



Semiconductor Device Type: ET (J7X) 005 DDPak Matte Tin

Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm
Fused Silica	60676-86-0	Mold Compound	33.915	496.010	339,152
Epoxy Resin	Trade Secret	Mold Compound	2.409	35.228	24,088
Phenol Resin	Trade Secret	Mold Compound	2.120	31.001	21,197
Carbon Black	1333-86-4	Mold Compound	0.096	1.409	964
Copper	7440-50-8	Lead Frame	58.268	852.175	582,684
Tin	7440-31-5	Lead Frame	0.098	1.436	982
Silver	7440-22-4	Lead Frame	1.133	16.577	11,335
Silver (Ag)	7440-22-4	Die Attach	0.079	1.148	785
Proprietary Resin	Trade Secret	Die Attach	0.019	0.271	185
Proprietary Curing agent & Hardener	Trade Secret	Die Attach	0.003	0.044	30
Silicon	7440-21-3	Chip (Die)	1.150	16.819	11,500
Gold	7440-57-5	Wire Bond	0.100	1.463	1,000
Tin	7440-31-5	Wire Bond	0.610	8.921	6,100
Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour					
TOTALS:			100.000	1,462.500	1,000.000
1.4625 g Total Mass					

Termination Base Alloy:
Copper Alloy (Cu)

Package Homogeneous Materials:
8.1 Electronics (e.g. pc boards, displays)

JEDEC 97
Product Marking
and/or Pkg.
Labeling
e3

(mg) Total	Mold Compound	% of Total Weight	
563.65			38.54
Fused Silica 60676-86-0		88.00	
Epoxy Resin Trade Secret		6.25	
Phenol Resin Trade Secret		5.50	
Carbon Black 1333-86-4		0.25	
Total		100.00	
(mg) Total	Lead Frame	% of Total Weight	
870.19			59.5
Copper 7440-50-8		97.93	
Tin 7440-31-5		0.17	
Silver 7440-22-4		1.91	
Total		100.00	
(mg) Total	Die Attach	% of Total Weight	
1.46			0.1
Silver (Ag) 7440-22-4		78.50	
Proprietary Resin Trade Secret		18.50	
Proprietary Curing agent & Hardener Trade Secret		3.00	
Total		100.00	
Total (mg)	Chip (Die)	% of Total Weight	
16.82			1.15
Doped Silicon 7440-21-3		100.00	
Total		100.00	
(mg) Total	Wire Bond	% of Total Weight	
1.46			0.1
Gold 7440-57-5		100.00	
Total		100.00	
(mg) Total	Plating on external leads (pins) - Matte Tin / annealed at 150°C for 1 hour	% of Total Weight	
8.92			0.61
Tin 7440-31-5		100.00	
Total		100.00	

This semiconductor device and its homogenous materials comply with EU Directives: 2002/95/EC (27 January 2003) & Directive 2011/65/EU (08 June 2011) and 2015/863/EU (31 March 2015) and 2002/53/EC (End-of-Life Vehicles (ELV) without exemption (zero)

Compliance with the above EU Directives has been verified via internal design controls, supplier declarations, and /or analytical test data.

If a chemical substance is absent from the list above, the chemical substance is NOT an intentional ingredient in the semiconductor device and, to the best of Microchip Technology Incorporated's knowledge and belief as of the date of this document, there is no credible reason to believe that the unavoidable impurity concentration of the chemical substance, if any, is not below the threshold of regulatory concern for any regulatory scheme world-wide.

Molding compounds used by Microchip meet the UL94 V0 flammability standard for plastics. You can access the UL iQTM family of databases to obtain a test report at <http://ul.com/global/eng/pages/offerings/industries/chemicals/plastics/>

The protective "tubes" in which the specific product is shipped are made from polyvinyl chloride (PVC) plastic. "Window envelopes" used to hold the packing slip on the outer box and certain "reels" may be made from PVC plastic.

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Assembled package referenced above is EU REACH compliant based on the latest SVHC candidate list of ECHA which can be found at <http://echa.europa.eu/web/guest/candidate-list-table>

1462.50

100.00