



**Solderability assessment of older date code Microchip (MCHP) products**

The below tables summarizes a solderability assessment which was performed by Microchip during the calendar years 2011, 2014 and 2016. This assessment was based on the availability of Microchip products with older date codes and does not represent every possible Microchip package/pin count offering. Samples were steam aged prior to the solderability test and were tested in accordance to the JEDEC J-STD-002 solderability test standard. Please note that no failures were detected but that this assessment in no way functions as a warranty or guarantee. Microchip's products will be subject to the terms and conditions under which they were purchased.

In the event you have any questions about the results below please contact your local [Microchip sales office](#).

**Solderability Assessment**

| Package | Package type | Assembly site | Lead frame material | Solder pot      | Temperature  | Date code | Test date    | Life Time @ test | Solderability with 8 hrs. steam aging |        |
|---------|--------------|---------------|---------------------|-----------------|--------------|-----------|--------------|------------------|---------------------------------------|--------|
|         |              |               |                     |                 |              |           |              |                  | Samples                               | Result |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | SnPb Backward   | 215 +/- 5 °C | 0648      | July 7, 2011 | 4 yrs, 31 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | Pb-Free Forward | 245 +/- 5 °C | 0648      | July 7, 2011 | 4 yrs, 31 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | SnPb Backward   | 215 +/- 5 °C | 0741      | July 7, 2011 | 3 yrs, 38 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | Pb-Free Forward | 245 +/- 5 °C | 0741      | July 7, 2011 | 3 yrs, 38 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | SnPb Backward   | 215 +/- 5 °C | 0917      | May 25, 2011 | 2 yrs, 27 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | Pb-Free Forward | 245 +/- 5 °C | 0917      | May 25, 2011 | 2 yrs, 27 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | SnPb Backward   | 215 +/- 5 °C | 0903      | July 7, 2011 | 2 yrs, 24 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UTL           | EFTEC 64T           | Pb-Free Forward | 245 +/- 5 °C | 0903      | July 7, 2011 | 2 yrs, 24 weeks  | 22                                    | Pass   |
| 28L QFN | Pb-free      | UNIS          | C194                | SnPb Backward   | 215 +/- 5 °C | 640       | May 25, 2011 | 4 yrs, 4 weeks   | 22                                    | Pass   |
| 28L QFN | Pb-free      | UNIS          | C194                | Pb-Free Forward | 245 +/- 5 °C | 640       | May 25, 2011 | 4 yrs, 4 weeks   | 22                                    | Pass   |



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| Package  | Package type | Assembly site | Lead frame material | Solder pot      | Temperature  | Date code | Test date         | Life Time @ test | Solderability with 8 hrs. steam aging |        |
|----------|--------------|---------------|---------------------|-----------------|--------------|-----------|-------------------|------------------|---------------------------------------|--------|
|          |              |               |                     |                 |              |           |                   |                  | Samples                               | Result |
| 28L QFN  | Pb-free      | UNIS          | C194                | SnPb Backward   | 215 +/- 5 °C | 0946      | July 7, 2011      | 1 yr, 33 weeks   | 22                                    | Pass   |
| 28L QFN  | Pb-free      | UNIS          | C194                | Pb-Free Forward | 245 +/- 5 °C | 0946      | July 7, 2011      | 1 yr, 33 weeks   | 22                                    | Pass   |
| 68L PLCC | Pb-free      | MMT           | C151                | SnPb Backward   | 215 +/- 5 °C | 0730      | September 6, 2011 | 4 yrs, 6 weeks   | 22                                    | Pass   |
| 68L PLCC | Pb-free      | MMT           | C151                | Pb-Free Forward | 245 +/- 5 °C | 0730      | September 6, 2011 | 4 yrs, 6 weeks   | 22                                    | Pass   |
| 20L SOIC | Pb-free      | MMT           | C194                | SnPb Backward   | 215 +/- 5 °C | 720       | September 6, 2011 | 4 yrs, 16 weeks  | 22                                    | Pass   |
| 20L SOIC | Pb-free      | MMT           | C194                | Pb-Free Forward | 245 +/- 5 °C | 720       | September 6, 2011 | 4 yrs, 16 weeks  | 22                                    | Pass   |
| 16L SOIC | Pb-free      | MMT           | C194                | SnPb Backward   | 215 +/- 5 °C | 1004      | September 6, 2011 | 1 yr, 32 weeks   | 22                                    | Pass   |
| 16L SOIC | Pb-free      | MMT           | C194                | Pb-Free Forward | 245 +/- 5 °C | 1004      | September 6, 2011 | 1 yr, 32 weeks   | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | SnPb Backward   | 215 +/- 5 °C | 0651      | September 6, 2011 | 4 yrs, 37 weeks  | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0651      | September 6, 2011 | 4 yrs, 37 weeks  | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | SnPb Backward   | 215 +/- 5 °C | 0810      | September 6, 2011 | 3 yrs, 26 weeks  | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0810      | September 6, 2011 | 3 yrs, 26 weeks  | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | SnPb Backward   | 215 +/- 5 °C | 0905      | September 6, 2011 | 2 yrs, 31 weeks  | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0905      | September 6, 2011 | 2 yrs, 31 weeks  | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | SnPb Backward   | 215 +/- 5 °C | 0943      | September 6, 2011 | 1 yr, 45 weeks   | 22                                    | Pass   |
| 44L MQFP | Pb-free      | MMT           | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0943      | September 6, 2011 | 1 yr, 45 weeks   | 22                                    | Pass   |



