

## Material Composition Declaration

### Package Information

Package	Package Weight (mg)	Terminal Finish	MSL Rating
SOT-23	8	Matte Tin (Sn)	1

### Product Group

Type No.	Description
MMBD352 – MMBD355	Diode Schottky 10mA 7V
BAS70 / A / C / S	Diode Schottky 70mA 70V
DAN217, DAP202, DAN202	Diode Schottky 100mA 80V
MMBD101	Diode Schottky 200mA 7V
MMBD717 / A / C / S	Diode Schottky 200mA 20V
BAT54 / A / C / S	Diode Schottky 200mA 30V
MMBD301	Diode Schottky 200mA 30V
BAS40 / A / C / S	Diode Schottky 200mA 40V
MMBD701	Diode Schottky 200mA 70V
1SS344	Diode Schottky 500mA 20V
RB491D	Diode Schottky 1000mA 20V
MMBD2835, MMBD2837	Diode Switching 100mA 30V
MMBD2836, MMBD2838	Diode Switching 100mA 50V
1SS181, 1SS184, 1SS187, 1SS190, 1SS193, 1SS196, 1SS226	Diode Switching 100mA 80V
BAV74	Diode Switching 200mA 50V
MMBD6050, MMBD6100	Diode Switching 200mA 70V
BAL99, BAV70, BAW56	Diode Switching 200mA 75V
DAN202, DAN217, DAP202	Diode Switching 200mA 100V
MMBD914, MMBD4148, MMBD7000	Diode Switching 200mA 100V
MMBD4148A – MMBD4148SE	Diode Switching 200mA 100V
BAS19 – BAS21	Diode Switching 200mA 120 – 250V
MMBD1501A – MMBD1505A	Diode Switching 200mA 200V
BAS21A / C / S	Diode Switching 200mA 250V
BAV99	Diode Switching 215mA 75V
BAS116, BAV170, BAV199	Diode Switching 215mA 85V
MMBD4448	Diode Switching 250mA 75V
BZX84B2V4 – BZX84B51	Diode Zener 350mW
BZX84C2V4 – BZX84C51	Diode Zener 350mW
BZX84C2V4CC – BZX84C75CC	Diode Zener 350mW
MMB5221B – MMB5262B	Diode Zener 350mW

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	0.158	1.97	0.158	19750
Wire Bond	Gold	Au	7440-57-5	100.00	0.010	0.12	0.010	1250
Leadframe	Ferrous Alloy	Fe	7439-89-6	56.40	1.229	27.24	2.179	153620
		Ni	7440-02-0	42.00	0.915			114398
		Mn	7439-96-5	0.80	0.017			2179
		Co	7440-48-4	0.50	0.011			1362
		Si	7440-21-3	0.30	0.007			817
Die Bond	Silver Silicone	Ag	7440-22-4	80.00	0.061	0.95	0.076	7600
		Bisphenol F	28064-14-4	15.00	0.011			1425
		Glycidyl neodeconate	26761-45-5	5.00	0.004			475
Plating	Matte Tin	Sn	7440-31-5	100.00	0.190	2.37	0.190	23750
Encapsulation	EMC	Silica	7631-86-9	79.00	4.256	67.35	5.387	531966
		Epoxy Resin	29690-82-2	20.00	1.077			134675
		Carbon Black	1333-86-4	1.00	0.054			6734

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).