

Dear Customers,

Material Data Sheet

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Product P/N	ERJP03F@@@V				
Product Classification	Electric/Electronic component(Passive component)				
Product Name	Chip resistor	Substitute P/N	No	Weight TOTAL(mg)	2.3078
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		1.7388	1.8	96.6	77.995961	75.344084		
			Quartz; SiO2	14808-60-7		0.0378		2.1		1.637924		
			Magnesium oxide; MgO	1309-48-4		0.018		1		0.779964		
			Calcium oxide; CaO	1305-78-8		0.0054		0.3		0.233989		
Top Terminal		Other special metals	Silver; Ag	7440-22-4		0.049223	0.0508	96.895667	2.201362	2.133028		
			Palladium; Pd	7440-05-3		0.00661		1.301182		0.028642		
		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			0.000458		0.901575	0.019846	
				Cupric oxide; CuO	1317-38-0			0.000305		0.600394	0.013216	
Bottom Terminal		Other special metals	Silver; Ag	7440-22-4		0.014565	0.01494	97.48996	0.647458	0.631208		
			Palladium; Pd	7440-05-3		0.000225		1.506024		0.00975		
		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			0.00015		1.004016	0.0065	
				Silica; Silicon dioxide	7631-86-9			0.00015		1.004016	0.0065	
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		0.023	43.995652	0.996664	0.438513		
				Ruthenium(IV) oxide; RuO2	12036-10-1			0.008786		38.2	0.380709	
				Boron oxide; B2O3	1303-86-2			0.00345		15	0.149493	
				Other antimony compounds	-			0.000431		1.873913	0.018676	
				Manganese dioxide; MnO2	1313-13-9			0.000214		0.930435	0.009273	
				Chromium(III) oxide; Pigment green 17 (C.I.); Cr2O3	1317-36-8			0.022		55	0.953289	
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		0.04	25.6	1.733254	0.443713		
				Silica; Silicon dioxide	7631-86-9			0.01024		12.9	0.22359	
				Boron oxide; B2O3	1303-86-2			0.00516		4.2	0.072797	
				Zinc oxide; ZnO	1314-13-2			0.00168		2.3	0.039865	
				Chromium(III) oxide; Pigment green 17 (C.I.); Cr2O3	1308-38-9			0.00092		2.3	0.039865	
				Other special metals	Silver; Ag	7440-22-4				0.008535	81.988471	0.451168
Re-top 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		0.01041	8.9049	0.451168	0.040169		
				Boron oxide; B2O3	1303-86-2			0.000864		8.299712	0.037439	
		Other special metals	Palladium; Pd	7440-05-3		0.000084		0.806917		0.00364		
			EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29690-82-2			0.05244		69	3.293181	2.272294
Second Protective Coating			Ceramics	Silica; Silicon dioxide	7631-86-9		0.076	23	3.293181	0.757432		
				Others (Powder,etc)	Carbon black; C	1333-86-4				0.00608	8	0.263455
				EP (Epoxy resin)	Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820; Araldite GY 250	25068-38-6				0.03711	45.450091	3.538045
Side Terminal			Other special metals	Silver; Ag	7440-22-4		0.08165	45.448868	3.538045	1.608025		
				Others (Powder,etc)	Carbon black; C	1333-86-4				0.007431	9.101041	0.321995
Middle Terminal			Nickel and Nickel alloys	Nickel; Ni	7440-02-0		0.124	100	5.373083	5.373083		
Outer Terminal			Other nonferrous metals	Tin; Sn	7440-31-5		0.087	100	3.769824	3.769824		

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