



Super 220

RoHS Compliance Document

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SUPER-220

Component	Material Name	Material Mass (g)	Element Name Composition	CAS #	Substance Mass (g)	Material Analysis Weight (%)	% of Total Weight
Chip	Silicon	0.01777	Si	7440-21-3	0.01777	100%	0.8%
Encapsulant	Epoxy Resin	0.92952	SiO ₂	7631-86-9	0.69713	75%	31.7%
			Epoxy	90598-46-2	0.13943	15%	6.3%
			Other	-	0.09296	10%	4.2%
Lead Frame	Copper	1.11710	Cu	7440-50-8	1.11151	99%	50.6%
			Fe	7439-89-6	0.00559	1%	0.3%
Die Attach	J-Alloy	0.01611	Sn	7440-31-5	0.01047	65%	0.5%
			Ag	7440-22-4	0.00403	25%	0.2%
			Sb	7440-36-0	0.00161	10%	0.1%
Wire Bond	Copper	0.00770	Al	7429-90-5	0.00770	100%	0.4%
Lead Finish	Matte Tin over Nickel*	0.10840	Ni	7440-02-0	0.01518	14%	0.7%
			Sn	7440-31-5	0.09322	86%	4.2%

Total Weight
(g)

2.19660

*Tin whisker mitigation strategy is nickel under-plate.

This part is compliant with EU Directive 2011/65/EU (RoHS Directive) and does not contain lead, mercury, cadmium (0.01%), hexavalent chromium, PBB or PBDE in concentrations greater than 0.1%, except as permitted by Annex (7).



SUPER-220

Test Definition	Test Conditions	Inspection Interval Class 1 and 2 Products	Total Duration Class 1 and 2 Products	Maximum Whisker Length (µm)
Room Temperature Humidity	30± 2°C/60± 3% RH	1000 hours	4000 hours	20
Temperature Humidity Unbiased	55± 3°C/85± 3% RH	1000 hours	4000 hours	20
Temperature Cycling	-40 to 55°C to 80 to 95°C, air to air, 10 min soak, approx 3	500 cycles	1500 cycles	45

Tin Whisker testing per JESD201, Environmental Acceptance Requirements for Tin Whisker Susceptibility of Tin and Tin Alloy Surface Finish

Tin Whisker Results (number of failing whiskers)

Test	1000 Hours	2000 Hours	3000 Hours	4000 Hours
Room Temperature Humidity Storage	0/24	0/24	0/24	0/24
Temperature Humidity	0/24	0/24	0/24	0/24
Test	500 Cycles	1000 Cycles	1500 Cycles	
Temperature Cycling	0/24	0/24	0/24	