



ADI Space Die Products

October 2021

Class K Die Products

In addition to our traditional packaged hermetic space products, ADI also offers space-grade die manufactured in the same wafer fab sites as our packaged parts. These chip devices undergo an Element Evaluation per MIL-PRF-38534, Table C-II (except where noted), and are fully traceable to the wafer lot or the individual wafer if requested.

There are multiple benefits to purchasing space-qualified die directly from ADI as opposed to up-screening them with third-party vendors:

- ▶ **Fabrication Facility**—ADI's space-qualified die are manufactured in our MIL-PRF-38535 Class V certified wafer fabrication sites.
- ▶ **WLAT**—Each wafer lot undergoes Wafer Lot Acceptance Testing per MIL-STD-883, Test Method 5007.
- ▶ **Traceability**—Each device can be traced back to the wafer lot from which it originated. They can also be traced to the individual wafer if requested.
- ▶ **Peace of Mind**—Working directly with ADI ensures that you can get the technical support you need, which third-party vendors may have difficulty

providing if they are not as intimately familiar with the device.

- ▶ **Die-Specific Datasheets**—All of our space-grade die have their own datasheets separate from the packaged product, including electrical parameter details.
- ▶ **Radiation Assurance**—Some of our space-qualified die products also include radiation performance guarantees. Group E Subgroup 2 is available with an additional lot charge plus the price of samples at the sample unit price. The standard test plan is per MIL-PRF-38535 with test points at 0 krad, 100 krad, and a 24-hour biased anneal

Available Die and Class K Element Evaluation Products

The table below lists the standard space-qualified die products available from ADI. In exceptional cases, products can also be made available per a customer's Source Control Drawing.

| Product | Function | X 1 | Y 1 | Area | Note |
|---------|------------|-----|-----|-------|------|
| AD524S | Inst Amp | 103 | 171 | 17613 | |
| AD534S | Multiplier | 76 | 100 | 7600 | 3 |
| AD561S | DAC | 106 | 153 | 16218 | 3 |

| Product | Function | X 1 | Y 1 | Area | Note |
|----------|-----------|-----|-----|-------|------|
| AD565S | DAC | 119 | 146 | 17374 | 3 |
| AD571S | ADC | 126 | 158 | 19908 | 3 |
| AD574S | ADC | 179 | 180 | 32220 | 3, 4 |
| AD584S | REF | 61 | 80 | 4880 | |
| AD585S | REF | 96 | 124 | 11904 | |
| AD589S | REF | 40 | 60 | 2400 | |
| AD590S | Temp | 66 | 42 | 2772 | |
| AD648S | 2 Amp | 113 | 67 | 7571 | |
| AD667S | DAC | 142 | 184 | 26128 | 3 |
| AD670S | ADC | 111 | 174 | 19314 | 3 |
| AD844S | Op Amp | 76 | 95 | 7220 | |
| AD847S | Op Amp | 64 | 57 | 3648 | |
| AD8001S | Op Amp | 38 | 41 | 1558 | |
| AD8041S | Op Amp | 42 | 50 | 2100 | 3 |
| AD8212S | I Monitor | 46 | 32 | 1472 | |
| AD8561S | Comp | 51 | 42 | 2142 | |
| AD8629S | Op Amp | 47 | 57 | 2679 | |
| ADG201S | Switch | 58 | 65 | 3770 | 2 |
| ADH141S | Mixer | 60 | 60 | 3600 | 3 |
| ADH232S | SPDT | 41 | 81 | 3321 | 3 |
| ADH346S | An Atten | 33 | 33 | 1089 | 3 |
| ADH424S | Dg Atten | 33 | 57 | 1881 | 3 |
| ADH463S | LNA | 51 | 120 | 6120 | 3 |
| ADH939S | Dg Atten | 90 | 37 | 3330 | 3 |
| ADH941S | Dg Atten | 90 | 37 | 3330 | 3 |
| ADH1015S | Mixer | 44 | 45 | 16539 | 3 |
| ADH8410S | LNA | 24 | 37 | 888 | 3 |
| OP12S | Op Amp | 50 | 43 | 2150 | 3 |
| OP15S | Op Amp | 68 | 56 | 3808 | |
| OP16S | Op Amp | 68 | 56 | 3808 | |
| OP22S | Op Amp | 70 | 50 | 3500 | |
| OP27S | Op Amp | 109 | 55 | 5995 | 3, 4 |
| OP37S | Op Amp | 98 | 56 | 5488 | |
| OP42S | Op Amp | 98 | 70 | 6860 | |
| OP43S | Op Amp | 103 | 74 | 7622 | |
| OP77S | Op Amp | 93 | 57 | 5301 | |
| OP200S | 2 Amp | 120 | 106 | 12720 | |
| OP215S | 2 Amp | 110 | 75 | 8250 | 3, 4 |
| OP270S | 2 Amp | 94 | 92 | 8648 | 3, 4 |
| OP400S | 4 Amp | 181 | 123 | 22263 | 3 |
| OP467S | 4 Amp | 111 | 100 | 11100 | |
| OP470S | 4 Amp | 163 | 106 | 17278 | 3, 4 |
| OP471S | 4 Amp | 163 | 106 | 17278 | |
| OP484S | 4 Amp | 80 | 110 | 8800 | 3, 4 |
| PM108S | Op Amp | 43 | 59 | 2537 | 3, 4 |
| PM111S | Comp | 66 | 50 | 3300 | |
| PM139S | Comp | 51 | 48 | 2448 | 3, 4 |
| PM155S | Op Amp | 68 | 56 | 3808 | |