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| Package   | Package type | Assembly site | Lead frame material | Solder pot      | Temperature  | Date code | Test date       | Life Time @ test | Solderability with 8 hrs. steam aging |        |
|-----------|--------------|---------------|---------------------|-----------------|--------------|-----------|-----------------|------------------|---------------------------------------|--------|
|           |              |               |                     |                 |              |           |                 |                  | Samples                               | Result |
| 64L QFN   | Pb-free      | UTAC          | KLF-194             | SnPb Backward   | 215 +/- 5 °C | 0936      | August 20, 2011 | 1 yr, 49 weeks   | 22                                    | Pass   |
| 64L QFN   | Pb-free      | UTAC          | KLF-194             | Pb-Free Forward | 245 +/- 5 °C | 0936      | August 20, 2011 | 1 yr, 49 weeks   | 22                                    | Pass   |
| 28L SOIC  | Pb-free      | MTAI          | C194                | SnPb Backward   | 215 +/- 5 °C | 0717      | August 2, 2011  | 4 yrs, 14 weeks  | 22                                    | Pass   |
| 28L SOIC  | Pb-free      | MTAI          | C194                | Pb-Free Forward | 245 +/- 5 °C | 0717      | August 2, 2011  | 4 yrs, 14 weeks  | 22                                    | Pass   |
| 28L SOIC  | Pb-free      | MTAI          | C194                | SnPb Backward   | 215 +/- 5 °C | 0821      | August 1, 2011  | 3 yrs, 10 weeks  | 22                                    | Pass   |
| 28L SOIC  | Pb-free      | MTAI          | C194                | Pb-Free Forward | 245 +/- 5 °C | 0821      | August 1, 2011  | 3 yrs, 10 weeks  | 22                                    | Pass   |
| 28L SOIC  | Pb-free      | MTAI          | C194                | SnPb Backward   | 215 +/- 5 °C | 0945      | July 26, 2011   | 1 yr, 37 weeks   | 22                                    | Pass   |
| 28L SOIC  | Pb-free      | MTAI          | C194                | Pb-Free Forward | 245 +/- 5 °C | 0945      | July 26, 2011   | 1 yr, 37 weeks   | 22                                    | Pass   |
| 100L TQFP | Pb-free      | MTAI          | C7025               | SnPb Backward   | 215 +/- 5 °C | 0648      | August 19, 2011 | 4 yrs, 37 weeks  | 22                                    | Pass   |
| 100L TQFP | Pb-free      | MTAI          | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0648      | August 19, 2011 | 4 yrs, 37 weeks  | 22                                    | Pass   |
| 100L TQFP | Pb-free      | MTAI          | C7025               | SnPb Backward   | 215 +/- 5 °C | 0827      | August 11, 2011 | 3 yrs, 5 weeks   | 22                                    | Pass   |
| 100L TQFP | Pb-free      | MTAI          | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0827      | August 11, 2011 | 3 yrs, 5 weeks   | 22                                    | Pass   |
| 100L TQFP | Pb-free      | MTAI          | C7025               | SnPb Backward   | 215 +/- 5 °C | 0933      | August 11, 2011 | 1 yr, 51 weeks   | 22                                    | Pass   |
| 100L TQFP | Pb-free      | MTAI          | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0933      | August 11, 2011 | 1 yr, 51 weeks   | 22                                    | Pass   |
| 44L MQFP  | Pb-free      | ATP           | C7025               | SnPb Backward   | 215 +/- 5 °C | 0834      | August 1, 2011  | 2 yrs, 49 weeks  | 22                                    | Pass   |
| 44L MQFP  | Pb-free      | ATP           | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0834      | August 1, 2011  | 2 yrs, 49 weeks  | 22                                    | Pass   |



