



Material Composition Declaration

Package Information

Package	Package Weight (mg)	Terminal Finish	MSL Rating
DO-15	400	Matte Tin (Sn)	N/A

Product Group

Type No.	Description
SB220 – SB2200	Diode Schottky 2A 20V – 200V
SR220 – SR2100	Diode Schottky 2A 20V – 100V
SF21 – SF27	Diode Superfast 2A 50V – 600V
HER151 – HER158	Diode Ultrafast 1.5A 50V – 1000V
HER201 – HER208	Diode Ultrafast 2A 50V – 1000V
FR151 – FR157	Diode Fast 1.5A 50V – 1000V
FR201 – FR207	Diode Fast 2A 50V – 1000V
1N5391 – 1N5399	Diode Standard 1.5A 50V – 1000V
RL201 – RL208	Diode Standard 2A 50V – 1300V
SA Series	Diode TVS 500W
P6KE Series	Diode TVS 600W
3EZ3.3D5 – 3EZ200D5	Diode Zener 3.0W
1N5333B – 1N5340B	Diode Zener 5.0W

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	1.16	0.29	1.16	2900
Die Attach	Solder Alloy	Pb	7439-92-1	92.50	4.44	1.20	4.80	11100
		Sn	7440-31-5	5.00	0.24			600
		Ag	7440-22-4	2.50	0.12			300
Leadframe	Copper Alloy	Cu	7440-50-8	97.78	275.75	70.50	282.00	689375
		Fe	7439-89-6	2.22	6.25			15625
Plating	Matte Tin	Sn	7440-31-5	100.00	4.00	1.00	4.00	10000
Encapsulation	EMC	Silica	7631-86-9	74.86	80.88	27.01	108.04	202200
		Epoxy Resin	29690-82-2	23.14	25.00			62500
		Sb ₂ O ₃	1309-64-4	1.00	1.08			2700
		Brominated Epoxy Resin	6386-73-8	1.00	1.08			2700

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).