

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: 06/09/2022

Details for "TLV9104IDR"

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)*
TLV9104IDR	NIPDAU	Level-2-260C-1 YEAR	TI MALAYSIA A/T	D 14	8.7x3.9x1.75	171

***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	0.040359	97.534982	975350	0.023608	236
Not Categorized	Proprietary Materials		0.000005	0.012083	121	0.000003	0
Precious Metals	Gold	7440-57-5	0.000021	0.05075	508	0.000012	0
Precious Metals	Palladium	7440-05-3	0.000993	2.399768	23998	0.000581	6
Precious Metals	Silver	7440-22-4	0.000001	0.002417	24	0.000001	0
Sub-Total			0.041379	100	1000000	0.024205	242
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.202738	80.000158	800002	0.118592	1186
Thermoplastics	Epoxy	85954-11-6	0.050684	19.999842	199998	0.029648	296
Sub-Total			0.253422	100	1000000	0.148239	1482
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	60.541734	97.585	975850	35.413928	354139
Copper and Its Alloys	Iron	7439-89-6	1.42692	2.3	23000	0.834678	8347
Copper and Its Alloys	Phosphorus	7723-14-0	0.009306	0.015	150	0.005444	54
Zinc and Its Alloys	Zinc	7440-66-6	0.06204	0.1	1000	0.03629	363
Sub-Total			62.04	100	1000000	36.29034	362903
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.057072	95.12	951200	0.033384	334
Precious Metals	Gold	7440-57-5	0.000468	0.78	7800	0.000274	3
Precious Metals	Palladium	7440-05-3	0.00246	4.1	41000	0.001439	14
Sub-Total			0.06	100	1000000	0.035097	351
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	94.802726	88	880000	55.454919	554549
Other Plastics and Rubber	Carbon Black	1333-86-4	0.323191	0.3	3000	0.189051	1891
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.592517	0.55	5500	0.346593	3466
Thermoplastics	Epoxy	85954-11-6	12.011936	11.15	111500	7.02639	70264
Sub-Total			107.73037	100	1000000	63.016953	630170
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.829414	100	1000000	0.485166	4852
Sub-Total			0.829414	100	1000000	0.485166	4852
Total			170.954585			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's 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: [\(click here for a fuller statement with a signed certificate\)](#)

Name/Title: Hubie Payne, Vice President, Worldwide SC Quality
 For further environmental statements, please go to www.ti.com/eoinfo
 Created on: 06/09/2022

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.