

Product Package Material Disclosure (Transistor)

Package Type: DFN1006-3B HAF

Weight: 0.742 mg / pc

Component	Material	Weight (mg)	Substance in material	CAS #	Content Spec. (%)	Content (%)	Substance Weight (mg)
Body	Epoxy Molding	0.539	Silica Fused	60676-86-0	82~92	89.40	0.481866
			Crystalline Silica (Quartz)	14808-60-7	5 max.	4.2	0.022638
			Carbon Black	1333-86-4	0.3 max.	0.15	0.000809
			Epoxy Resin 1	Trade secret	0.5~8	3.75	0.020213
			Epoxy Resin 2	Trade secret	0.5~6	1.0	0.005390
			Hardener	Trade secret	3~8	1.5	0.008085
Adhesive	Silver Glue	0.011	Ag	7440-22-4	70-80	78	0.008580
			Bisphenol F	28064-14-4	10-20	16	0.001760
			2-Ethyl Hexyl Glycidyl Ether	2461-15-6	0-10	6	0.000660
Bonding Wire	Gold Wire	0.004	Au	7440-57-5	99.99 min.	99.99	0.0039996
			Others	—	0.01 max.	0.01	0.0000004
Lead Frame	Copper Alloy	0.176389	Cu	7440-50-8	balance	95.635	0.169274
			Si	7440-21-3	0.25-1.2	0.8	0.001416
			Ni	7440-02-0	2.2-4.2	3	0.005310
			Mg	7439-95-4	0.05-0.3	0.22	0.000389
	Plating Layer	0.000611	Ni	7440-02-0	0.122-0.248	0.2	0.000354
			Pd	7440-05-3	0.003-0.198	0.12	0.000212
Au			7440-57-5	0.002-0.032	0.025	0.000044	
Dice	Wafer	0.011	Silicon	7440-21-3	93.3585	93.3585	0.010269
			Antimony	7440-36-0	0.0605	0.0605	0.000007
			Titanium	7440-32-6	0.157	0.157	0.000017
			Nickel	7440-02-0	0.543	0.543	0.000060
			Silver	7440-22-4	5.881	5.881	0.000647

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Product Package Material Disclosure (Transistor)

Package Type: DFN1006-3H HAF

Weight: 0.861 mg / pc

Component	Material	Weight (mg)	Substance in material	CAS #	Content Spec. (%)	Content (%)	Substance Weight (mg)
Body	Epoxy Molding	0.658	Silica Fused	60676-86-0	82~92	89.40	0.588252
			Crystalline Silica (Quartz)	14808-60-7	5 max.	4.2	0.027636
			Carbon Black	1333-86-4	0.3 max.	0.15	0.000987
			Epoxy Resin 1	Trade secret	0.5~8	3.75	0.024675
			Epoxy Resin 2	Trade secret	0.5~6	1.0	0.006580
			Hardener	Trade secret	3~8	1.5	0.009870
Adhesive	Silver Glue	0.011	Ag	7440-22-4	70-80	78	0.008580
			Bisphenol F	28064-14-4	10-20	16	0.001760
			2-Ethyl Hexyl Glycidyl Ether	2461-15-6	0-10	6	0.000660
Bonding Wire	Gold Wire	0.004	Au	7440-57-5	99.99 min.	99.99	0.0039996
			Others	—	0.01 max.	0.01	0.0000004
Lead Frame	Copper Alloy	0.176389	Cu	7440-50-8	balance	95.635	0.169274
			Si	7440-21-3	0.25-1.2	0.8	0.001416
			Ni	7440-02-0	2.2-4.2	3	0.005310
			Mg	7439-95-4	0.05-0.3	0.22	0.000389
	Plating Layer	0.000611	Ni	7440-02-0	0.122-0.248	0.2	0.000354
			Pd	7440-05-3	0.003-0.198	0.12	0.000212
Au			7440-57-5	0.002-0.032	0.025	0.000044	
Dice	Wafer	0.011	Silicon	7440-21-3	93.3585	93.3585	0.010269
			Antimony	7440-36-0	0.0605	0.0605	0.000007
			Titanium	7440-32-6	0.157	0.157	0.000017
			Nickel	7440-02-0	0.543	0.543	0.000060
			Silver	7440-22-4	5.881	5.881	0.000647

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ISO 14001 : 2004
Certificate No. 121505007



ISO 9001 : 2008
Certificate No. 50114012



OHSAS 18001 : 2007
Certificate No. 05131509006



IECQ QC 080000
Certificate No. EC2-H1000Y 14.002

Product Package Material Disclosure (Transistor)

Package Type: SOT-23 HAF

Weight: 8.72mg / pc

Make up of material	Material	Weight (mg)	Substance in material	CAS #	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating	Tin	0.14	Sn	7440-31-5	99.95 min.	99.97	0.139958
			Others	—	0.05 max.	0.03	0.000042
Body	Epoxy Molding	6.0171	Silica Fused	60676-86-0	75-90	85.0	5.114535
			Epoxy Resin	29690-82-2	5-10	8.7	0.5234877
			Phenolic Resin	9003-35-4	2-8	6.0	0.361026
			Pigment	1333-86-4	0.1-0.5	0.3	0.0180513
Bonding Wire	Gold Wire	0.0115	Au	7440-57-5	99.99 min.	99.998	0.01149977
			Others	—	0.01 max.	0.002	0.00000023
Lead Frame	Lead Frame	2.526	Alloy (Ni & Fe)	12645-50-0	98.636	98.636	2.47727346
			Cu	7440-50-8	0.168	0.168	0.00962406
			Ag	7440-22-4	1.196	1.196	0.03910248
Dice	Wafer	0.0254	Si	7440-21-3	93.2	93.2	0.0236728
			Al	7429-90-5	0.8	0.8	0.0002032
			Au	7440-57-5	6	6	0.001524

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Product Package Material Disclosure (Transistor)

Package Type: SOT-26 HAF

Weight: 15.34mg / pc

Make up of material	Material	Weight (mg)	Substance in material	CAS #	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating	Tin	0.1859	Sn	7440-31-5	99.9 min.	99.97	0.18584423
			Others	—	0.02-0.1	0.03	0.00005577
Body	Epoxy Molding	8.214	Silica Fused	60676-86-0	75-90	85.0	6.9819
			Epoxy Resin	29690-82-2	5-10	8.7	0.714618
			Phenolic Resin	9003-35-4	2-8	6	0.492840
			Carbon Black	1333-86-4	0.1-0.5	0.3	0.024642
Bonding Wire	Gold Wire	0.0202	Au	7440-57-5	99.99 min.	99.998	0.02019960
			Others	—	0.01 max.	0.002	0.000000404
Adhesive	Silver Glue	0.0512	Ag	7440-22-4	70-80	80	0.04096
			Bisphenol F	28064-14-4	10-20	15	0.00768
			2-Ethyl Hexyl Glycidyl Ether	2461-15-6	0-10	5	0.00256
Lead Frame	Lead Frame	6.583	Cu	7440-50-8	97.3 max.	97	6.38551
			Fe	7439-89-6	0.1 min.	0.27	0.0177741
			P	7723-14-0	0.03 min.	0.03	0.0019749
			Ag	7440-22-4	2.5 Max	2.70	0.17774100
Dice	Wafer	0.2857	Si	7440-21-3	93.67	93.67	0.26761519
			Al	7429-90-5	1.03	1.03	0.00294271
			Au	7440-57-5	4.24	4.24	0.01211368
			SiO ₂	14808-60-7	0.55	0.55	0.00157135
			Si ₃ N ₄	12033-89-5	0.51	0.51	0.00145707

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