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| Package     | Package type | Assembly site | Lead frame material | Solder pot      | Temperature  | Date code | Test date       | Life Time @ test | Solderability with 8 hrs. steam aging |        |
|-------------|--------------|---------------|---------------------|-----------------|--------------|-----------|-----------------|------------------|---------------------------------------|--------|
|             |              |               |                     |                 |              |           |                 |                  | Samples                               | Result |
| 44L MQFP    | Pb-free      | ATP           | C7025               | SnPb Backward   | 215 +/- 5 °C | 0949      | August 1, 2011  | 1 yr, 34 weeks   | 22                                    | Pass   |
| 44L MQFP    | Pb-free      | ATP           | C7025               | Pb-Free Forward | 245 +/- 5 °C | 0949      | August 1, 2011  | 1 yr, 34 weeks   | 22                                    | Pass   |
| 100L TQFP   | Pb-free      | ATP           | EFTEC 64T           | SnPb Backward   | 215 +/- 5 °C | 0817      | August 20, 2011 | 3 yrs, 16 weeks  | 22                                    | Pass   |
| 100L TQFP   | Pb-free      | ATP           | EFTEC 64T           | Pb-Free Forward | 245 +/- 5 °C | 0817      | August 20, 2011 | 3 yrs, 16 weeks  | 22                                    | Pass   |
| 100L TQFP   | Pb-free      | ATP           | EFTEC 64T           | SnPb Backward   | 215 +/- 5 °C | 0927      | August 20, 2011 | 2 yrs, 6 weeks   | 22                                    | Pass   |
| 100L TQFP   | Pb-free      | ATP           | EFTEC 64T           | Pb-Free Forward | 245 +/- 5 °C | 0927      | August 20, 2011 | 2 yrs, 6 weeks   | 22                                    | Pass   |
| 44L DFN/QFN | Pb-Free      | ASECL         | C194                | SnPb Backward   | 215 +/- 5C   | 1048      | June 14, 2016   | 5 Years 28 Weeks | 22                                    | Pass   |
| 44L DFN/QFN | Pb-Free      | ASECL         | C194                | Pb-Free Forward | 245 +/- 5C   | 1048      | June 14, 2016   | 5 Years 28 Weeks | 22                                    | Pass   |
| 32L DFN/QFN | Pb-Free      | ASEKH         | C194                | SnPb Backward   | 215 +/- 5C   | 1330      | June 22, 2016   | 2 Years 48 weeks | 22                                    | Pass   |
| 32L DFN/QFN | Pb-Free      | ASEKH         | C194                | Pb-Free Forward | 245 +/- 5C   | 1330      | June 22, 2016   | 2 Years 48 weeks | 22                                    | Pass   |
| 20L DFN/QFN | Pb-Free      | ASEKR         | C194                | SnPb Backward   | 215 +/- 5C   | 1120      | June 29, 2016   | 5 Years 7 weeks  | 22                                    | Pass   |
| 20L DFN/QFN | Pb-Free      | ASEKR         | C194                | Pb-Free Forward | 245 +/- 5C   | 1120      | June 29, 2016   | 5 Years 7 weeks  | 22                                    | Pass   |
| 32L DFN/QFN | Pb-Free      | ATC           | C194                | SnPb Backward   | 215 +/- 5C   | 1030      | July 12, 2016   | 5 Years 51 weeks | 22                                    | Pass   |
| 32L DFN/QFN | Pb-Free      | ATC           | C194                | Pb-Free Forward | 245 +/- 5C   | 1030      | July 12, 2016   | 5 Years 51 weeks | 22                                    | Pass   |
| 40L DFN/QFN | Pb-Free      | ATK           | C194                | SnPb Backward   | 215 +/- 5C   | 1114      | June 29, 2016   | 5 Years 13 Weeks | 22                                    | Pass   |
| 40L DFN/QFN | Pb-Free      | ATK           | C194                | Pb-Free Forward | 245 +/- 5C   | 1114      | June 29, 2016   | 5 Years 13 Weeks | 22                                    | Pass   |



