

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: 08/28/2022

Details for "TP57B4253QDDARQ1"

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)*
TP57B4253QDDARQ1	NIPDAUAG	Level-2-260C-1 YEAR	Ext-Mfg	DDA 8	4.9x3.9x1.75	93.8

*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	0.115562	96.410932	964109	0.123245	1232
Precious Metals	Palladium	7440-05-3	0.004302	3.589068	35891	0.004588	46
Sub-Total			0.119864	100	1000000	0.127833	1278
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.345893	81.999948	819999	0.36889	3689
Thermoplastics	Epoxy	85954-11-6	0.075928	18.000052	180001	0.080976	810
Sub-Total			0.421821	100	1000000	0.449866	4499
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	32.453525	97.020996	970210	34.611237	346112
Copper and Its Alloys	Iron	7439-89-6	0.77972	2.331001	23310	0.831561	8316
Copper and Its Alloys	Phosphorus	7723-14-0	0.045827	0.137001	1370	0.048874	489
Magnesium and Its Alloys	Magnesium	7439-95-4	0.016725	0.05	500	0.017837	178
Other Inorganic Materials	Silicon	7440-21-3	0.082956	0.248	2480	0.088471	885
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.003011	0.009001	90	0.003211	32
Precious Metals	Silver	7440-22-4	0.002676	0.008	80	0.002854	29
Zinc and Its Alloys	Zinc	7440-66-6	0.065562	0.196	1960	0.069921	699
Sub-Total			33.450002	100	1000000	35.673966	356740
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.2919	97.3	973000	0.311307	3113
Precious Metals	Gold	7440-57-5	0.0009	0.3	3000	0.00096	10
Precious Metals	Palladium	7440-05-3	0.0063	2.1	21000	0.006719	67
Precious Metals	Silver	7440-22-4	0.0009	0.3	3000	0.00096	10
Sub-Total			0.3	100	1000000	0.319946	3199
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	48.595629	84.849999	848500	51.826568	518266
Other Plastics and Rubber	Carbon Black	1333-86-4	0.085909	0.150001	1500	0.091621	916
Thermoplastics	Epoxy	85954-11-6	8.59086	15.000001	150000	9.162034	91620
Sub-Total			57.272398	100	1000000	61.080222	610802
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	2.201779	100	1000000	2.348167	23482
Sub-Total			2.201779	100	1000000	2.348167	23482
Total			93.765864			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: \(click here for a fuller statement with a signed certificate\)](#)

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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.