

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.

TR-HUML2020L8-HF-JE_Rev.6

Type	Package Code	ROHM Package	Mass (mg)	Part No.
Transistor	DFN2020-8	HUML2020L8 (Halogen free)	7.0602	-

No	Part Name	Weight (mg)	Substance Name	CAS No	Weight (mg)	Portion vs. Products	Portion vs. Part Name
1	Mold compound	3.5093	Silica (amorphous)	60676-86-0	3.2882	46.57%	93.70%
			Epoxy resin	-	0.1053	1.49%	3.00%
			Phenol-formaldehyde resin	-	0.1053	1.49%	3.00%
			Carbon black	1333-86-4	0.0105	0.15%	0.30%
			<i>Subtotal</i>		<i>3.5093</i>	<i>49.71%</i>	<i>100%</i>
2	Lead frame (Base material)	2.7821	Copper (Cu)	7440-50-8	2.7620	39.12%	99.28%
			Tin (Sn)	7440-31-5	0.0070	0.10%	0.25%
			Chromium	7440-47-3	0.0070	0.10%	0.25%
			Zinc (Zn)	7440-66-6	0.0061	0.09%	0.22%
			<i>Subtotal</i>		<i>2.7821</i>	<i>39.41%</i>	<i>100%</i>
3	Lead frame (Surface treatment)	0.0961	Nickel (Ni)	7440-02-0	0.0869	1.23%	90.43%
			Palladium (Pd)	7440-05-3	0.0080	0.11%	8.32%
			Gold (Au)	7440-57-5	0.0012	0.02%	1.25%
			<i>Subtotal</i>		<i>0.0961</i>	<i>1.36%</i>	<i>100%</i>
4	External plating	0.1181	Tin (Sn)	7440-31-5	0.1181	1.67%	100.00%
			<i>Subtotal</i>		<i>0.1181</i>	<i>1.67%</i>	<i>100%</i>
5	Die	0.3802	Silicon (Si)	7440-21-3	0.3710	5.25%	97.58%
			Nickel (Ni)	7440-02-0	0.0049	0.07%	1.29%
			Silver (Ag)	7440-22-4	0.0030	0.04%	0.79%
			Gold (Au)	7440-57-5	0.0013	0.02%	0.34%
			<i>Subtotal</i>		<i>0.3802</i>	<i>5.39%</i>	<i>100%</i>
6	Die attach	0.0517	Silver (Ag)	7440-22-4	0.0444	0.63%	85.88%
			Epoxy Resin	-	0.0060	0.08%	11.61%
			Phenol resin	-	0.0013	0.02%	2.51%
			<i>Subtotal</i>		<i>0.0517</i>	<i>0.73%</i>	<i>100%</i>
7	Bonding wire	0.1227	Copper (Cu)	7440-50-8	0.1227	1.74%	100.00%
			<i>Subtotal</i>		<i>0.1227</i>	<i>1.74%</i>	<i>100%</i>
			<i>Total</i>	-	<i>7.0602</i>	<i>100%</i>	<i>-</i>

Note
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