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| Package     | Package type | Assembly site | Lead frame material | Solder pot      | Temperature | Date code | Test date     | Life Time @ test    | Solderability with 8 hrs. steam aging |        |
|-------------|--------------|---------------|---------------------|-----------------|-------------|-----------|---------------|---------------------|---------------------------------------|--------|
|             |              |               |                     |                 |             |           |               |                     | Samples                               | Result |
| 32L DFN/QFN | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1044      | July 6, 2016  | 5 Years<br>36 Weeks | 22                                    | Pass   |
| 32L DFN/QFN | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1044      | July 6, 2016  | 5 Years<br>36 Weeks | 22                                    | Pass   |
| 56L DFN/QFN | Pb-Free      | Hanna Micron  | C194                | SnPb Backward   | 215 +/- 5C  | 1219      | July 8, 2016  | 4 Years<br>9 Weeks  | 22                                    | Pass   |
| 56L DFN/QFN | Pb-Free      | Hanna Micron  | C194                | Pb-Free Forward | 245 +/- 5C  | 1219      | July 8, 2016  | 4 Years<br>9 weeks  | 22                                    | Pass   |
| 64L DFN/QFN | Pb-Free      | Lingsen       | C194                | SnPb Backward   | 215 +/- 5C  | 1025      | July 13, 2016 | 6 Years<br>4 Weeks  | 22                                    | Pass   |
| 64L DFN/QFN | Pb-Free      | Lingsen       | C194                | Pb-Free Forward | 245 +/- 5C  | 1025      | July 13, 2016 | 6 Years<br>4 Weeks  | 22                                    | Pass   |
| 48L DFN/QFN | PB-Free      | SGTK          | C194                | SnPb Backward   | 215 +/- 5C  | 1421      | July 15, 2016 | 2 Years<br>9 Weeks  | 22                                    | Pass   |
| 48L DFN/QFN | PB-Free      | SGTK          | C194                | Pb-Free Forward | 245 +/- 5C  | 1421      | July 15, 2016 | 2 Years<br>9 Weeks  | 22                                    | Pass   |
| 64L DFN/QFN | Pb-Free      | UTL           | C194                | SnPb Backward   | 215 +/- 5C  | 1031      | July 7, 2016  | 5 Years<br>50 Weeks | 22                                    | Pass   |
| 64L DFN/QFN | Pb-Free      | UTL           | C194                | Pb-Free Forward | 245 +/- 5C  | 1031      | July 7, 2016  | 5 Years<br>50 Weeks | 22                                    | Pass   |
| 40L PDIP    | Pb-Free      | ASESH         | C194                | SnPb Backward   | 215 +/- 5C  | 1330      | June 29, 2016 | 2 Years<br>49 Weeks | 22                                    | Pass   |
| 40L PDIP    | Pb-Free      | ASESH         | C194                | Pb-Free Forward | 245 +/- 5C  | 1330      | June 29, 2016 | 2 Years<br>49 Weeks | 22                                    | Pass   |
| 8L PDIP     | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1052      | June 17, 2016 | 5 Years<br>25 Weeks | 22                                    | Pass   |
| 8L PDIP     | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1052      | June 17, 2016 | 5 Years<br>25 Weeks | 22                                    | Pass   |
| 8L PDIP     | Pb-Free      | Lingsen       | C194                | SnPb Backward   | 215 +/- 5C  | 1027      | June 24, 2016 | 5 Years<br>51 Weeks | 22                                    | Pass   |
| 8L PDIP     | Pb-Free      | Lingsen       | C194                | Pb-Free Forward | 245 +/- 5C  | 1027      | June 24, 2016 | 5 Years<br>51 Weeks | 22                                    | Pass   |



