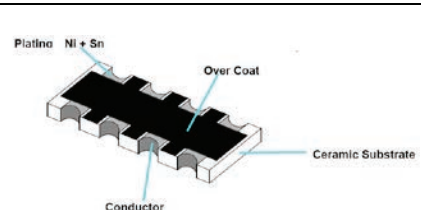


MATERIAL DECLARATION SHEET



Material Number	CAT16-X2 Series		
Product Line	Thick Film Chip Resistors Arrays		
Compliance Date	4-1-2003 DC0314		
RoHS Compliant	Yes	MSL	1



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 Substrate	Ceramic	0.0038218365256	Aluminum oxide	1344-28-1	96%	0.003668963	83.39%
				Crystalline Silica Quartz	14808-60-7	4%	0.000152873	3.47%
2	Conductor Layer	Conductor Ink	0.0000686399376	Silver	7440-22-4	96%	0.000065894340096	1.50%
				Bismuth	7440-69-9	1%	0.0000006864	0.02%
				Barium	7440-39-3	1%	0.0000006864	0.02%
				Silicon	7440-21-3	1%	0.0000006864	0.02%
				Boron	7440-42-8	1%	0.0000006864	0.02%
3	Resistive Element	Resistive Ink	0.0000457599584	Ruthenium oxide	12036-10-1	25%	0.0000114399896	0.26%
				Silver	7440-22-4	40%	0.0000183039834	0.42%
				Palladium	7440-05-3	15%	0.0000068639938	0.16%
				Lead	7439-92-1	20%	0.0000091519917	0.21%
4	Over Coating	Epoxy	0.0000589599464	Epoxy	29690-82-2	100%	0.0000589599464	1.34%
5	Marking	Epoxy	0.0000057199948	Epoxy	25068-38-6	100%	0.0000057199948	0.13%
6	End Terminal	NI-CR	0.00009899991	Nickel	7440-02-0	80%	0.000079199928	1.80%
				Chromium	7440-47-3	20%	0.000019799982	0.45%
7	Nickel Plating	Nickel	0.00016499985	Nickel	7440-02-0	100%	0.00016499985	3.75%
8	Tin Plating	Tin	0.0001350798772	Tin	7440-31-5	100%	0.0001350798772	3.07%
			Total weight	0.004399996				

This Document was updated on: **4-11-2016**

Important remarks: Resistive Element contains the Lead (Pb) which can be referred to RoHS Exemption 7(c)-I