



Material Content Data Sheet



| Sales Product Name | | IPP110N20NA | | Issued | | 1. August 2018 | | |
|---------------------------|--------------------|----------------|--------------------|----------------|------------------|----------------|--------------------|-----------|
| MA# | | MA000899044 | | | | | | |
| Package | | PG-TO220-3-1 | | Weight* | | 2044.27 mg | | |
| Construction Element | Material Group | Substances | CAS# if applicable | Weight [mg] | Average Mass [%] | Sum [%] | Average Mass [ppm] | Sum [ppm] |
| chip | inorganic material | silicon | 7440-21-3 | 17.562 | 0.86 | 0.86 | 8591 | 8591 |
| leadframe | inorganic material | phosphorus | 7723-14-0 | 0.245 | 0.01 | | 120 | |
| | non noble metal | iron | 7439-89-6 | 0.816 | 0.04 | | 399 | |
| | non noble metal | copper | 7440-50-8 | 815.335 | 39.90 | 39.95 | 398838 | 399357 |
| | non noble metal | aluminium | 7429-90-5 | 10.673 | 0.52 | 0.52 | 5221 | 5221 |
| wire | non noble metal | aluminium | 7429-90-5 | 10.673 | 0.52 | 0.52 | 5221 | 5221 |
| encapsulation | organic material | carbon black | 1333-86-4 | 8.661 | 0.42 | | 4237 | |
| | plastics | epoxy resin | - | 95.271 | 4.66 | | 46604 | |
| | inorganic material | silicondioxide | 60676-86-0 | 473.467 | 23.16 | 28.24 | 231606 | 282447 |
| leadfinish | non noble metal | tin | 7440-31-5 | 21.462 | 1.05 | 1.05 | 10499 | 10499 |
| plating | inorganic material | phosphorus | 7723-14-0 | 0.001 | 0.00 | | 1 | |
| | non noble metal | nickel | 7440-02-0 | 0.244 | 0.01 | 0.01 | 119 | 120 |
| solder | non noble metal | tin | 7440-31-5 | 0.206 | 0.01 | | 101 | |
| | noble metal | silver | 7440-22-4 | 0.258 | 0.01 | | 126 | |
| | non noble metal | lead | 7439-92-1 | 9.839 | 0.48 | 0.50 | 4813 | 5040 |
| heatspreader | inorganic material | phosphorus | 7723-14-0 | 0.177 | 0.01 | | 87 | |
| | non noble metal | iron | 7439-89-6 | 0.590 | 0.03 | | 289 | |
| | non noble metal | copper | 7440-50-8 | 589.466 | 28.83 | 28.87 | 288349 | 288725 |
| *deviation | < 10% | | Sum in total: | | | 100.00 | | 1000000 |

Important Remarks:

1. Infineon Technologies AG provides full material declaration based on information provided by third parties and has taken and continues to take reasonable steps to provide representative and accurate information.
2. Infineon Technologies AG and Infineon Technologies AG suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.
3. All statements are based on our present knowledge, are provided 'as is' and may be subject to change at any time due to technical requirements and development without notification.

This product is in compliance with EU Directive 2015/863/EU amending Annex II to EU Directive 2011/65/EU (RoHS) and contains Pb according RoHS exemption 7a, Lead in high melting temperature type solders.

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