | U3016E |
| STQFN 18L 1.6x3mm 0.4P FC Green | HA01B / HA01C / HA01D | MO-288 | U3016E |
| STQFN 18L 2x3mm 0 4P FC Green | GA04 | MO-288 | U30FE |
| STQFN 20L 2x3mm 0.4P COL Green | PA72/PA62 | MO-288 | U30FE |
| STQFN 20L 2x3mm 0.4P FC Green | PG45 (PA14+GA05) | MO-288 | U30FE |
| STQFN 20L 2x3mm 0.4P FCA Green | PA42 | MO-288 | U30FE |
| STQFN 20L 2x3.5mm 0.4P COL Green | TA03/TA04 | MO-288 | U35FE |
| MSTQFN 15L 1.6x2mm 0.4P FC Green | PG14 (PA11+GA14E) | MO-288 | UG16E |
| MSTQFN 22L 2x2.2mm 0.4P Green | PA73/PA72 | MO-288 | UKFE |
| MSTQFN 26L 2x3mm 0.4P WF Green | PG36 (PA73+GA16) | MO-288 | U30FE |
| MSTQFN 32L 2x3.5mm 0.4P Green | PA58 | MO-288 | U35FE |
| TDFN 8L 1.5x2mm FC Green | MA03/GA03/GA03B | MO-229 | WCBD |
| TDFN 8L 1.5x2mm FC Green (GA06) | GA06 | MO-229 | WCBD |
| TDFN 8L 2x2mm Green | DA11/DA20/DA23/SA25/  SA31/SA32/SA37/PA02 | MO-229 | WCCD |
| TDFN 9L 1.5x2mm 0.4P FC Green | GA03C | MO-229 | WCBE |
| TDFN 10L 2x2mm 0.4P Green | SA25 | MO-229 | WCCE |
| TDFN 10L 2x2mm 0.4P SP Green | DA23 | MO-229 | WCCE |
| TDFN 10L 3x3mm Green | DA17 | MO-229 | WEED |
| TDFN 12L 2.5x2.5mm 0.4P Green | PA04 | MO-229 | WDDE |
| TDFN 14L 2x3mm 0.4P F1 Green | MA01 | MO-229 | WECE |
| TQFN 10L 2x2mm Green | PA01 | MO-220 | WCCD |
| TQFN 12L 2x2mm COL Green | LA01 | MO-220 | WCCD |
| TQFN 16L 2x3mm 0.4P Green | SA25/SA29 | MO-220 | WECE |
| TQFN 16L 3x3mm Green | SA25 / GA01 | MO-220 | WEED |
| TQFN 18L 2x3.5mm 0.4P Green | SA29 | MO-220 | WFCE |
| TQFN 20L 2x4mm 0.4P Green | SA29 | MO-220 | WGCE |
| TQFN 20L 3x3mm 0.4P Green | DA18 | MO-220 | WEEE |
| TQFN 20L 3x3mm 0.4P SP Green | DA18 | MO-220 | WEEE |
| TQFN 20L 4x4mm Green | SA18 | MO-220 | WGGD |
| TQFN 28L 4X4mm 0.4P Green | SA09 | MO-220 | WGGE |
| TQFN 32L 5x5mm Green | SA09/SA18 | MO-220 | WHHD |
| TQFN 40L 6x6mm Green | SA09 | MO-220 | WJJD |
| TQFN 56L 8X8mm Green | SA09/SA18 | MO-220 | WLLD |
| TQFN 64L 9x9mm Green | SA09 | MO-220 | WMMD |
| TQFN 72L 10X10mm Green | SA09 | MO-220 | WNND |

Thanks!

David

David Riedell

Applications Engineer

Silego Technology

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