

Dear Customers,

Material Data Sheet

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Product P/N	ERJS02F@@@X		
Product Classification	Electric/Electronic component(Passive component)		
Product Name	Chip Resistor	Substitute P/N	No
Pb	Pb free	Packaging Material	Not included
			Weight TOTAL(mg) 0.63769

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		0.44436	0.46	96.6	72.132842	69.680239	
			Quartz; SiO2	14808-60-7		0.00966		2.1		1.514843	
			Magnesium oxide; MgO	1309-48-4		0.0046		1		0.721354	
			Calcium oxide; CaO	1305-78-8		0.00138		0.3		0.216406	
Top Terminal	EU RoHS exemption 7(c)-I	Gold	Gold; Au	7440-57-5		0.005681	0.00602	94.36877	0.944348	0.891186	
			Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8		0.000229		3.803987		0.035911	
		Glass	Cupric oxide; CuO	1317-38-0		0.000073		1.212625		0.011448	
			Boron oxide; B2O3	1303-86-2		0.000037		0.614618		0.005803	
Bottom Terminal	EU RoHS exemption 7(c)-I	Other special metals	Silver; Ag	7440-22-4		0.00778	0.00798	97.493733	1.25155	1.220186	
			Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8		0.00012		1.50376		0.018818	
		Glass	Silica; Silicon dioxide	7631-86-9		0.00008		1.002507		0.012546	
Resistive Element	EU RoHS exemption 7(c)-I	Glass	Ruthenium(IV) oxide; RuO2	12036-10-1		0.002521	0.00588	42.874149	0.922393	0.395647	
			Silica; Silicon dioxide	7631-86-9		0.001176		20		0.184416	
			Boron oxide; B2O3	1303-86-2		0.000418		7.108844		0.065549	
			Manganese dioxide; MnO2	1313-13-9		0.000142		2.414966		0.022268	
			Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8		0.001623		27.602041		0.254513	
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		0.003232	0.00588	54.965984	0.922393	0.507143	
			Silica; Silicon dioxide	7631-86-9		0.001506		25.612245		0.236165	
			Boron oxide; B2O3	1303-86-2		0.000759		12.908164		0.119024	
			Zinc oxide; ZnO	1314-13-2		0.000247		4.200681		0.038734	
			Chromium(III) oxide; Pigment green 17 (C.I.); Cr2O3	1308-38-9		0.000136		2.312926		0.021327	
Second Protective Coating		Ceramics	Silica; Silicon dioxide	7631-86-9		0.00628	0.00931	67.454349	1.460272	0.985119	
			EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29690-82-2			0.002805		30.128894	0.439869
			Others (Powder,etc)	Carbon black; C	1333-86-4			0.000225		2.416757	0.035284
Re-top Terminal	EU RoHS exemption 7(c)-I	Other special metals	Silver; Ag	7440-22-4		0.004229	0.00516	81.957363	0.809643	0.663646	
			Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8		0.00046		8.914729		0.072136	
			Boron oxide; B2O3	1303-86-2		0.000429		8.313954		0.067274	
		Other special metals	Palladium; Pd	7440-05-3		0.000042		0.813954		0.006587	
Marking 1		EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29690-82-2		0.000582	0.00126	46.190474	0.197903	0.091581	
			Ceramics	Kaolin; Aluminum silicate hydroxide	1332-58-7			0.000294		23.333334	0.046104
			Silica; Silicon dioxide	7631-86-9		0.000082		6.507937		0.012859	
			Others (Powder,etc)	Titanium dioxide; Pigment white 6; TiO2	13463-67-7			0.000294		23.333334	0.046104
Side Terminal		EP (Epoxy resin)	Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820; Araldite GY 250	25068-38-6		0.02418	0.0532	45.451127	8.342926	3.791811	
			Other special metals	Silver; Ag	7440-22-4			0.024178		45.447369	3.791811
			Others (Powder,etc)	Carbon black; C	1333-86-4			0.004842		9.101504	0.759304
Middle Terminal		Nickel and Nickel alloys	Nickel; Ni	7440-02-0		0.043	0.043	100	6.743089	6.743089	
Outer Terminal		Other nonferrous metals	Tin; Sn	7440-31-5		0.04	0.04	100	6.272641	6.272641	

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