

ON Semiconductor **10/16/2019**

Base Part	STK681-320		
Orderable Part	STK681-320	Total weight (mg)	3800

Homogenous Material	Weight (mg)	Substance in Mat.	CAS #	% Avg. Weight
Ceramic Substrate	1128.58	Bisphenol A_Epichlorohydrin polymer	25068-38-6	0.57
		Aluminum Trioxide (Al2O3)	1344-28-1	3.8
		Nickel (Ni)	7440-02-0	0.18
		Acrylic resins	n/a	0.07
		Copper (Cu)	7440-50-8	3.55
		Barium Sulfate (BaSO4)	7727-43-7	0.06
		Aluminum (Al)	7429-90-5	91.77
Chip Parts	17.4	Titanium Dioxide (TiO2)	13463-67-7	0.01
		Silver (Ag)	7440-22-4	3.64
		Epoxy resins	129915-35-1	1.63
		Bisphenol A, Epichlorohydrin polymer	25036-25-3, 25068-38-6	0.21
		Tin (Sn)	7440-31-5	3.42
		Magnesium Monoxide (MgO)	1309-48-4	0.12
		Silica Amorphous (SiO2)	7631-86-9	1.88
		Ceramic	12013-47-7, 12047-27-7	18.12
		Palladium (Pd)	7440-05-3	0.01
		Aluminum Trioxide (Al2O3)	1344-28-1	55.15
		Nickel (Ni)	7440-02-0	9.05
		Lead Oxide (PbO)	1317-36-8	0.26
		Chromium Trioxide (Cr2O3)	1308-38-9	0.03
		Copper (Cu)	7440-50-8	5.9
		Silica Crystalline (SiO2)	14808-60-7	0.57
Die	9.03	Silicon (Si)	7440-21-3	99.96
		Polyimide	n/a	0.04
Die Attach	0.41	Silver (Ag)	7440-22-4	77
		Other Epoxy resins	n/a	17
		Other Metal Oxide	n/a	4.3
		Antimony Pentoxide (Sb2O5)	1314-60-9	1.7
Lead Frame	468.02	Tin (Sn)	7440-31-5	0.06
		Copper (Cu)	7440-50-8	99.94
Mold Compound-Black	2168.5	Brominated epoxy resin	n/a	2
		Phenolic Resin	n/a	7
		Antimony Trioxide (Sb2O3)	1309-64-4	2
		Fused Silica (SiO2)	60676-86-0	70
		Ortho Cresol Novolac Resin	29690-82-2	19
Plating	0.94	Tin (Sn)	7440-31-5	61.91
		Nickel (Ni)	7440-02-0	38.09
Solder Ball	6.42	Silver (Ag)	7440-22-4	2.79
		Tin (Sn)	7440-31-5	96.64
		Antimony (Sb)	7440-36-0	0.08
		Copper (Cu)	7440-50-8	0.49
Wire Bond	0.7	Silicon (Si)	7440-21-3	1
		Aluminum (Al)	7429-90-5	99

Materials Disclosure Disclaimer: Even though all possible efforts have been made to provide you with the most accurate information, we cannot guarantee to its accuracy since the data has been compiled based on the ranges provided, and some information provided by the subcontractors and raw material suppliers may have been withheld to protect their business proprietary information. Thus this information is provided only as estimates, and do not include trace levels fo dopants and metal materials contained within silicon devices in the finished products. There is no intentional use of Mercury, Hexavalent Chromium, Cadmium, PBB or PBDE (5 of the 6 RoHS banned substances) in this or any of our other products. For further explanation on material composition calculations, please view our Product Chemical Content Brochure at:
<http://www.onsemi.com/pub/Collateral/BRD8022-D.PDF>