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| Package  | Package type | Assembly site | Lead frame material | Solder pot      | Temperature | Date code | Test date     | Life Time @ test    | Solderability with 8 hrs. steam aging |        |
|----------|--------------|---------------|---------------------|-----------------|-------------|-----------|---------------|---------------------|---------------------------------------|--------|
|          |              |               |                     |                 |             |           |               |                     | Samples                               | Result |
| 8L PDIP  | Pb-Free      | TSPIC         | C194                | SnPb Backward   | 215 +/- 5C  | 1348      | June 21, 2016 | 2 Years<br>30 Weeks | 22                                    | Pass   |
| 8L PDIP  | Pb-Free      | TSPIC         | C194                | Pb-Free Forward | 245 +/- 5C  | 1348      | June 21, 2016 | 2 Years<br>30 Weeks | 22                                    | Pass   |
| 8L PDIP  | Pb-Free      | UTL           | C194                | SnPb Backward   | 215 +/- 5C  | 1004      | June 23, 2016 | 6 Years<br>22 Weeks | 22                                    | Pass   |
| 8L PDIP  | Pb-Free      | UTL           | C194                | Pb-Free Forward | 245 +/- 5C  | 1004      | June 23, 2016 | 6 Years<br>22 Weeks | 22                                    | Pass   |
| 32L PLCC | Pb-Free      | AIC           | C151                | SnPb Backward   | 215 +/- 5C  | 1208      | June 20, 2016 | 4 Years<br>18 Weeks | 22                                    | Pass   |
| 32L PLCC | Pb-Free      | AIC           | C151                | Pb-Free Forward | 245 +/- 5C  | 1208      | June 20, 2016 | 4 Years<br>18 Weeks | 22                                    | Pass   |
| 20L PLCC | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1047      | June 22, 2016 | 5 Years<br>31 Weeks | 22                                    | Pass   |
| 20L PLCC | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1047      | June 22, 2016 | 5 Years<br>31 Weeks | 22                                    | Pass   |
| 32L PLCC | Pb-Free      | Lingsen       | C151                | SnPb Backward   | 215 +/- 5C  | 1036      | June 28, 2016 | 5 Years<br>43 Weeks | 22                                    | Pass   |
| 32L PLCC | Pb-Free      | Lingsen       | C151                | Pb-Free Forward | 245 +/- 5C  | 1036      | June 28, 2016 | 5 Years<br>43 Weeks | 22                                    | Pass   |
| 100L QFP | Pb-Free      | ASECL         | C7025               | SnPb Backward   | 215 +/- 5C  | 1210      | June 16, 2016 | 4 Years<br>15 weeks | 22                                    | Pass   |
| 100L QFP | Pb-Free      | ASECL         | C7025               | Pb-Free Forward | 245 +/- 5C  | 1210      | June 16, 2016 | 4 Years<br>15 weeks | 22                                    | Pass   |
| 44L QFP  | Pb-Free      | ASEKH         | C7025               | SnPb Backward   | 215 +/- 5C  | 1037      | July 13, 2016 | 5 Years<br>44 Weeks | 22                                    | Pass   |
| 44L QFP  | Pb-Free      | ASEKH         | C7025               | Pb-Free Forward | 245 +/- 5C  | 1037      | July 13, 2016 | 5 Years<br>44 Weeks | 22                                    | Pass   |
| 100L QFP | Pb-Free      | ASESH         | C7025               | SnPb Backward   | 215 +/- 5C  | 1120      | July 19, 2016 | 5 Years<br>10 Weeks | 22                                    | Pass   |
| 100L QFP | Pb-Free      | ASESH         | C7025               | Pb-Free Forward | 245 +/- 5C  | 1120      | July 19, 2016 | 5 Years<br>10 Weeks | 22                                    | Pass   |



