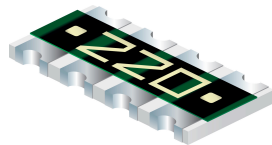


MATERIAL DECLARATION SHEET



Material Number	CAT16-J4AS Series			
Product Line	Chip Resistor			
Compliance Date	11/19/2015			
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 substrate	Alumina	6.680	Magnesium oxide	1309-48-4	1.3	1.0553	81.1763
				Crystalline silica	14808-60-7	3.0	2.4353	
				Aluminum oxide	1344-28-1	95.0	77.1175	
				Calcium oxide	1305-78-8	0.7	0.5682	
2	Surface electrode	AgPd glass	0.299	Lead	7439-92-1	2.0	0.0727	3.6335
				Boron	7440-42-8	1.0	0.0363	
				Palladium	7440-05-3	21.0	0.7630	
				Silver	7440-22-4	73.0	2.6524	
				Crystalline silica	14808-60-7	2.0	0.0727	
3	Resistance Element	RuO2 glass	0.210	Lead	7439-92-1	26.0	0.6635	2.5520
				Boron	7440-42-8	4.0	0.1021	
				Palladium	7440-05-3	7.0	0.1786	
				Silver	7440-22-4	38.0	0.9697	
				Crystalline silica	14808-60-7	9.0	0.2297	
				Manganese oxide	1313-13-9	1.0	0.0255	
4	Protective Coat 1	Glass	0.260	Lead	7439-92-1	50.0	1.5798	3.1596
				Boron	7440-42-8	10.0	0.3160	
				Crystalline silica	14808-60-7	37.0	1.1690	
				Chromium oxide	1308-38-9	3.0	0.0948	
5	Protective Coat 2	Resin	0.250	Crystalline silica	14808-60-7	35.0	1.0633	3.0380
				Epoxy resin	Proprietary	65.0	1.9747	
6	Stamp	Resin	0.015	Titanium dioxide	13463-67-7	50	0.0911	0.1822
				Epoxy resin	Proprietary	50	0.0911	

MATERIAL DECLARATION SHEET



7	Side electrode	NiCr/Cu	0.085	Nickel	7440-02-0	20.0	0.2066	1.0329
				Copper	7440-50-8	75.0	0.7747	
				Chromium	7440-47-3	5.0	0.0516	
8	Internal coating	Nickel	0.220	Nickel	7440-02-0	99.75	2.6668	2.6735
				Misc., not to declare	N/A	0.25	0.0067	
9	External coating	Tin	0.210	Tin	7440-31-5	99.75	2.5456	2.5520
				Misc., not to declare	N/A	0.25	0.0064	
Total weight			8.229					

This Document was updated on: January 5, 2017

Important remarks:

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