

## Material Composition Declaration

### Package Information

Package	Package Weight (mg)	Terminal Finish	MSL Rating
D <sup>2</sup> PAK	1700	Matte Tin (Sn)	1

### Product Group

Type No.	Description
SB820D –SB8200D	Diode Schottky 8A 20V – 200V
SB820DC –SB8200DC	Diode Schottky 8A 20V – 200V
SB1020D –SB10200D	Diode Schottky 10A 20V – 200V
SB1020DC –SB10200DC	Diode Schottky 10A 20V – 200V
SB1620D –SB16200D	Diode Schottky 16A 20V – 200V
SB1620DC –SB16200DC	Diode Schottky 16A 20V – 200V
SB2020DC –SB20200DC	Diode Schottky 20A 20V – 200V
SB2520DC –SB25200DC	Diode Schottky 25A 20V – 200V
SB3020DC –SB30200DC	Diode Schottky 30A 20V – 200V
SBL3020DC –SBL3045DC	Diode Schottky 30A 20V – 45V
SB4020DC –SB40200DC	Diode Schottky 40A 20V – 200V
SBL4020DC –SBL4045DC	Diode Schottky 40A 20V – 45V
MURHB820 – MURHB860	Diode Superfast 8A 200V – 600V
MURHB820CT – MURHB860CT	Diode Superfast 8A 200V – 600V
MURB1020CT – MURB1060CT	Diode Superfast 10A 200V – 600V
MURB1620 – MURB1660	Diode Superfast 16A 200V – 600V
MURB1620CT – MURB1660CT	Diode Superfast 16A 200V – 600V
MURB3020 – MURB3060	Diode Superfast 30A 200V – 600V
MURB3020CT – MURB3060CT	Diode Superfast 30A 200V – 600V

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	3.42	0.20	3.42	2012
Die Attach	Solder Alloy	Pb	7439-92-1	92.50	17.58	1.12	19.00	10338
		Sn	7440-31-5	5.00	0.95			559
		Ag	7440-22-4	2.50	0.48			279
Wire Bond	Aluminum Alloys	Al	7429-90-5	100.00	0.38	0.02	0.38	224
Leadframe	Copper Alloy	Cu	7440-50-8	97.50	1047.57	63.20	1074.43	616217
		Fe	7439-89-6	2.40	25.79			15168
		Zn	7440-66-6	0.10	1.07			632
Plating	Matte Tin	Sn	7440-31-5	100.00	17.00	1.00	17.00	10000
Encapsulation	EMC	Silica	7631-86-9	74.91	438.80	34.46	585.77	258118
		Epoxy Resin	29690-82-2	23.13	135.49			79699
		Sb <sub>2</sub> O <sub>3</sub>	1309-64-4	0.98	5.74			3377
		Brominated Epoxy Resin	6386-73-8	0.98	5.74			3377

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), Bis(2-ethylhexyl) Phthalate (DEHP), Butyl Benzyl Phthalate (BBP), Dibutyl Phthalate (DBP) and Diisobutyl Phthalate (DIBP) 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 and amending EU Directive 2015/863/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 these directives.

**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).