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| Package  | Package type | Assembly site | Lead frame material | Solder pot      | Temperature | Date code | Test date     | Life Time @ test | Solderability with 8 hrs. steam aging |        |
|----------|--------------|---------------|---------------------|-----------------|-------------|-----------|---------------|------------------|---------------------------------------|--------|
|          |              |               |                     |                 |             |           |               |                  | Samples                               | Result |
| 100L QFP | Pb-Free      | ATK           | C194                | SnPb Backward   | 215 +/- 5C  | 1025      | June 17, 2016 | 6 Years 0 Weeks  | 22                                    | Pass   |
| 100L QFP | Pb-Free      | ATK           | C194                | Pb-Free Forward | 245 +/- 5C  | 1025      | June 17, 2016 | 6 Years 0 Weeks  | 22                                    | Pass   |
| 32L QFP  | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1038      | July 14, 2016 | 5 Years 43 Weeks | 22                                    | Pass   |
| 32L QFP  | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1038      | July 14, 2016 | 5 Years 43 Weeks | 22                                    | Pass   |
| 100L QFP | Pb-Free      | Lingsen       | C7025               | SnPb Backward   | 215 +/- 5C  | 1035      | June 21, 2016 | 5 Years 43 Weeks | 22                                    | Pass   |
| 100L QFP | Pb-Free      | Lingsen       | C7025               | Pb-Free Forward | 245 +/- 5C  | 1035      | June 21, 2016 | 5 Years 43 Weeks | 22                                    | Pass   |
| 24L SOIC | Pb-Free      | ASECL         | C194                | SnPb Backward   | 215 +/- 5C  | 1201      | June 29, 2016 | 4 Years 26 Weeks | 22                                    | Pass   |
| 24L SOIC | Pb-Free      | ASECL         | C194                | Pb-Free Forward | 245 +/- 5C  | 1201      | June 29, 2016 | 4 Years 26 Weeks | 22                                    | Pass   |
| 20L SOIC | Pb-Free      | ASESH         | C194                | SnPb Backward   | 215 +/- 5C  | 1143      | June 20, 2016 | 3 Years 35 Weeks | 22                                    | Pass   |
| 20L SOIC | Pb-Free      | ASESH         | C194                | Pb-Free Forward | 245 +/- 5C  | 1143      | June 20, 2016 | 3 Years 35 Weeks | 22                                    | Pass   |
| 8L SOIC  | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1002      | June 28, 2016 | 6 Years 25 Weeks | 22                                    | Pass   |
| 8L SOIC  | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1002      | June 28, 2016 | 6 Years 25 Weeks | 22                                    | Pass   |
| 20L SOIC | Pb-Free      | Lingsen       | C194                | SnPb Backward   | 215 +/- 5C  | 1001      | June 29, 2016 | 6 Years 26 Weeks | 22                                    | Pass   |
| 20L SOIC | Pb-Free      | Lingsen       | C194                | Pb-Free Forward | 245 +/- 5C  | 1001      | June 29, 2016 | 6 Years 26 Weeks | 22                                    | Pass   |
| 8L SOIC  | Pb-Free      | TSPIC         | C194                | SnPb Backward   | 215 +/- 5C  | 1135      | June 20, 2016 | 4 Years 43 Weeks | 22                                    | Pass   |
| 8L SOIC  | Pb-Free      | TSPIC         | C194                | Pb-Free Forward | 245 +/- 5C  | 1135      | June 20, 2016 | 4 Years 43 Weeks | 22                                    | Pass   |



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| Package | Package type | Assembly site | Lead frame material | Solder pot      | Temperature | Date code | Test date     | Life Time @ test    | Solderability with 8 hrs. steam aging |        |
|---------|--------------|---------------|---------------------|-----------------|-------------|-----------|---------------|---------------------|---------------------------------------|--------|
|         |              |               |                     |                 |             |           |               |                     | Samples                               | Result |
| 8L SOIC | Pb-Free      | UTL           | C194                | SnPb Backward   | 215 +/- 5C  | 1034      | July 7, 2016  | 6 Years<br>46 Weeks | 22                                    | Pass   |
| 8L SOIC | Pb-Free      | UTL           | C194                | Pb-Free Forward | 245 +/- 5C  | 1034      | July 7, 2016  | 6 Years<br>46 Weeks | 22                                    | Pass   |
| 20L SOP | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1028      | June 23, 2016 | 5 Years<br>51 Weeks | 22                                    | Pass   |
| 20L SOP | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1028      | June 23, 2016 | 5 Years<br>51 Weeks | 22                                    | Pass   |
| 28L SOP | Pb-Free      | Lingsen       | C7025               | SnPb Backward   | 215 +/- 5C  | 1120      | June 16, 2016 | 5 Years<br>5 Weeks  | 22                                    | Pass   |
| 28L SOP | Pb-Free      | Lingsen       | C7025               | Pb-Free Forward | 245 +/- 5C  | 1120      | June 16, 2016 | 5 Years<br>5 Weeks  | 22                                    | Pass   |
| 10L SOP | Pb-Free      | TSPIC         | C194                | SnPb Backward   | 215 +/- 5C  | 1340      | July 1, 2016  | 2 Years<br>39 Weeks | 22                                    | Pass   |
| 10L SOP | Pb-Free      | TSPIC         | C194                | Pb-Free Forward | 245 +/- 5C  | 1340      | July 1, 2016  | 2 Years<br>39 Weeks | 22                                    | Pass   |
| 8L SOP  | Pb-Free      | UTL           | C7025               | SnPb Backward   | 215 +/- 5C  | 1038      | June 17, 2016 | 5 Years<br>39 Weeks | 22                                    | Pass   |
| 8L SOP  | Pb-Free      | UTL           | C7025               | Pb-Free Forward | 245 +/- 5C  | 1038      | June 17, 2016 | 5 Years<br>39 Weeks | 22                                    | Pass   |
| 5L SOT  | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1020      | June 21, 2016 | 6 Years<br>6 Weeks  | 22                                    | Pass   |
| 5L SOT  | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1020      | June 21, 2016 | 6 Years<br>6 Weeks  | 22                                    | Pass   |
| 5L SOT  | Pb-Free      | UTL           | C194                | SnPb Backward   | 215 +/- 5C  | 1032      | June 29, 2016 | 5 Years<br>47 Weeks | 22                                    | Pass   |
| 5L SOT  | Pb-Free      | UTL           | C194                | Pb-Free Forward | 245 +/- 5C  | 1032      | June 29, 2016 | 5 Years<br>47 Weeks | 22                                    | Pass   |





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| Package     | Package type | Assembly site | Lead frame material | Solder pot      | Temperature | Date code | Test date     | Life Time @ test    | Solderability with 1 hr steam aging |        |
|-------------|--------------|---------------|---------------------|-----------------|-------------|-----------|---------------|---------------------|-------------------------------------|--------|
|             |              |               |                     |                 |             |           |               |                     | Samples                             | Result |
| 48L DFN/QFN | Pb-Free      | ASECL         | C194                | SnPb Backward   | 215 +/- 5C  | 1044      | July 20, 2016 | 5 Years<br>34 Weeks | 22                                  | Pass   |
| 48L DFN/QFN | Pb-Free      | ASECL         | C194                | Pb-Free Forward | 245 +/- 5C  | 1044      | July 20, 2016 | 5 Years<br>34 Weeks | 22                                  | Pass   |
| 64L DFN/QFN | Pb-Free      | ASEKH         | C194                | SnPb Backward   | 215 +/- 5C  | 1235      | July 20, 2016 | 3 Years<br>37 Weeks | 22                                  | Pass   |
| 64L DFN/QFN | Pb-Free      | ASEKH         | C194                | Pb-Free Forward | 245 +/- 5C  | 1235      | July 20, 2016 | 3 Years<br>37 Weeks | 22                                  | Pass   |
| 64L DFN/QFN | Pb-Free      | ASEKR         | C194                | SnPb Backward   | 215 +/- 5C  | 1102      | July 11, 2016 | 5 Years<br>26 weeks | 22                                  | Pass   |
| 64L DFN/QFN | Pb-Free      | ASEKR         | C194                | Pb-Free Forward | 245 +/- 5C  | 1102      | July 11, 2016 | 5 Years<br>26 weeks | 22                                  | Pass   |
| 8L DFN/QFN  | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1010      | July 5, 2016  | 6 Years<br>18 Weeks | 22                                  | Pass   |
| 8L DFN/QFN  | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1010      | July 5, 2016  | 6 Years<br>18 Weeks | 22                                  | Pass   |
| 8L DFN/QFN  | Pb-Free      | UTL           | C194                | SnPb Backward   | 215 +/- 5C  | 1002      | July 21, 2016 | 6 Years<br>28 Weeks | 22                                  | Pass   |
| 8L DFN/QFN  | Pb-Free      | UTL           | C194                | Pb-Free Forward | 245 +/- 5C  | 1002      | July 21, 2016 | 6 Years<br>28 Weeks | 22                                  | Pass   |
| 8L LAP      | Pb-Free      | ATK           | N/A                 | SnPb Backward   | 215 +/- 5C  | 1046      | July 18, 2016 | 5 Years<br>36 Weeks | 22                                  | Pass   |
| 8L LAP      | Pb-Free      | ATK           | N/A                 | Pb-Free Forward | 245 +/- 5C  | 1046      | July 18, 2016 | 5 Years<br>36 Weeks | 22                                  | Pass   |
| 48L LGA     | Pb-Free      | UTL           | N/A                 | SnPb Backward   | 215 +/- 5C  | 1302      | July 18, 2016 | 3 Years<br>28 Weeks | 22                                  | Pass   |
| 48L LGA     | Pb-Free      | UTL           | N/A                 | Pb-Free Forward | 245 +/- 5C  | 1302      | July 18, 2016 | 3 Years<br>28 Weeks | 22                                  | Pass   |
| 216L QFP    | Pb-Free      | ASEKH         | C7025               | SnPb Backward   | 215 +/- 5C  | 1449      | July 5, 2016  | 1 Year<br>31 Weeks  | 22                                  | Pass   |
| 216L QFP    | Pb-Free      | ASEKH         | C7025               | Pb-Free Forward | 245 +/- 5C  | 1449      | July 5, 2016  | 1 Year<br>31 Weeks  | 22                                  | Pass   |
| 8L SOIC     | Pb-Free      | ASESH         | C194                | SnPb Backward   | 215 +/- 5C  | 1008      | July 11, 2016 | 6 Years<br>21 Weeks | 22                                  | Pass   |
| 8L SOIC     | Pb-Free      | ASESH         | C194                | Pb-Free Forward | 245 +/- 5C  | 1008      | July 11, 2016 | 6 Years<br>21 Weeks | 22                                  | Pass   |
| 8L SOIC     | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C  | 1004      | June 20, 2016 | 6 Years<br>22 Weeks | 22                                  | Pass   |
| 8L SOIC     | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C  | 1004      | June 20, 2016 | 6 Years<br>22 Weeks | 22                                  | Pass   |
| 8L SOIC     | Pb-Free      | UTL           | C194                | SnPb Backward   | 215 +/- 5C  | 1004      | June 27, 2016 | 6 Years<br>23 Weeks | 22                                  | Pass   |



