


# MATERIAL DECLARATION SHEET



Material Number	<b>1220-series</b>			
Product Line	<b>SPD</b>			
Compliance Date	<b>June 2023</b>			
RoHS Compliant	<b>Yes</b>	MSL	<b>1</b>	

NO	Construction Element (subpart)	Homogeneous Materials	Material weight [g]	Homogeneous Material	CASRN	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt • (%)
				Substances	if applicable			
1	Varistor	Ceramic	13.95	Zinc oxide	1314-13-2	99.00%	30.90%	35.68%
				Manganese oxide	1344-43-0	0.10%	0.03%	
				Titanium oxide	13463-67-7	0.05%	0.02%	
				Antimony oxide	1332-81-6	0.20%	0.06%	
				Boron oxide	1303-86-2	0.10%	0.03%	
				Chromium Oxide	1118-57-3	0.10%	0.03%	
				Silver nitrate	7761-88-8	0.05%	0.02%	
				Cobalt oxide	1307-96-6	0.20%	0.06%	
		Bismuth trioxide	1304-76-3	0.20%	0.06%			
		Termination	2	Silver	7440-22-4	100%	4.47%	
2	Plastic shell	PBT	12.65	Polybutylene terephthalate	25038-59-9	60.00%	16.98%	28.30%
				Glass fiber	65997-17-3	30.00%	8.49%	
				brominated epoxy ester	68928-70-1	10%	2.83%	

# MATERIAL DECLARATION SHEET



3	Spring	Spring	0.2	Iron	7439-89-6	98.00%	0.44%	0.45%
				Manganese	7439-96-5	0.65%	0.00%	
				Carbon	7440-44-0	0.65%	0.00%	
				Silicon	7440-21-3	0.20%	0.00%	
				Misc not to declare	/	0.50%	0.00%	
4	Switch	Nylon	0.8	PPA	452072-22-9	70.00%	1.25%	2.24%
				Glass fiber	65997-17-3	30.00%	0.54%	
		SUS301 plated	0.0558	Iron	7439-89-6	79.50%	0.10%	
				Chromium	7440-47-3	18.80%	0.02%	
				Manganese	7439-96-5	1.70%	0.00%	
		SUS301 Nickel plating	0.0042	Nickel	7440-02-0	100.00%	0.01%	
		SUS430 plated	0.1	Manganese	7439-96-5	1.50%	0.00%	
				Nickel	7440-02-0	10.50%	0.02%	
				Chromium	7440-47-3	19.00%	0.04%	
				Iron	7439-89-6	69.00%	0.15%	
		Copper strip C2800	0.04	Copper	7440-50-8	61.50%	0.06%	
				Zinc	7440-66-6	38.47%	0.03%	
				phosphorus	7723-14-0	0.01%	0.00%	
iron	7439-89-6			0.02%	0.00%			
5	Copper Electrode	Copper part	9.8	Copper	7440-50-8	91.55%	20.07%	21.92%
				Tin	7440-31-5	8.00%	1.75%	
				Zinc	31396-84-6	0.30%	0.07%	
				Phosphorus	7723-14-0	0.15%	0.03%	
6	Low-temperature alloys	Alloys Solder	1	Tin	7440-31-5	95.00%	2.13%	2.24%
				Silver	7449-22-4	3.60%	0.08%	

# MATERIAL DECLARATION SHEET



				Copper	7740-50-8	1.40%	0.03%	
7	Potting adhesive	Potting adhesive	4.1	Polydimethylsiloxane	68083-19-2	60.00%	5.50%	9.17%
				Polymethylhydrosiloxane	63148-57-2	5.00%	0.46%	
				Alumina	1344-28-1	24.00%	2.20%	
				Aluminum hydroxide	21645-51-2	10.00%	0.92%	
				Platinum	68478-92-2	0.20%	0.02%	
				Carbon black	1333-86-4	0.80%	0.07%	
		<b>Total</b>	<b>44.7</b>					

**This Document was updated: June 2023**

**Important remarks:**

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