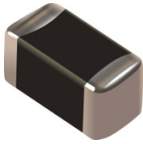


MATERIAL DECLARATION SHEET



Material Number	BVRA0402 Series			
Product Line	Varistor			
Compliance Date	2023/08/07			
RoHS Compliant	Yes	MSL	1	

No.	Construction Element(subpart)	Homogeneous Material	Material weight [mg]	Homogeneous Material Substances	CASRN if applicable	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Ceramic body	Main body	0.9742	Zinc oxide	1314-13-2	100.00%	79.85%	79.85%
		Others additives in Metal Oxide Layer	0.0759	Bismuth Trioxide	12048-50-9	46.55%	2.90%	6.22%
				Manganese(III) oxide	1317-34-6	6.68%	0.42%	
				Nickel Oxide	1313-99-1	20.05%	1.25%	
				Cobalt(II,III) oxide	1308-06-1	8.91%	0.55%	
				Antimony Trioxide	1309-64-4	6.68%	0.42%	
				Chromium(III) oxide	1308-38-9	11.13%	0.69%	
		Sintering Flux in Metal Oxide Layer	0.0284	Silicon dioxide	7631-86-9	4.80%	0.11%	2.33%
				Aluminium oxide	1344-28-1	1.50%	0.03%	
				Boron Trioxide	1303-86-2	8.90%	0.21%	
				Zinc oxide	1314-13-2	12.30%	0.29%	
				Sodium Oxide	1313-59-3	1.30%	0.03%	
Bismuth Trioxide	1304-76-3			71.20%	1.66%			
	0.076	Silver	7440-22-4	80.00%	4.98%	6.23%		

MATERIAL DECLARATION SHEET



		Internal Electrode		Palladium	7440/5/3	20.00%	1.25%	
		Overcoat	0.0039	Epoxy resin	182697-62-7	60.00%	0.19%	0.32%
				Heavy aromatic naphtha petroleum	64742-94-5	15.00%	0.05%	
				Carbon black	1333-86-4	15.00%	0.05%	
				Talc	14807-96-6	10.00%	0.03%	
		End Termination	0.0506	Silver	7440-22-4	100.00%	4.15%	4.15%
2	External electrode	External electrode	0.011	Nickel	7440-02-0	40.00%	0.36%	0.90%
				Tin	7440-31-5	60.00%	0.54%	
		Total weight	1.22					

This Document was updated on: 2023/08/07

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.