

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)
 Contact Info: ti.com/support
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB
 Created on: 08/25/2022

Details for "THVD1452DGS"

Current Product Information

TI part number	Lead finish/Ball material	MSL rating/peak reflow	Assembly site	Package Pins	Package body size (mm)	Total device mass (mg)*
THVD1452DGS	NIPDAUAG	Level-1-260C-UNLIM	Ext-Mfg	DGS 10	3x3x1	33.2

*Total Device Mass

The summary mass is a rounded value and will be within approximately +/- 10% of the detailed mass value.

Environmental Ratings Information

RoHS	REACH	Green	IEC 62474 DB
Yes	Yes	Yes	Yes

Component Information

Component	Substance	CAS Number	Amount (mg)	Homogeneous Material Level		Component Level	
				Percentage %	ppm	Percentage %	ppm
Bond Wire							
Copper and Its Alloys	Copper	7440-50-8	0.093684	96.62328	966233	0.282364	2824
Precious Metals	Gold	7440-57-5	0.000311	0.320757	3208	0.000937	9
Precious Metals	Palladium	7440-05-3	0.002963	3.055962	30560	0.008931	89
Sub-Total			0.096958	100	1000000	0.292232	2922
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.39485	82.000066	820001	1.190081	11901
Thermoplastics	Epoxy	85954-11-6	0.086674	17.999934	179999	0.261236	2612
Sub-Total			0.481524	100	1000000	1.451317	14513
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	16.48521	95.899994	959000	49.686563	496866
Magnesium and Its Alloys	Magnesium	7439-95-4	0.030083	0.175003	1750	0.09067	907
Nickel and Its Alloys	Nickel	7440-02-0	0.55008	3.2	32000	1.657946	16579
Other Inorganic Materials	Silicon	7440-21-3	0.124628	0.725003	7250	0.37563	3756
Sub-Total			17.190001	100	1000000	51.810809	518108
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.23352	97.3	973000	0.703831	7038
Precious Metals	Gold	7440-57-5	0.00072	0.3	3000	0.00217	22
Precious Metals	Palladium	7440-05-3	0.00504	2.1	21000	0.015191	152
Precious Metals	Silver	7440-22-4	0.00072	0.3	3000	0.00217	22
Sub-Total			0.24	100	1000000	0.723362	7234
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	12.931758	93.500001	935000	38.976428	389764
Other Plastics and Rubber	Carbon Black	1333-86-4	0.069154	0.500002	5000	0.208431	2084
Thermoplastics	Epoxy	85954-11-6	0.829845	5.999997	60000	2.50116	25012
Sub-Total			13.830757	100	1000000	41.686019	416860
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	1.339167	100	1000000	4.036261	40363
Sub-Total			1.339167	100	1000000	4.036261	40363
Total			33.178407			100	1000000

Important Note

The ppm calculations are at the homogeneous material level and are maximum concentration values. The ppm displayed represents the homogeneous material with the highest ppm for that substance. The amount (mg) calculations represent the maximum total amount of each substance within the component.

The ppm calculations are at the component level and are average concentration values. The amount (mg) calculations represent the average total amount of each substance within the component.

[See Glossary of Terms for more details.](#)

Important Part Information

There is a remote possibility the Customer Part Number (CPN) your company uses could reference more than one TI part number. This is due to two or more users (EMSI or subcontractors) using the same CPN for different TI part numbers. If this occurs, please check your Customer Part Number and cross reference it with the TI part number seen on this page.

Product Content Methodology

[For an explanation of the methods used to determine material weights, See Product Content Methodology.](#)

Material Declaration Certificate for Semiconductor IC Packaged Products

TI certifies that the material content information provided by TI is representative and accurate to the best of their knowledge based on material information provided by its suppliers and their combination into finished IC packaged products. TI semiconductor products designated to be "Pb-free", "Green" or "RoHS Exempt" fully meets the latest EU RoHS Directive requirements along with other legislation as seen in the former JIG-101 list that has been transferred to the IEC 62474 database.

Important Information/Disclaimer

TI bases its material content information on information provided by third-party suppliers and has taken, and continues to take, reasonably diligent steps to provide any required or available information. TI may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers may consider certain information to be proprietary, and thus certain information may not be available for release by TI. The material content information is provided by TI "as is."

[For additional information, please contact TI customer support.](#)

[Signature: \(click here for a fuller statement with a signed certificate\)](#)

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 For further environmental statements, please go to www.ti.com/ecoinfo
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RoHS: Means TI semiconductor products that are compliant with the current RoHS requirement that the maximum concentration values of the ten substances listed in RoHS Annex II do not exceed 0.1 % by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI semiconductor products labeled as "RoHS Compliant" are suitable for use in specified lead-free processes. TI may also reference these types of semiconductor products as "Pb-Free." These TI semiconductor products are also fully compliant with GADSL and the IEC 62474 database for electronic requirements.

RoHS Exempt: Means TI semiconductor products that contain lead (Pb) above the RoHS Annex II threshold, but that fall within one of the specific RoHS exemptions noted above or documented in <http://www.ti.com/lit/pdf/szzq088>

Green: Means the content of Chlorine (Cl) and Bromine (Br)-based flame retardants meet JS709B low halogen requirements of <=1 000ppm threshold; Antimony trioxide (Sb2O3) contained in halogen based flame retardant materials meets the <=1 000ppm threshold requirement; and Beryllium Oxide (BeO) is <=1000ppm.