

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: 05/30/2022

Details for "DS90UB913QSQ/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)*
DS90UB913QSQ/NOPB	SN	Level-3-260C-168 HR	Texas Instruments Electronics	RTV 32	5 x 5 x 0.75	60.8

*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	0.000002	0.000246	2	0.000003	0
Copper and Its Alloys	Iron	7439-89-6	0.000002	0.000246	2	0.000003	0
Other Nonferrous Metals and Alloys	Beryllium	7440-41-7	0.000001	0.000123	1	0.000002	0
Other Nonferrous Metals and Alloys	Calcium	7440-70-2	0.000001	0.000123	1	0.000002	0
Precious Metals	Gold	7440-57-5	0.813787	99.998771	999988	1.338496	13385
Precious Metals	Silver	7440-22-4	0.000004	0.000492	5	0.000007	0
Sub-Total			0.813797	100	1000000	1.338512	13385
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.593677	75.000032	750000	0.976465	9765
Thermoplastics	Epoxy	85954-11-6	0.197892	24.999968	250000	0.325488	3255
Sub-Total			0.791569	100	1000000	1.301952	13020
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	29.56446	95.4	954000	48.626863	486269
Copper and Its Alloys	Iron	7439-89-6	0.80574	2.6	26000	1.32526	13253
Copper and Its Alloys	Phosphorus	7723-14-0	0.046485	0.15	1500	0.076457	765
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.003099	0.01	100	0.005097	51
Precious Metals	Silver	7440-22-4	0.570216	1.84	18400	0.937877	9379
Sub-Total			30.99	100	1000000	50.971555	509716
Lead Frame Plating							
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.31	100	1000000	0.50988	5099
Sub-Total			0.31	100	1000000	0.50988	5099
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	23.442325	90.499998	905000	38.557333	385573
Other Plastics and Rubber	Carbon Black	1333-86-4	0.129516	0.500002	5000	0.213025	2130
Thermoplastics	Epoxy	85954-11-6	2.331281	9	90000	3.834431	38344
Sub-Total			25.903122	100	1000000	42.604789	426048
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	1.990128	100	1000000	3.273311	32733
Sub-Total			1.990128	100	1000000	3.273311	32733
Total			60.798616			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/ecoinfo
 Created on: 05/30/2022

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.