

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: **08/28/2022**

Details for "LM338T/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)*
LM338T/NOPB	SN	Level-1-NA-UNLIM	Texas Instruments Electronics	NDE 3	14.99 x 10.16 x 4.57	2605.4

*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							
Aluminum and Its Alloys	Aluminum	7429-90-5	0.000001	0.000231	2	0	0
Copper and Its Alloys	Copper	7440-50-8	0.432793	99.997227	999972	0.016611	166
Copper and Its Alloys	Iron	7439-89-6	0.000002	0.000462	5	0	0
Other Nonferrous Metals and Alloys	Calcium	7440-70-2	0.000001	0.000231	2	0	0
Precious Metals	Silver	7440-22-4	0.000008	0.001848	18	0	0
Sub-Total			0.432805	100	1000000	0.016612	166
Die Attach Adhesive							
Other Nonferrous Metals and Alloys	Antimony	7440-36-0	0.119907	10.000008	100000	0.004602	46
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.779395	65.000013	650000	0.029915	299
Precious Metals	Silver	7440-22-4	0.299767	24.999979	250000	0.011506	115
Sub-Total			1.199069	100	1000000	0.046023	460
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	1244.954836	99.844	998440	47.783966	477840
Copper and Its Alloys	Phosphorus	7723-14-0	0.074814	0.006	60	0.002872	29
Other Nonferrous Metals and Alloys	Tin	7440-31-5	1.87035	0.15	1500	0.071788	718
Sub-Total			1246.9	100	1000000	47.858625	478586
Lead Frame Plating							
Other Nonferrous Metals and Alloys	Tin	7440-31-5	20.05	100	1000000	0.769561	7696
Sub-Total			20.05	100	1000000	0.769561	7696
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	1184.622758	89	890000	45.468295	454683
Other Nonferrous Metals and Alloys	Metal Hydroxide	Trade Secret	39.931104	3	30000	1.532639	15326
Thermoplastics	Epoxy	85954-11-6	106.482945	8	80000	4.087038	40870
Sub-Total			1331.036807	100	1000000	51.087972	510880
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	5.763292	100	1000000	0.221207	2212
Sub-Total			5.763292	100	1000000	0.221207	2212
Total			2605.381973			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: [\(click here for a fuller statement with a signed certificate\)](#)

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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 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.