



Semiconductor Device Type: 008 CERDIP .300in SAC (F9X)

Basic Substance	CAS Number	"Contained In" Sub-Component	% Total Weight	mg/part	ppm
Aluminum Oxide	1344-28-1	Base: Ceramics (Black)	41.057	419.76	410567.02
Manganese Oxide	1313-13-9	Base: Ceramics (Black)	1.631	16.67	16307.46
Silicon oxide	14808-60-7	Base: Ceramics (Black)	1.171	11.97	11707.92
Chromium oxide	1308-38-9	Base: Ceramics (Black)	0.706	7.22	7061.92
Titanium oxide	13463-67-7	Base: Ceramics (Black)	0.706	7.22	7061.92
Iron oxide	1309-37-1	Base: Ceramics (Black)	0.706	7.22	7061.92
Magnesium Oxide	1309-48-4	Base: Ceramics (Black)	0.242	2.47	2415.92
Cobalt oxide	1308-06-1	Base: Ceramics (Black)	0.242	2.47	2415.92
Lead Oxide	1317-36-8	Seal Glass	4.893	50.03	48929.81
Tin oxide	18282-10-5	Seal Glass	1.505	15.39	15049.72
Boron oxide	1303-86-2	Seal Glass	0.752	7.69	7524.86
Silicon oxide	14808-60-7	Seal Glass	0.752	7.69	7524.86
Aluminum oxide	1344-28-1	Seal Glass	0.377	3.86	3771.54
Titanium oxide	13463-67-7	Seal Glass	0.377	3.86	3771.54
Magnesium oxide	1309-48-4	Seal Glass	0.377	3.86	3771.54
Zinc oxide	1314-13-2	Seal Glass	0.076	0.77	756.13
Aluminum	7429-90-5	Lid	3.492	35.70	34919.50
Copper	7440-50-8	Lid	0.002	0.02	17.50
Magnesium	7439-95-4	Lid	0.002	0.02	17.50
Manganese	7439-96-5	Lid	0.002	0.02	17.50
Zinc	7440-66-6	Lid	0.002	0.02	17.50
Titanium	7440-32-6	Lid	0.001	0.01	10.50
Iron	7439-89-6	Lead Frame	16.431	167.99	164313.31
Nickel	7440-02-0	Lead Frame	12.907	131.95	129068.00
Silver	7440-22-4	Lead Frame	0.585	5.99	5854.07
Cobalt	7440-48-4	Lead Frame	0.307	3.14	3073.00
Manganese	7439-96-5	Lead Frame	0.246	2.51	2458.40
Zinc (Metal)	7440-44-0	Lead Frame	0.154	1.57	1536.50
Silicon	7440-21-3	Lead Frame	0.092	0.94	921.90
Phosphorous	7723-14-0	Lead Frame	0.008	0.08	76.83
Gold	7440-57-5	Die Attach	1.500	15.34	15000.00
Silicon	7440-21-3	Chip (Die)	3.500	35.78	35000.00
Aluminum	7429-90-5	Wire Bond	0.833	8.52	8330.00
Silicon	7440-21-3	Wire Bond	0.017	0.17	170.00
Tin	7440-31-5	Plating on external leads (pins) -	4.198	42.92	41977.50
Silver	7440-22-4	Plating on external leads (pins) -	0.131	1.33	1305.00
Copper	7440-50-8	Plating on external leads (pins) -	0.022	0.22	217.50
			100.000	1022.40	1,000,000

1.02240 g Total Mass

This assembled package and its homogenous materials is not globally RoHS compliant.  
 This assembled package is EU-RoHS compliant using exemption 7c-1 estimated expiration: 21 July 2016 Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound. This Product can only be used in exempted end user applications (Refer to EU Directive 2011/65/EU (RoHS Directive) Annex III and Annex IV of Directive).

The protective "tubes" in which the specific semiconductor is shipped and "window envelope" used to hold the packing slip on the outer box are made from polyvinyl chloride (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>

Termination Base Alloy: Copper Alloy (Cu)			Package Homogeneous Materials: 8.1 Electronics (e.g. pc boards, displays)			JEDEC J-STD-609A Product Marking and/or Pkg. Labeling e1
475.01	(mg) Total	Base: Ceramics (Black)	% of Total Weight	46.46		
		Aluminum Oxide 1344-28-1	88.37			
		Manganese Oxide 1313-13-9	3.51			
		Silicon oxide 14808-60-7	2.52			
		Chromium oxide 1308-38-9	1.52			
		Titanium oxide 13463-67-7	1.52			
		Iron oxide 1309-37-1	1.52			
		Magnesium Oxide 1309-48-4	0.52			
		Cobalt oxide 1308-06-1	0.52			
Total			100.00			
93.14	(mg) Total	Seal Glass	% of Total Weight	9.11		
		Lead Oxide 1317-36-8	53.71			
		Tin oxide 18282-10-5	16.52			
		Boron oxide 1303-86-2	8.26			
		Silicon oxide 14808-60-7	8.26			
		Aluminum oxide 1344-28-1	4.14			
		Titanium oxide 13463-67-7	4.14			
		Magnesium oxide 1309-48-4	4.14			
		Zinc oxide 1314-13-2	0.83			
Total			100.00			
35.78	(mg) Total	Lid	% of Total Weight	3.50		
		Aluminum 7429-90-5	99.77			
		Copper 7440-50-8	0.05			
		Magnesium 7439-95-4	0.05			
		Manganese 7439-96-5	0.05			
		Zinc 7440-66-6	0.05			
		Titanium 7440-32-6	0.03			
Total			100.00			
314.18	(mg) Total	Lead Frame	% of Total Weight	30.73		
		Iron 7439-89-6	53.47			
		Nickel 7440-02-0	42.00			
		Silver 7440-22-4	1.91			
		Cobalt 7440-48-4	1.00			
		Manganese 7439-96-5	0.80			
		Zinc (Metal) 7440-44-0	0.50			
		Silicon 7440-21-3	0.30			
		Phosphorous 7723-14-0	0.03			
Total			100.00			
15.34	(mg) Total	Die Attach	% of Total Weight	1.50		
		Gold 7440-57-5	100.00			
Total			100.00			
35.78	Total (mg)	Chip (Die)	% of Total Weight	3.50		
		Silicon 7440-21-3	100.00			
Total			100.00			
8.69	(mg) Total	Wire Bond	% of Total Weight	0.85		
		Aluminum 7429-90-5	98.00			
		Silicon 7440-21-3	2.00			
Total			100.00			
44.47	(mg) Total	Plating on external leads (pins) -	% of Total Weight	4.35		
		Tin 7440-31-5	96.50			
		Silver 7440-22-4	3.00			
		Copper 7440-50-8	0.50			
Total			100.00			

1,022,400

100,000