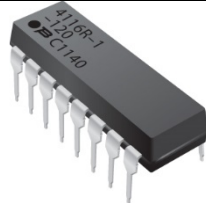


MATERIAL DECLARATION SHEET



Material Number	4100R-LF			
Product Line	Fixed Resistor			
Compliance Date	11/26/2025			
RoHS Compliant	Yes	MSL	1	

4100R-LF > 4 Ω, Reference Model: 4116R-LF

No.	Construction Element (Subpart)	Homogeneous Material	Material Weight (g)	Homogeneous Material Substance	CASRN	Material Mass %	Material Mass % of total unit wt.	Subpart mass of total wt. (%)
1	Housing	Epoxy Molding Compound	0.8300	Silica, vitreous	60676-86-0	75.0000%	44.6877%	59.5836%
				Epoxy cresol novolac resin	29690-82-2	14.0000%	8.3417%	
				Phenol formaldehyde resin	9003-35-4	7.0000%	4.1709%	
				3,5,3',5'-Tetrabromobisphenol A, epichlorohydrin polymer	40039-93-8	2.0000%	1.1917%	
				Carbon black	1333-86-4	1.0000%	0.5958%	
				Antimonytrioxide	1309-64-4	1.0000%	0.5958%	
2	Terminals	Copper C102	0.3000	Copper	7440-50-8	99.9990%	21.5360%	21.5363%
				Oxygen	7782-44-7	0.0010%	0.0002%	
		Plating	0.0040	Tin	7440-31-5	100.0000%	0.2872%	0.2872%
3	Solder Paste	Solder	0.0140	Tin	7440-31-5	10.0000%	0.1005%	1.0050%
				Silver	7440-22-4	2.0000%	0.0201%	
				Lead	7439-92-1	88.0000%	0.8844%	
4	Substrate	Alumina	0.2350	Aluminum oxide	1344-28-1	96.0000%	16.1953%	16.8701%
				Silicon dioxide	7631-86-9	2.0000%	0.3374%	
				Magnesium oxide	1309-48-4	1.0000%	0.1687%	
				Calcium oxide	1305-78-8	1.0000%	0.1687%	
5	Termination Pad	Ink	0.0040	Silver	7440-22-4	95.6000%	0.2745%	0.2872%
				Platinum	7440-06-4	2.0000%	0.0057%	
				Dibismuth-trioxide	1304-76-3	1.0000%	0.0029%	
				Lead	7439-92-1	1.0000%	0.0029%	

MATERIAL DECLARATION SHEET



				Copper	7440-50-8	0.4000%	0.0011%	
				Aluminum oxide	1344-28-1	3.0000%	0.0086%	
				Quartz	14808-60-7	1.0000%	0.0029%	
				Ceramic w/o Declarables	66402-68-4	11.0000%	0.0316%	
				Titanium-dioxide	13463-67-7	1.0000%	0.0029%	
				Zinc oxide	1314-13-2	0.5000%	0.0014%	
				Silicon dioxide	7631-86-9	14.5000%	0.0416%	
				Palladium	7440-05-3	11.0000%	0.0316%	
				Silver	7440-22-4	8.0000%	0.0230%	
				Copper	7440-50-8	1.0000%	0.0029%	
				Glass w/o Declarables	65997-17-3	19.0000%	0.0546%	
				Lead in Glass	7439-92-1	19.0000%	0.0546%	
				Ruthenium(IV)oxide	12036-10-1	11.0000%	0.0316%	
6	Resistive Ink	Ink	0.0040					0.2872%
7	Encapsulant Glaze Ink	Ink	0.0020	Glass without declarable substances	65997-17-3	98.0000%	0.1407%	
				Chromium(III)oxide	1308-38-9	2.0000%	0.0029%	0.1436%
Total Weight			1.393					

This Document was updated on: 12/1/2025

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. Resistive material weight will be different based on the resistance value, and some Homogeneous material might not be present.
3. Weight will be varied by the number of pins.