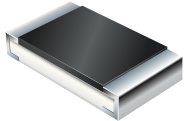


# MATERIAL DECLARATION SHEET



Material Number	CR2010A Series			
Product Line	Thick Film Chip Resistors			
Compliance Date	2018/06/14			
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	CRXXXX	20.35625	Aluminum oxide	1344-28-1	96%	84.31%	90.47%
				Silicon dioxide	14808-60-7	4%	3.51%	
2	Conductor Layer	AZZ.002.5421	0.33976	Silver	7440-22-4	95%	1.86%	1.51%
				Glass	65997-17-3	5%	0.10%	
3	Resistive Element	AZZ.002.00XXX	0.27226	Ruthenium oxide	12036-10-1	25%	0.30%	1.21%
				Silver	7440-22-4	40%	0.48%	
				Palladium	7440-05-3	15%	0.18%	
				Lead Glass	7439-92-1	20%	0.24%	
4	Over Coating	AZZ.002.1057A	0.39376	Epoxy	25068-38-6	100%	1.42%	1.75%
5	Marking	ZSR-XXX	0.02475	Epoxy	25085-99-8	100%	0.08%	0.11%
6	End Terminal	AZZ.003.0048	0.00900	Nickel	7440-02-0	80%	0.05%	0.04%
				Chromium	7440-47-3	20%	0.01%	
7	Ni Plating	Ni	0.58276	Nickel	7440-02-0	100%	3.95%	2.59%
8	Sn Plating	Sn	0.52201	Tin	7440-31-5	100%	3.51%	2.32%
			<b>TOTAL WEIGHT</b>				<b>22.50055</b>	

This Document was updated on: 2018/06/14

Important remarks: It is the responsibility of the user to verify they are accessing the latest version.