WON-TOP ELECTRONICS

# Material Composition Declaration

**Package Information**

| Package | Package Weight (mg) | Terminal Finish | MSL Rating |
|---|---|---|---|
| SOD-123 | 10 | Matte Tin (Sn) | 1 |

**Product Group**

| Type No. | Description |
|---|---|
| SD101AW – SD101CW | Diode Schottky 15mA 40V – 60V |
| 1N5711W | Diode Schottky 15mA 70V |
| BAT42W – BAT43W | Diode Schottky 200mA 30V |
| MMSD301 | Diode Schottky 200mA 30V |
| MMSD701 | Diode Schottky 200mA 70V |
| SD103AW – SD103CW | Diode Schottky 350mA 20V – 40V |
| SS0520 – SS0540 | Diode Schottky 500mA 20V – 40V |
| SS1040 | Diode Schottky 1000mA 40V |
| 1N4148W | Diode Switching 150mA 75V |
| 1N4151W | Diode Switching 150mA 75V |
| BAV16W | Diode Switching 150mA 75V |
| 1N4150W | Diode Switching 200mA 50V |
| MMSD914 | Diode Switching 200mA 100V |
| MMSD4148 | Diode Switching 200mA 100V |
| BAV19W – BAV21W | Diode Switching 200mA 120V – 250V |
| MMSD103 | Diode Switching 200mA 250V |
| 1N4448W | Diode Switching 250mA 75V |
| BZT52B2V4 – BZT52B51 | Diode Zener 500mW |
| BZT52C2V0 – BZT52C51 | Diode Zener 500mW |
| MMSZ4681 – MMSZ4717 | Diode Zener 500mW |
| MMSZ5221B – MMSZ5262B | Diode Zener 500mW |

| Component | Material | Substance | CAS No. | Material Mass (%) | Material Mass (mg) | Component Mass (%) | Component Mass (mg) | PPM |
|---|---|---|---|---|---|---|---|---|
| Die | Doped Silicon* | Si | 7440-21-3 | 100.00 | 0.38 | 3.83 | 0.38 | 38000 |
| Wire Bond | Gold | Au | 7440-57-5 | 100.00 | 0.03 | 0.31 | 0.03 | 3000 |
| Leadframe | Ferrous Alloy | Fe | 7439-89-6 | 56.40 | 1.58 | 28.07 | 2.81 | 158484 |
| | | Ni | 7440-02-0 | 42.00 | 1.18 | | | 118020 |
| | | Mn | 7439-96-5 | 0.80 | 0.02 | | | 2248 |
| | | Co | 7440-48-4 | 0.50 | 0.01 | | | 1405 |
| | | Si | 7440-21-3 | 0.30 | 0.01 | | | 843 |
| Die Bond | Silver Silicone | Ag | 7440-22-4 | 80.00 | 0.10 | 1.15 | 0.12 | 9600 |
| | | Bisphenol F | 28064-14-4 | 15.00 | 0.02 | | | 1800 |
| | | Glycidyl neodeconate | 26761-45-5 | 5.00 | 0.01 | | | 600 |
| Plating | Matte Tin | Sn | 7440-31-5 | 100.00 | 0.20 | 2.00 | 0.20 | 20000 |
| Encapsulation | EMC | Silica | 7631-86-9 | 79.00 | 5.10 | 64.64 | 6.46 | 510340 |
| | | Epoxy Resin | 29690-82-2 | 20.00 | 1.29 | | | 129200 |
| | | Carbon Black | 1333-86-4 | 1.00 | 0.06 | | | 6460 |

Tolerance ±10%

*Dopant and metallization of the silicon die are not reported in this statement where their concentration is less than the minimum reportable level per EIA JIG-101.

Data disclosed herewith is approximate and is based on information from suppliers surveys, Material Safety Datasheet, engineering calculations and measurements. Won-Top Electronics(WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. WTE reserves the right to change any or all information herein without further notice.

## RoHS Declaration

The European Parliament and of the Council on the Restriction of the use of Certain Hazardous Substances in Electrical and Electronics Equipment (RoHS) directive restricts the concentration of Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr6+), Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBD) to 0.1%(1000 PPM) and restricts the concentration of Cadmium (Cd) to 0.01%(100 PPM) in homogeneous materials of electronics products.

The product group listed above and the homogenous materials are compliant with the Directive 2011/65/EU. WTE warrants that all its packing, components and/or products supplied to the Customer and/or its affiliated companies or designated contractors do not contain these hazardous substances in quantity levels higher than or equal to the thresholds to this directive.

**Exemptions as declared for the directive are:**
7(a) Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead).
7(c)-I Lead in glass (applicable for glass passivated silicon die).