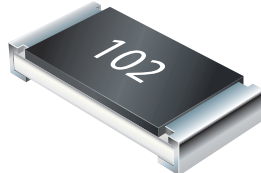


MATERIAL DECLARATION SHEET



Material Number	CR0603-PF Series (10~100ohm)			
Product Line	Thick Film Resistors (Ultra-low lead content)			
Compliance Date	2017.12.06			
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	CR****	1.66012	Aluminum oxide	1344-28-1	96%	77.86%	81.10%
				Silicon dioxide	14808-60-7	4%	3.24%	
2	Conductor Layer	5***	0.01049	Silver	7440-22-4	100%	0.51%	0.51%
3	Resistive Element	R-U	0.00860	Chromium	7440-47-3	60%	0.25%	0.42%
				Nickel	7440-02-0	40%	0.17%	
4	Over Coating	1***	0.19631	Epoxy	25068-38-6	100%	9.59%	9.59%
5	Marking	ZSR-XXX	0.00328	Epoxy	25085-99-8	100%	0.16%	0.16%
6	End Terminal	NI-CR	0.00246	Nickel	7440-02-0	80%	0.10%	0.12%
				Chromium	7440-47-3	20%	0.02%	
7	Ni Plating	Ni	0.08761	Nickel	7440-02-0	100%	4.28%	4.28%
8	Sn Plating	Sn	0.07820	Tin	7440-31-5	100%	3.82%	3.82%
			Total weight	2.04707				

This Document was updated on: 2017/12/6