| Product | Function | X 1 | Y 1 | Area | Note |
|-----------|-----------|-----|-----|-------|------|
| PM156S | Op Amp | 68 | 56 | 3808 | |
| REF01S | REF | 74 | 48 | 3552 | |
| REF02S | REF | 74 | 48 | 3552 | 3, 4 |
| REF05S | REF | 74 | 48 | 3552 | |
| REF10S | REF | 74 | 48 | 3552 | |
| RH27C | Op Amp | 83 | 99 | 8217 | 4, 5 |
| RH101A | Op Amp | 80 | 59 | 4720 | 4, 5 |
| RH108A | Op Amp | 74 | 51 | 3774 | 4, 5 |
| RH117 | LDO | 96 | 102 | 9792 | 4, 5 |
| RH119 | Comp | 80 | 59 | 4720 | 4, 5 |
| RH137 | Neg LDO | 85 | 89 | 7565 | 4, 5 |
| RH1009 | REF | 50 | 54 | 2700 | 4, 5 |
| RH1011 | Comp | 80 | 48 | 3840 | 4, 5 |
| RH1013M | 2 Amp | 96 | 78 | 7488 | 4, 5 |
| RH1016M | Comp | 56 | 58 | 3248 | 4, 5 |
| RH1021-5 | REF | 94 | 55 | 5170 | 4, 5 |
| RH1021-10 | REF | 94 | 55 | 5170 | 4, 5 |
| RH1028M | Op Amp | 81 | 114 | 9234 | 4, 5 |
| RH1056A | JFET | 59 | 78 | 4602 | 4, 5 |
| RH1078M | Op Amp | 90 | 97 | 8730 | |
| RH1085 | LDO | 106 | 121 | 12705 | 4, 5 |
| RH1086M | LDO | 103 | 85 | 8755 | 4, 5 |
| RH1128M | Neg LDO | 114 | 81 | 9234 | 4, 5 |
| RH1185 | Neg LDO | 110 | 116 | 12760 | 4, 5 |
| RH1498M | Op Amp | 117 | 82 | 9594 | 4, 5 |
| RH1573K | Reg Drvr | 61 | 72 | 4392 | 4, 5 |
| RH1814 | Op Amp | 40 | 45 | 1800 | 4, 5 |
| RH1959 | Buck | 80 | 138 | 11040 | |
| RH1965 | LDO | 71 | 66 | 4686 | 4, 5 |
| RH3080 | LDO | 44 | 75 | 3300 | 4, 5 |
| RH3083 | LDO | 66 | 113 | 7458 | 4, 5 |
| RH3845 | Buck Ctl | 113 | 124 | 14012 | 4, 5 |
| RH5596S | Pwr Det | 47 | 59 | 2773 | 4, 5 |
| RH6105 | I Monitor | 58 | 52 | 3016 | 5 |
| SMP11S | S/H | 88 | 83 | 7304 | |

Notes

- ¹ All dimensions are in mills
- ² Not available with wafer lot acceptance. Available as MIL-STD 883 Class B Die plus SEM and M2010 Condition A Visual only
- ³ To be offered as Standard Die with class K element evaluation.
- ⁴ To be offered with a total dose radiation guarantee.
- ⁵ Legacy LTC is not qualified to process to MIL-PRF-38534. These products are processed to an LTC-imposed element evaluation that follows MIL-STD-883 test methods and conditions. Please note the quantity and accept number from Sample Size Series of 5%, accept on 0, and note that the actual sample and accept number does not begin until Subgroup 6 OP-LIFE.