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: **05/30/2022**

Details for "LF412CDG4"

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)*
LF412CDG4	NIPDAU	Level-1-260C-UNLIM	TI AGUASCALIENTES	D | 8	3.91x4.9x1.58	109.6

***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

				Homogeneous Material Level		Component Level	
Component	**Substance**	**CAS Number**	**Amount (mg)**	**Percentage %**	**ppm**	**Percentage %**	**ppm**
Bond Wire							
Precious Metals	Gold	7440-57-5	0.077897	100	1000000	0.071057	711
Sub-Total			**0.077897**	**100**	**1000000**	**0.071057**	**711**
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.508379	78.999966	790000	0.463738	4637
Thermoplastics	Epoxy	85954-11-6	0.135139	21.000034	210000	0.123273	1233
Sub-Total			**0.643518**	**100**	**1000000**	**0.587011**	**5870**
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	46.301585	97.049999	970500	42.235865	422359
Copper and Its Alloys	Iron	7439-89-6	1.240434	2.6	26000	1.131512	11315
Copper and Its Alloys	Phosphorus	7723-14-0	0.071564	0.150001	1500	0.06528	653
Zinc and Its Alloys	Zinc	7440-66-6	0.095418	0.2	2000	0.087039	870
Sub-Total			**47.709001**	**100**	**1000000**	**43.519697**	**435197**
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.157899	95.11988	951199	0.144034	1440
Precious Metals	Gold	7440-57-5	0.001295	0.78012	7801	0.001181	12
Precious Metals	Palladium	7440-05-3	0.006806	4.1	41000	0.006208	62
Sub-Total			**0.166**	**100**	**1000000**	**0.151424**	**1514**
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	51.646893	88	880000	47.111804	471118
Other Plastics and Rubber	Carbon Black	1333-86-4	0.176069	0.3	3000	0.160608	1606
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.322793	0.55	5500	0.294449	2944
Thermoplastics	Epoxy	85954-11-6	6.543896	11.15	111500	5.96928	59693
Sub-Total			**58.689651**	**100**	**1000000**	**53.536141**	**535361**
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	2.340159	100	1000000	2.134671	21347
Sub-Total			**2.340159**	**100**	**1000000**	**2.134671**	**21347**
Total			109.626226			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 (EMSIs 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.

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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/ecoinfo
Created on: 05/30/2022

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 (Sb203) contained in halogen based flame retardant materials meets the <=1 000ppm threshold requirement; and Beryllium Oxide (BeO) is <=1000ppm.