

## Package-type

Epson Package name; **QFP5-100PIN-S2**

JEITA Package name; **P-QFP100-1420-0.65**

Terminal plating; **Lead(Pb) Free**

Weight; **1.78 [g]\*Note1**

Part	Subpart	Subpart weight [mg]	Substance name	CAS No.	Content *Note2		Application
					[mg]	[ppm]	
IC Die	IC Die	66	Silicon	7440-21-3	66	999895	Base material
			Boron	7440-42-8	0.0001	2	Dopant
			Phosphorus	7723-14-0	0.0003	5	Dopant
			Aluminum	7429-90-5	0.001	20	Metalization
			Arsenic *Note3	7440-38-2	0.0003	5	Dopant
			Fluorine *Note3	7782-41-4	0.0001	2	Dopant
			Titanium *Note3	7440-32-6	0.001	20	Metalization
			Molybdenum *Note3	7439-98-7	0.001	20	Metalization
			Tungsten *Note3	7440-33-7	0.002	30	Metalization
			Cobalt *Note3	7440-48-4	0.0001	2	Metalization
	Stress buffer coat	1.3	Polyimide	-	1.3	1000000	Stress buffer coat *Note4
Package	Die Bonding material	4.0	Silver	7440-22-4	2.7	681818	Base material
			Epoxy resin	-	0.80	202020	Adhesive
			Phenol resin	-	0.30	75758	Adhesive
			Inorganic powder	-	0.16	40404	Additive
	Lead Frame Plating	30	Tin	7440-31-5	30	980066	Solder
			Bismuth	7440-69-9	0.60	19934	Solder
	Lead Frame	363	Copper	7440-50-8	343	944934	Conductor
			Silver	7440-22-4	1.8	4956	Inner lead plating
			Others *Note5	-	18	50110	Additive
	Bonding Wire	4.6	Gold	7440-57-5	4.6	1000000	Conductor
	Mold resin	1309	Epoxy resin	-	144	110003	Base material
			Antimony trioxide	1309-64-4	10	7945	Flame retardant
			Halogenated compound(Brominations epoxy)	-	10	7945	Flame retardant
			Silica	60676-86-0/-	987	753594	Filler
Carbon black			1333-86-4	13	10007	Coloring agent	
Hardening chemical(ex:Phenol resin)			-	144	110003	Base material	
			Organic phosphorous compound	-	0.66	504	Hardening accelerator

Regarding the information of chemical substances

\*Note1 The weight might be somewhat different depending on an individual built-in IC-chip specification like the size etc.

\*Note2 Content data are estimated values based on supplier information and intended levels of content in product.

Actual measurements may vary from these values somewhat.

\*Note3 Use or not-use of these substances depends on individual built-in IC-chip specification.

\*Note4 The stress buffer coat may not be used depending on the individual model.

\*Note5 The nickel, zinc, tin, silicon, iron, and the zinc oxide are included for the Cu type. And the carbon, silicon, and manganese are included for 42alloy type.