

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.

Type	Package Code	ROHM Package	Mass (mg)	Part No.
IGBT	-	TO-247N(Halogen free)	6419.4257	-

No	Part Name	Weight (mg)	Substance Name	CAS No	Weight (mg)	Portion vs. Products	Portion vs. Part Name
1	Mold compound	1946.8063	Silica (amorphous)	60676-86-0	1696.6417	26.43%	87.15%
			Epoxy resin	-	146.0105	2.27%	7.50%
			Phenol-formaldehyde resin	-	97.3403	1.52%	5.00%
			Carbon black	1333-86-4	6.8138	0.11%	0.35%
			<i>Subtotal</i>		<i>1946.8063</i>	<i>30.33%</i>	<i>100%</i>
2	Lead frame (Base material)	4419.3157	Copper (Cu)	7440-50-8	4413.7916	68.76%	99.88%
			Tin (Sn)	7440-31-5	5.5241	0.09%	0.12%
			<i>Subtotal</i>		<i>4419.3157</i>	<i>68.84%</i>	<i>100%</i>
3	Lead frame (Surface treatment)	0.8082	Nickel (Ni)	7440-02-0	0.8082	0.01%	100.00%
			<i>Subtotal</i>		<i>0.8082</i>	<i>0.01%</i>	<i>100%</i>
4	External plating	5.7262	Tin (Sn)	7440-31-5	5.7262	0.09%	100.00%
			<i>Subtotal</i>		<i>5.7262</i>	<i>0.09%</i>	<i>100%</i>
5	Die	5.0716	Silicon (Si)	7440-21-3	4.6627	0.07%	91.94%
			Aluminum (Al)	7429-90-5	0.2484	0.004%	4.90%
			Titanium(Ti)	7440-32-6	0.0252	0.0004%	0.50%
			Nickel (Ni)	7440-02-0	0.1064	0.002%	2.10%
			Gold (Au)	7440-57-5	0.0289	0.0005%	0.57%
			<i>Subtotal</i>		<i>5.0716</i>	<i>0.08%</i>	<i>100%</i>
6	Die attach	28.5767	Lead (Pb) *1	7439-92-1	27.2908	0.43%	95.50%
			Tin (Sn)	7440-31-5	0.5715	0.009%	2.00%
			Silver (Ag)	7440-22-4	0.7144	0.01%	2.50%
			<i>Subtotal</i>		<i>28.5767</i>	<i>0.45%</i>	<i>100%</i>
7	Bonding wire	13.1211	Aluminum (Al)	7429-90-5	13.1211	0.20%	100.00%
			<i>Subtotal</i>		<i>13.1211</i>	<i>0.20%</i>	<i>100%</i>
			<i>Total</i>	-	<i>6419.4257</i>	<i>100%</i>	-

Note
※1 It is exempted from the RoHS, because of the high melting point solder.
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