



PQFN 5X6

RoHS Compliance Document

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International Rectifier

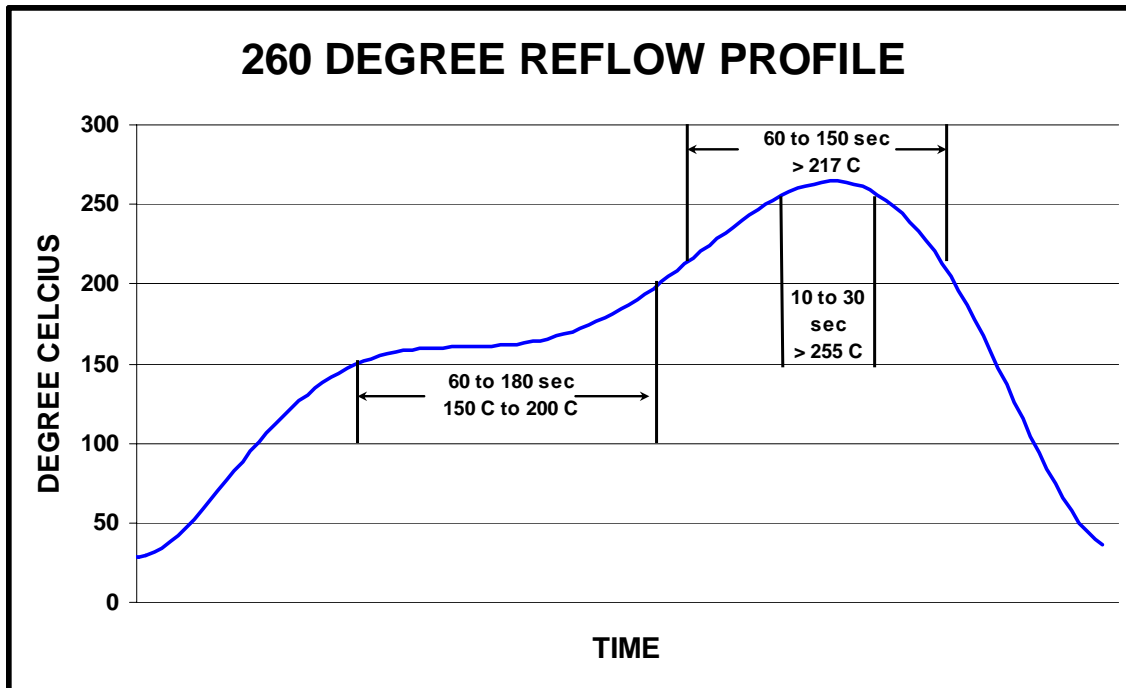
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PQFN 5X6

| Component | Material Name | Material Mass (g) | Element Name Composition | CAS # | Substance Mass (g) | Material Analysis Weight (%) | % of Total Weight |
|------------------|---------------|-------------------|--------------------------|------------|--------------------|------------------------------|-------------------|
| Chip | Silicon | 0.00131 | Si | 7440-21-3 | 0.00131 | 100% | 1.6% |
| Encapsulant | Epoxy Resin | 0.03822 | SiO2 | 7631-86-9 | 0.03409 | 89% | 42.3% |
| | | | Epoxy | 90598-46-2 | 0.00343 | 9% | 4.3% |
| | | | Other | - | 0.00070 | 2% | 0.9% |
| Lead Frame | Copper | 0.03816 | Cu | 7440-50-8 | 0.03727 | 98% | 46.2% |
| | | | Fe | 7439-89-6 | 0.00089 | 2% | 1.1% |
| Die Attach | Silver Epoxy | 0.00083 | Ag | 7440-22-4 | 0.00060 | 72% | 0.7% |
| | | | Epoxy | 90598-46-2 | 0.00017 | 21% | 0.2% |
| | | | Other | - | 0.00006 | 7% | 0.1% |
| Wire bond | Copper | 0.00064 | Cu | 7440-50-8 | 0.00064 | 100% | 0.8% |
| Lead Finish | Matte Tin* | 0.00146 | Sn | 7440-31-5 | 0.00146 | 100% | 1.8% |
| Total Weight (g) | | | | | 0.08062 | | |

* Tin whisker mitigation strategy is 150 C, 1 hour anneal within 24 hours of tin plating.



This part is compliant with EU Directive 2002/95/EC (RoHS) and does not contain lead, mercury, cadmium (0.01%), hexavalent chromium, PBB or PBDE in concentrations greater than 0.1%, except as permitted by Annex (7).

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| Test Definition | Test Conditions | Inspection Interval Class 1 and 2 Products | Total Duration Class 1 and 2 Products | Maximum Whisker Length (um) |
|--|--|--|---------------------------------------|-----------------------------|
| Room Temperature Humidity Storage | 30± 2°C/60± 3% RH | 1000 hours | 4000 hours | 20 |
| Temperature Humidity Unbiased | 55± 3°C/85±3% RH | 1000 hours | 4000 hours | 20 |
| Temperature Cycling | -40 to 55°C to 80 to 95°C, air to air, 10 min soak, approx 3 cycles /hours | 500 cycles | 1500 cycles | 45 |

Tin Whisker testing per JESD201, Environmental Acceptance Requirements for Tin Whisker Susceptibility of Tin and Tin Alloy Surface Finish

Tin Whisker Results (number of failing whiskers)

| Test | 1000 Hours | 2000 Hours | 3000 Hours | 4000 Hours |
|--|------------|-------------|-------------|------------|
| Room Temperature Humidity Storage | 0/24 | 0/24 | 0/24 | 0/24 |
| Temperature Humidity Unbiased | 0/24 | 0/24 | 0/24 | 0/24 |
| Test | 500 Cycles | 1000 Cycles | 1500 Cycles | |
| Temperature Cycling | 0/24 | 0/24 | 0/24 | |