


# MATERIAL DECLARATION SHEET



Material Number	CHV 1206-A			
Product Line	Safety Certified Thick-Film Type High-Voltage Automotive Chip Resistors			
Compliance Date	04/22/2019			
RoHS Compliant	Yes (Lead Exemption)	MSL	N/A	

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	Substrate	8.588	Aluminum oxide	1344-28-1	96	81.946	85.36
				Silicon dioxide	14808-60-7	4	3.414	
				Magnesium oxide	1309-48-4			
2	Top conductor	Silver	0.162	Silver	7440-22-4	100	1.610	1.610
3	Bottom conductor	Silver	0.0543	Silver	7440-22-4	100	0.540	0.540
4	Resistor	Ruthenium Oxide	0.1087	Glass	65997-18-4	55.7	0.602	1.080
				Lead-containing glass	7439-92-1	19.3	0.208	
				Ruthenium oxide	12036-10-1	25	0.270	

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5	First encapsulating	Glass	0.1038	Silica	14808-60-7	74	0.763	1.032
				Glass	65997-18-4	12	0.124	
				Aluminum oxide	1344-28-1	6	0.062	
				Chromium III oxide	1308-38-9	8	0.083	
6	Overcoat	Resin	0.2327	Resin	25036-25-3	100	2.313	2.313
7	Side conductor	Silver	0.2341	Silver	7440-22-4	85	1.978	2.327
				Resin	9003-36-5	15	0.349	
8	Plating (Middle)	Nickel	0.1985	Nickel	7440-02-0	100	1.973	1.973
9	Plating (Outer)	Tin	0.3573	Tin	7440-31-5	100	3.551	3.551
10	Marking	Resin	0.0215	Resin	29690-82-2	70	0.150	0.214
				Titanium oxide	1317-80-2	30	0.064	
Total weight			10.0609					

**This Document was updated on: 04/22/2019**

**Important remarks:**

1. It is the responsibility of the user to verify they are accessing the latest version.
2. RoHS exemption: 7( c )-1 Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound.