

MATERIAL DECLARATION SHEET



Material Number	BVRA1812 Series			
Product Line	Varistor			
Compliance Date	2025/01/10			
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	98.89	Zinc oxide	1314-13-2	100.00%	82.55%	82.55%
		Other additives in Metal Oxide Layer	5.37	Bismuth Trioxide	12048-50-9	46.55%	2.09%	4.49%
				Manganese(III) oxide	1317-34-6	6.68%	0.30%	
				Nickel Oxide	1313-99-1	20.05%	0.90%	
				Cobalt(II,III) oxide	1308-06-1	8.91%	0.40%	
				Antimony Trioxide	1309-64-4	6.68%	0.30%	
				Chromium(III) oxide	1308-38-9	11.13%	0.50%	
		Sintering Flux in Metal Oxide Layer	2.13	Non-Lead glass	65997-18-4	100.00%	1.78%	1.78%
		Internal Electrode	9.00	Silver	7440-22-4	95.00%	7.14%	7.51%
				Palladium	7440-05-3	5.00%	0.38%	
Overcoat	0.32	Epoxy resin	182697-62-7	60.00%	0.16%	0.27%		
		Heavy aromatic naphtha petroleum	64742-94-5	15.00%	0.04%			
		Carbon black	1333-86-4	15.00%	0.04%			
		Talc	14807-96-6	10.00%	0.03%			

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		End Termination	3.00	Silver	7440-22-4	100.00%	2.50%	2.50%
2	External electrode	External electrode	1.08	Nickel	7440-02-0	40.00%	0.36%	0.90%
				Tin	7440-31-5	60.00%	0.54%	
		Total weight	119.80					

This Document was updated on: 2025/01/10

Important remarks:

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