

Material Composition Declaration

Package Information

Package	Package Weight (mg)	Terminal Finish	MSL Rating
DO-41G	310	Matte Tin (Sn)	N/A

Product Group

Type No.	Description
1N4728AG – 1N4764AG	Diode Zener 1.0W

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	0.09	0.03	0.09	290
Dumet Wire	Ferrous Alloy	Fe	7439-89-6	56.45	31.27	17.87	55.40	100882
		Ni	7440-02-0	41.95	23.24			74969
		Mn	7439-96-5	0.80	0.44			1430
		Co	7440-48-4	0.50	0.28			894
		Si	7440-21-3	0.30	0.17			536
Leadframe	Ferrous Alloy	Fe	7439-89-6	64.25	124.30	62.41	193.47	400982
		Cu	7440-50-8	35.05	67.81			218746
		C	7440-44-0	0.50	0.97			3120
		Mn	7439-96-5	0.20	0.39			1248
Plating	Matte Tin	Sn	7440-31-5	100.00	3.38	1.09	3.38	10903
Encapsulation	Ceramic / Glass	Orange Lead	1314-41-6	60.93	35.13	18.60	57.66	113330
		Quartz SiO ₂	14808-60-7	32.26	18.60			60004
		Potassium Oxide	12136-45-7	3.75	2.16			6975
		Diboron Trioxide**	1303-86-2	3.00	1.73			5580
		Sb ₂ O ₃	1309-64-4	0.06	0.03			112

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.

**Diboron trioxide was added to REACH Annex XIV as a Substance of Very High Concern on June 18, 2012. Won-Top Electronics(WTE) products in glass encapsulated packages may list Diboron trioxide as a constituent material in the glass packages, in a concentration greater than 0.1%. REACH classifies: glass as a substance of unknown or variable composition, complex reaction products or biological matter (UVCB) containing the elements silica, calcium, sodium, potassium, magnesium and other cautions bonded together with oxygen. In glass encapsulation, these elements are bonded into a non crystalline molecular structure with completely different properties than the starting material. Therefore Diboron trioxide is not present in the finished WTE products and does not require notification of the presents of a SVHC.

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).