

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: 06/08/2022

Details for "TL1963A-18DCQR"

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)*
TL1963A-18DCQR	NIPDAU	Level-2-260C-1 YEAR	Ext-Mfg	DCQ 6	6.5x3.5x1.5	130.7

*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	0.000001	0.000177	2	0.000001	0
Copper and Its Alloys	Iron	7439-89-6	0.000001	0.000177	2	0.000001	0
Other Nonferrous Metals and Alloys	Beryllium	7440-41-7	0.000001	0.000177	2	0.000001	0
Other Nonferrous Metals and Alloys	Germanium	7440-56-4	0.000005	0.000884	9	0.000004	0
Precious Metals	Gold	7440-57-5	0.565913	99.998233	999982	0.432992	4330
Precious Metals	Silver	7440-22-4	0.000002	0.000353	4	0.000002	0
Sub-Total			0.565923	100	1000000	0.433	4330
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.625928	87.999978	880000	0.478911	4789
Thermoplastics	Epoxy	85954-11-6	0.085354	12.000022	120000	0.065306	653
Sub-Total			0.711282	100	1000000	0.544217	5442
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	67.87386	97.38	973800	51.931764	519318
Copper and Its Alloys	Iron	7439-89-6	1.65886	2.38	23800	1.26923	12692
Copper and Its Alloys	Phosphorus	7723-14-0	0.058548	0.084	840	0.044796	448
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.02091	0.03	300	0.015999	160
Zinc and Its Alloys	Zinc	7440-66-6	0.087822	0.126	1260	0.067195	672
Sub-Total			69.7	100	1000000	53.328983	533290
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	1.265096	95.12	951200	0.967952	9680
Precious Metals	Gold	7440-57-5	0.010374	0.78	7800	0.007937	79
Precious Metals	Palladium	7440-05-3	0.05453	4.1	41000	0.041722	417
Sub-Total			1.33	100	1000000	1.017612	10176
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	47.545993	85.000001	850000	36.378471	363785
Other Plastics and Rubber	Carbon Black	1333-86-4	0.167809	0.299999	3000	0.128394	1284
Thermoplastics	Epoxy	85954-11-6	8.22266	14.7	147000	6.291336	62913
Sub-Total			55.936462	100	1000000	42.798201	427982
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	2.454494	100	1000000	1.877987	18780
Sub-Total			2.454494	100	1000000	1.877987	18780
Total			130.698161			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 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 meets 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.