

MATERIAL DECLARATION SHEET



Material Number	CRL2512 Series			
Product Line	Thick Film Low Ohmic Chip Resistors			
Compliance Date	2014.Feb.5			
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	0.03380	Aluminum oxide	1344-28-1	96%	86.13	89.72
				Silicon dioxide	14808-60-7	4%	3.59	
2	Conductor Layer	Thick Film Conductor	0.00051	Silver	7440-22-4	96%	1.28	1.36
				Bismuth	7440-69-9	1%	0.02	
				Barium	7440-39-3	1%	0.02	
				Silicon	7440-21-3	1%	0.02	
				Boron	7440-42-8	1%	0.02	
				Ruthenium dioxide	12036-10-1	25%	0.32	
3	Resistive Element	Thick Film Resistor	0.00049	Silver	7440-22-4	40%	0.52	1.29
				Palladium	7440-05-3	15%	0.19	
				Lead	7439-92-1	20%	0.26	
				Ruthenium dioxide	12036-10-1	25%	0.32	
4	Over Coating	Epoxy	0.00066	Epoxy	29690-82-2	100%	1.74	1.74
5	Marking	Epoxy	0.00004	Epoxy	25085-99-8	100%	0.11	0.11
6	End Terminal	NI-CR	0.00001	Nickel	7440-02-0	80%	0.02	0.03
				Chromium	7440-47-3	20%	0.01	
7	Ni Plating	Nickel	0.00115	Nickel	7440-02-0	100%	3.04	3.04
8	Sn Plating	Tin	0.00102	Tin	7440-31-5	100%	2.71	2.71
			Total weight	0.03768				

This Document was updated on: **2016-02-08**

Important remarks:

1. It is the responsibility of the user to verify they are accessing the latest version.
2. Resistive Element contains the Lead (Pb) which can be referred to RoHS Exemption 7(c)-I.