

CONSTITUTION MATERIALS LIST

The RoHS directive, REACH regulation, and other laws and regulations related to the management of environmentally hazardous substances come into effect. When developing products, the global environmental load must be considered. ROHM pursues green procurement and endeavors to increase the detection accuracy of chemicals contained in parts and procured materials while at the same time placing great importance on the internal chemical management system that was built to ensure that no prohibited substances are procured, used or shipped in order to provide a steady supply of worry-free products.

Туре	Package Code	ROHM Package	Mass (mg)	Part No.
IPM	-	All of IPM package	9014.9951	-

No.	Part	t Name	Weight (mg)	Substance Name	CAS No.	Weight (mg)	Portion vs. Products	Portion vs. Part Name
1	Mold compound	Mold compound 4096		Silica (amorphous)	60676-86-0	3277.1900	36.35%	80.00%
				Epoxy resin	-	409.6488	4.54%	10.00%
				Phenol Resin	-	204.8244	2.27%	5.00%
				Antimony Trioxide	1309-64-4	122.8946	1.36%	3.00%
				Epoxy Resin Bromide	40039-93-8	61.4473	0.68%	1.50%
				Carbon Black	1333-86-4	20.4824	0.23%	0.50%
2	Leadframe	Base material	3536.1720	Copper (Cu)	7440-50-8	3532.6358	39.19%	99.90%
				Iron (Fe)	7439-89-6	3.5362	0.04%	0.10%
		Surface treatment	3.2000	Silver (Ag)	7440-22-4	3.2000	0.04%	100.00%
3	External plating		96.7000	Tin (Sn)	7440-31-5	96.7000	1.07%	100.00%
4	Die		180.2000	Silicon (Si)	7440-21-3	177.4979	1.97%	98.50%
				Nickel (Ni)	7440-02-0	1.1637	0.013%	0.65%
				Gold (Au)	7440-57-5	0.9239	0.01%	0.51%
				Silver (Ag)	7440-22-4	0.5904	0.007%	0.33%
				Titanium (Ti)	7440-32-6	0.0240	0.0003%	0.01%
5	Die attach		19.5200	Silver (Ag)	7440-22-4	14.7376	0.16%	75.50%
				Epoxy Resin	9003-36-5	3.9040	0.04%	20.00%
				Phenolic Resin	-	0.8784	0.01%	4.50%
6	Die attach		39.8000	Tin (Sn)	7440-31-5	38.4070	0.43%	96.50%
				Silver (Ag)	7440-22-4	1.1940	0.01%	3.00%
				Copper (Cu)	7440-50-8	0.1990	0.002%	0.50%
7	Bonding wire		71.0048	Aluminum(AI)	7429-90-5	71.0012	0.79%	99.995%
				Nickel (Ni)	7440-02-0	0.0036	0.00004%	0.005%
8	Bonding wire		4.9108	Gold (Au)	7440-57-5	4.9108	0.05%	100.000%
9	Heat Sink		914.8000	Aluminium Oxide	1344-28-1	878.2080	9.74%	96.00%
				Silico Dioxide	7631-86-9	27.4440	0.30%	3.00%
				Magnesium Oxide	1309-48-4	5.4888	0.06%	0.60%
				Calcium Oxide	1305-78-8	3.6592	0.04%	0.40%
10	Adhesive		52.2000	Aluminium Oxide	1344-28-1	44.3700	0.49%	85.00%
				Bisphenol F, Epichlorohydrin Polymer	-	5.2200	0.06%	10.00%
				Bisphenol A, Epichlorohydrin Polymer	25068-38-6	2.6100	0.03%	5.00%
						9014.9951	100.00%	

備考

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免責事項

Constitution Materials List is composed using the information provided by the raw material suppliers.

However, due to the confidentiality of some suppliers, some information may not provided fully.

Therefore we cannot guarantee that all chemical substances information are listed in it.

- The content shown is the representative value content.
- •The data does not include overcoat, impurities and dopant diffused in the semiconductor chip.

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Notes

- 1) The information contained herein is subject to change without notice.
- Before you use our Products, please contact our sales representative and verify the latest specifications:
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors. Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Poducts beyond the rating specified by ROHM
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
- 5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.
- 6) The Products are intended for use in general electronic equipment (i.e. AV/OA devices, communication, consumer systems, gaming/entertainment sets) as well as the applications indicated in this document.
- 7) The Products specified in this document are not designed to be radiation tolerant.
- 8) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
- 9) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.
- 10) ROHM shall have no responsibility for any damages or injury arising from non-compliance with the recommended usage conditions and specifications contained herein.
- 11) ROHM has used reasonable care to ensur the accuracy of the information contained in this document. However, ROHM does not warrants that such information is error-free, and ROHM shall have no responsibility for any damages arising from any inaccuracy or misprint of such information.
- 12) Please use the Products in accordance with any applicable environmental laws and regulations, such as the RoHS Directive. For more details, including RoHS compatibility, please contact a ROHM sales office. ROHM shall have no responsibility for any damages or losses resulting non-compliance with any applicable laws or regulations.
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