

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: 06/12/2022

Details for "TPS78233DDCT"

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)*
TPS78233DDCT	NIPDAU	Level-2-260C-1 YEAR	Ext-Mfg	DDC 5	2.9x1.6x0.85	13.4

*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							
Precious Metals	Gold	7440-57-5	0.053537	100	1000000	0.400544	4005
Sub-Total			0.053537	100	1000000	0.400544	4005
Die Attach Adhesive							
Other Inorganic Materials	Aluminum Oxide	1344-28-1	0.029242	30.000103	300001	0.218778	2188
Other Inorganic Materials	Silica	7631-86-9	0.004386	4.499708	44997	0.032814	328
Other Organic Materials	Chlorine	7782-50-5	0.000034	0.034881	349	0.000254	3
Thermoplastics	Epoxy	85954-11-6	0.063811	65.465308	654653	0.47741	4774
Sub-Total			0.097473	100	1000000	0.729256	7293
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	6.579802	96.210001	962100	49.227597	492276
Copper and Its Alloys	Iron	7439-89-6	0.177814	2.6	26000	1.330337	13303
Copper and Its Alloys	Phosphorus	7723-14-0	0.010259	0.150007	1500	0.076754	768
Nickel and Its Alloys	Nickel	7440-02-0	0.054712	0.8	8000	0.409335	4093
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.000684	0.010001	100	0.005117	51
Precious Metals	Gold	7440-57-5	0.002188	0.031993	320	0.01637	164
Precious Metals	Palladium	7440-05-3	0.013541	0.197997	1980	0.101309	1013
Sub-Total			6.839	100	1000000	51.166819	511668
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.000951	95.1	951000	0.007115	71
Precious Metals	Gold	7440-57-5	0.000008	0.8	8000	0.00006	1
Precious Metals	Palladium	7440-05-3	0.000041	4.1	41000	0.000307	3
Sub-Total			0.001	100	1000000	0.007482	75
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	4.882214	85.000003	850000	36.526884	365269
Other Plastics and Rubber	Carbon Black	1333-86-4	0.017231	0.299994	3000	0.128916	1289
Thermoplastics	Epoxy	85954-11-6	0.844336	14.700003	147000	6.317004	63170
Sub-Total			5.743781	100	1000000	42.972803	429728
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.631293	100	1000000	4.723096	47231
Sub-Total			0.631293	100	1000000	4.723096	47231
Total			13.366084			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
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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 (Sb203) contained in halogen based flame retardant materials meets the <=1 000ppm threshold requirement; and Beryllium Oxide (BeO) is <=1000ppm.