

# MATERIAL DECLARATION SHEET



Material Number	<b>PWRA247</b>		
Product Line	<b>Surface Mound Wirewound Power Resistor</b>		
Compliance Date	<b>July 9, 2023</b>		
RoHS Compliant	<b>Yes</b>	MSL	<b>1</b>

No.	Construction Element (subpart)	Homogeneous Material	Material weight [g]	Homogeneous Material/Substances	CASRN if applicable	Materials Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Ceramic Core - End Cap SubAssembly	Ceramic Core	3.0625	Alumium Oxide	1334-28-1	83.08%	73.02%	38.56%
				Silicon Dioxide	14808-60-7	15.00%	13.18%	
				Magnesium Oxide	1309-48-4	0.19%	0.17%	
				Calcium Oxide	1305-78-8	0.18%	0.16%	
				Iron Oxide Nanoparticles	1309-37-1	0.17%	0.15%	
				Sodium Oxide	1313-59-3	1.02%	0.90%	
				Potassium Oxide	12136-45-7	0.21%	0.18%	
				Barium Oxide	1304-28-5	0.15%	0.13%	
		End Cap	0.5600	Iron ( Fe )	7439-89-6	98.81%	9.57%	
				Carbon ( C )	7440-44-0	0.18%	0.02%	
				Manganese ( Mn )	7439-96-5	0.82%	0.08%	
				Sulphur ( S )	7704-34-9	0.08%	0.01%	
Copper Plating	0.0336	Phosphorus ( P )	7723-14-0	0.11%	0.01%			
		Copper ( Cu )	7440-50-8	100.00%	1.82%			
Sn Plating	0.0013	Tin ( Sn )	7440-31-5	100.00%	0.61%			
2	Alloy Resistance Wire	Ni	1.3568	Nickel ( Ni )	7440-02-0	81.00%	81.00%	14.30%
		Cr		Chromium ( Cr. )	7440-47-3	15.00%	15.00%	
		Other		Aluminum ( Al )	7429-90-5	4.00%	4.00%	
3	Protective Coat	Silicone Resin	0.0526	Silica	14808-60-7	100.00%	100.00%	0.55%
4	Lead Frame	Copper Lead frame	0.7369	Copper ( Cu )	7440-50-8	100.00%	95.24%	8.16%
		Sn Plating	0.0368	Tin ( Sn )	7440-31-5	100.00%	4.76%	

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5	Epoxy Molded	Epoxy Molding Compound	3.6453	Silica	14808-60-7	64.00%	64.00%	38.43%
				Epoxy Resin	29690-82-2	20.00%	20.00%	
				Phenol Resin	9003-35-4	12.50%	12.50%	
				Antimony Trioxide	1309-64-4	2.50%	2.50%	
				Brominated Epoxy R.	40039-93-8	0.50%	0.50%	
				Carbon Black	1333-86-4	0.50%	0.50%	
Total			9.4858				100.00%	

**This Document was updated on: Nov 4, 2024**

**Important remarks:**

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