# MICROCHIP

| Package | Package type | Assembly site | Lead frame material | Solder pot      | Temperature  | Date code | Test date        | Life Time @ test    | Solderability with 1 hr steam aging |        |
|---------|--------------|---------------|---------------------|-----------------|--------------|-----------|------------------|---------------------|-------------------------------------|--------|
|         |              |               |                     |                 |              |           |                  |                     | Samples                             | Result |
| 8L SOIC | Pb-Free      | UTL           | C194                | Pb-Free Forward | 245 +/- 5C   | 1004      | June 27, 2016    | 6 Years<br>23 Weeks | 22                                  | Pass   |
| 8L SOP  | Pb-Free      | ASESH         | C7025               | SnPb Backward   | 215 +/- 5C   | 1010      | June 20, 2016    | 6 Years<br>17 Weeks | 22                                  | Pass   |
| 8L SOP  | Pb-Free      | ASESH         | C7025               | Pb-Free Forward | 245 +/- 5C   | 1010      | June 20, 2016    | 6 Years<br>17 Weeks | 22                                  | Pass   |
| 8L SOP  | Pb-Free      | ATP           | C194                | SnPb Backward   | 215 +/- 5C   | 1004      | June 20, 2016    | 6 Years<br>22 Weeks | 22                                  | Pass   |
| 8L SOP  | Pb-Free      | ATP           | C194                | Pb-Free Forward | 245 +/- 5C   | 1004      | June 20, 2016    | 6 Years<br>22 Weeks | 22                                  | Pass   |
| 8L SOP  | Pb-Free      | UTL           | C7025               | SnPb Backward   | 215 +/- 5C   | 1050      | June 17, 2016    | 5 Years<br>27 Weeks | 22                                  | Pass   |
| 8L SOP  | Pb-Free      | UTL           | C7025               | Pb-Free Forward | 245 +/- 5C   | 1050      | June 17, 2016    | 5 Years<br>27 Weeks | 22                                  | Pass   |
| 6L SOT  | Pb-Free      | UTL           | C194                | SnPb Backward   | 215 +/- 5C   | 1339      | July 21, 2016    | 2 Years<br>43 Weeks | 22                                  | Pass   |
| 6L SOT  | Pb-Free      | UTL           | C194                | Pb-Free Forward | 245 +/- 5C   | 1339      | July 21, 2016    | 2 Years<br>43 Weeks | 22                                  | Pass   |
| 8L ULA  | Pb-Free      | UTL           | N/A                 | SnPb Backward   | 215 +/- 5C   | 1036      | July 21, 2016    | 5 Years<br>46 Weeks | 22                                  | Pass   |
| 8L ULA  | Pb-Free      | UTL           | N/A                 | Pb-Free Forward | 245 +/- 5C   | 1036      | July 21, 2016    | 5 Years<br>46 Weeks | 22                                  | Pass   |
| 16L QFN | Pb-free      | UNIW          | C194                | SnPb Backward   | 215 +/- 5 °C | 1128      | July 3, 2014     | 2 yrs, 51 weeks     | 22                                  | Pass   |
| 16L QFN | Pb-free      | UNIW          | C194                | SnPb Backward   | 215 +/- 5 °C | 0951      | July 3, 2014     | 4 yrs, 28 weeks     | 22                                  | Pass   |
| 16L QFN | Pb-free      | UTL           | C194                | SnPb Backward   | 215 +/- 5 °C | 1418      | October 21, 2014 | 25 weeks            | 22                                  | Pass   |