

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: 08/25/2022

Details for "TP57A5401QRGRQ1"

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)*
TP57A5401QRGRQ1	NIPDAU	Level-2-260C-1 YEAR	TI Semiconductor	RGR 20	3.5x3.5x0.9	40.5

***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	0.170594	99.998241	999982	0.42139	4214
Copper and Its Alloys	Iron	7439-89-6	0.000001	0.000586	6	0.000002	0
Precious Metals	Silver	7440-22-4	0.000002	0.001172	12	0.000005	0
Sub-Total			0.170597	100	1000000	0.421398	4214
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.544282	79.999941	799999	1.344451	13445
Thermoplastics	Epoxy	85954-11-6	0.136071	20.000059	200001	0.336114	3361
Sub-Total			0.680353	100	1000000	1.680565	16806
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	21.312021	97.520001	975200	52.643598	526436
Copper and Its Alloys	Iron	7439-89-6	0.502642	2.3	23000	1.241594	12416
Copper and Its Alloys	Phosphorus	7723-14-0	0.006556	0.029999	300	0.016194	162
Zinc and Its Alloys	Zinc	7440-66-6	0.032781	0.15	1500	0.080974	810
Sub-Total			21.854	100	1000000	53.98236	539824
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.637304	95.12	951200	1.574228	15742
Precious Metals	Gold	7440-57-5	0.005226	0.78	7800	0.012909	129
Precious Metals	Palladium	7440-05-3	0.02747	4.1	41000	0.067855	679
Sub-Total			0.67	100	1000000	1.654991	16550
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	13.194088	87.999999	880000	32.591197	325912
Other Organic Materials	Chlorine	7782-50-5	0.00015	0.001	10	0.000371	4
Other Plastics and Rubber	Carbon Black	1333-86-4	0.04498	0.300001	3000	0.111107	1111
Thermoplastics	Epoxy	85954-11-6	1.754064	11.699	116990	4.332777	43328
Sub-Total			14.993282	100	1000000	37.035451	370355
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	2.115363	100	1000000	5.225235	52252
Sub-Total			2.115363	100	1000000	5.225235	52252
Total			40.483595			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: [\(click here for a fuller statement with a signed certificate\)](#)

Name/Title: Hubie Payne, Vice President, Worldwide SC Quality
 For further environmental statements, please go to www.ti.com/eoinfo
 Created on: 08/25/2022

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/szq088>

Green: Means the content of Chlorine (Cl) and Bromine (Br)-based flame retardants meet J5709B 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.