

Dear Customers,

Material Data Sheet

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Product P/N	ERJ14YJ@@@U				
Product Classification	Electric/Electronic component(Passive component)				
Product Name	Chip Resistor	Substitute P/N	No	Weight TOTAL(mg)	15.9252
Pb	Pb free	Packaging Material	Not included		

Part Name		Material Name	Chemical Name	CASNo.	Remark	Weight of each chemical material in a part (mg)	Weight of a part(mg)	Rate of each chemical material in a part(%)	Rate of each chemical material in a product(wt%)	Rate of each part in a product(wt%)							
Substrate		Ceramics	Aluminum oxide ; Alumina; Corundum; Al2O3	1344-28-1		13.524	14	96.6	87.910903	84.921929							
			Quartz; SiO2	14808-60-7	0.294	2.1		1.846131									
			Magnesium oxide; MgO	1309-48-4	0.14	1		0.87911									
			Calcium oxide; CaO	1305-78-8	0.042	0.3		0.263733									
Top Terminal		Other special metals	Silver; Ag	7440-22-4		0.109203	0.1127	96.89707	0.707711	0.68575							
			Palladium; Pd	7440-05-3	0.001466	1.300799		0.009206									
			Cupric oxide; CuO	1317-38-0	0.000677	0.60071		0.004252									
		Glass	Silica; Silicon dioxide	7631-86-9	0.000339	0.300799		0.002129									
			Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8	0.001015	0.900622		0.006374									
			EU RoHS exemption 7(c)-I	Other special metals	Silver; Ag	7440-22-4		0.102033		0.10465	97.499283	0.657142	0.640708				
Glass	Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8			0.00157	1.500239	0.009859										
	Silica; Silicon dioxide	7631-86-9			0.001047	1.000478	0.006575										
Bottom Terminal	EU RoHS exemption 7(c)-I	Glass	Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8	0.055153	0.12535	43.9992	0.787125	0.346332								
			Ruthenium(IV) oxide; RuO2	12036-10-1	0.047884					38.20024	0.300681						
			Boron oxide; B2O3	1303-86-2	0.018803					15.000399	0.118071						
			Other antimony compounds	-	0.002344					1.869965	0.014719						
			Manganese dioxide; MnO2	1313-13-9	0.001166					0.930196	0.007322						
			Resistive Element	EU RoHS exemption 7(c)-I	Glass					Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8	0.047051	0.08555	54.998245	0.537213	0.295463	
Silica; Silicon dioxide	7631-86-9	0.021901				25.600234	0.137525										
Boron oxide; B2O3	1303-86-2	0.011036				12.900059	0.069299										
Zinc oxide; ZnO	1314-13-2	0.003594				4.201052	0.022568										
Chromium(III) oxide; Pigment green 17 (C.I.); Cr2O3	1308-38-9	0.001968				2.30041	0.012358										
First Protective Coating	EU RoHS exemption 7(c)-I	Glass				Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8	0.125289	0.18158	68.999338	1.140219	0.786747					
			Silica; Silicon dioxide	7631-86-9	0.041764	23.000331	0.262251										
			Boron oxide; B2O3	1333-86-4	0.014527	8.000331	0.091221										
			Zinc oxide; ZnO	1314-13-2	0.003275	60.986964	0.033728										
			Chromium(III) oxide; Pigment green 17 (C.I.); Cr2O3	1308-38-9	0.001638	30.502794	0.010286										
			Second Protective Coating		EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29690-82-2	0.003275					0.00537	60.986964	0.033728	0.020572	
Silica; Silicon dioxide	7631-86-9	0.001638				30.502794	0.010286										
Others (Powder,etc)	Titanium dioxide; Pigment white 6; TiO2	13463-67-7				0.000457	8.510242	0.00287									
Marking 1	EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol				29690-82-2	0.003275	0.00537	60.986964	0.033728	0.020572						
		Silica; Silicon dioxide				7631-86-9	0.001638					30.502794					0.010286
		Others (Powder,etc)				Titanium dioxide; Pigment white 6; TiO2	13463-67-7					0.000457					8.510242
Side Terminal		Other nonferrous metals	Silver; Ag	7440-22-4	0.16695	0.35	47.7	2.197776	1.048339								
			EP (Epoxy resin)	Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820; Araldite GY 250	25068-38-6					0.14595	41.7	0.916472					
			Others (Powder,etc)	Carbon black; C	1333-86-4					0.02065	5.9	0.129669					
			Other nonferrous metals	Potassium titanate; Potassium titanium oxide; K2Ti6O13	12056-51-8					0.01645	4.7	0.103296					
Middle Terminal		Nickel and Nickel alloys	Nickel; Ni	7440-02-0	0.501	0.501	100	3.145958	3.145958								
Outer Terminal		Other nonferrous metals	Tin; Sn	7440-31-5	0.459	0.459	100	2.882225	2.882225								

EU RoHS exemption 7(c)-I

Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound