

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: 05/06/2022

Details for "TLC4502CDR"

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)*
TLC4502CDR	NIPDAU	Level-1-260C-UNLIM	TI TAIWAN A/T	D 8	3.91x4.9x1.58	85.1

***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	0.024927	100	1000000	0.029293	293
Sub-Total			0.024927	100	1000000	0.029293	293
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.729599	79.999978	800000	0.857375	8574
Thermoplastics	Epoxy	85954-11-6	0.1824	20.000022	200000	0.214344	2143
Sub-Total			0.911999	100	1000000	1.07172	10717
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	24.416166	97.425006	974250	28.692228	286922
Copper and Its Alloys	Iron	7439-89-6	0.601476	2.4	24000	0.706814	7068
Copper and Its Alloys	Phosphorus	7723-14-0	0.003759	0.014999	150	0.004417	44
Copper and Its Alloys	Tin	7440-31-5	0.007518	0.029998	300	0.008835	88
Copper and Its Alloys	Zinc	7440-66-6	0.025061	0.099998	1000	0.02945	294
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.007518	0.029998	300	0.008835	88
Sub-Total			25.061498	100	1000000	29.450579	294506
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.036621	95.121951	951220	0.043035	430
Precious Metals	Gold	7440-57-5	0.0003	0.779241	7792	0.000353	4
Precious Metals	Palladium	7440-05-3	0.001578	4.098808	40988	0.001854	19
Sub-Total			0.038499	100	1000000	0.045241	452
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	49.348976	88	880000	57.991582	579916
Other Plastics and Rubber	Carbon Black	1333-86-4	0.168235	0.3	3000	0.197698	1977
Other Plastics and Rubber	Organic Phosphorus	1330-78-5	0.308431	0.55	5500	0.362447	3624
Thermoplastics	Epoxy	85954-11-6	6.25274	11.150001	111500	7.347798	73478
Sub-Total			56.078382	100	1000000	65.899525	658995
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	2.981487	100	1000000	3.503642	35036
Sub-Total			2.981487	100	1000000	3.503642	35036
Total			85.096792			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 IIG-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 J57098 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.