

Supplier Name: Texas Instruments Inc. (DUNS# 00-732-1904)  
 Contact Info: [ti.com/support](http://ti.com/support)  
 Form/Declaration Type: Distribute - RoHS and IEC 62474 DB  
 Created on: 05/30/2022

Details for "DS90UB902QSQX/NOPB"

**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)*
DS90UB902QSQX/NOPB	SN	Level-3-260C-168 HR	Texas Instruments Electronics	RTA   40	6 x 6 x 0.75	88.8

\*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
<b>Bond Wire</b>							
Copper and Its Alloys	Copper	7440-50-8	0.000003	0.000227	2	0.000003	0
Copper and Its Alloys	Iron	7439-89-6	0.000003	0.000227	2	0.000003	0
Magnesium and Its Alloys	Magnesium	7439-95-4	0.000001	0.000076	1	0.000001	0
Other Nonferrous Metals and Alloys	Beryllium	7440-41-7	0.000001	0.000076	1	0.000001	0
Other Nonferrous Metals and Alloys	Calcium	7440-70-2	0.000002	0.000151	2	0.000002	0
Precious Metals	Gold	7440-57-5	1.322958	99.998715	999987	1.490123	14901
Precious Metals	Silver	7440-22-4	0.000007	0.000529	5	0.000008	0
Sub-Total			1.322975	100	1000000	1.490142	14901
<b>Die Attach Adhesive</b>							
Precious Metals	Silver	7440-22-4	0.847129	75.000022	750000	0.95417	9542
Thermoplastics	Epoxy	85954-11-6	0.282376	24.999978	250000	0.318056	3181
Sub-Total			1.129505	100	1000000	1.272226	12722
<b>Lead Frame</b>							
Copper and Its Alloys	Copper	7440-50-8	44.768232	96.7	967000	50.425009	504250
Copper and Its Alloys	Iron	7439-89-6	1.203696	2.6	26000	1.355791	13558
Copper and Its Alloys	Phosphorus	7723-14-0	0.069444	0.15	1500	0.078219	782
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.00463	0.010001	100	0.005215	52
Precious Metals	Silver	7440-22-4	0.249998	0.539999	5400	0.281587	2816
Sub-Total			46.296	100	1000000	52.145822	521458
<b>Lead Frame Plating</b>							
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.1	100	1000000	0.112636	1126
Sub-Total			0.1	100	1000000	0.112636	1126
<b>Mold Compound</b>							
Other Inorganic Materials	Fused Silica	60676-86-0	33.56968	90.5	905000	37.811442	378114
Other Plastics and Rubber	Carbon Black	1333-86-4	0.185468	0.5	5000	0.208903	2089
Thermoplastics	Epoxy	85954-11-6	3.338421	8.999999	90000	3.760254	37603
Sub-Total			37.093569	100	1000000	41.780599	417806
<b>Semiconductor Device</b>							
Ceramics / Glass	Doped Silicon	7440-21-3	2.839753	100	1000000	3.198576	31986
Sub-Total			2.839753	100	1000000	3.198576	31986
<b>Total</b>			88.781802			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](http://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.