

Dear Customers,

Material Data Sheet

Date : June 23, 2021

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Product P/N	ERJU02F@@@@@X				
Product Classification	Electric/Electronic component(Passive component)				
Product Name	Chip Resistor	Substitute P/N	No	Weight TOTAL(mg)	0.62988
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		0.444011	0.45964	96.599729	72.970638	70.489378
			Quartz; SiO2	14808-60-7		0.009653		2.100122		1.53251
			Magnesium oxide; MgO	1309-48-4		0.004597		1.000131		0.72982
			Calcium oxide; CaO	1305-78-8		0.001379		0.300018		0.21893
Top Terminal		(This code cannot be used)	Silver; Ag	7440-22-4		0.004827	0.006121	78.859662	0.972089	0.766652
			Palladium; Pd	7440-05-3		0.001232		20.127431		0.195593
	EU RoHS exemption 7(c)-I		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8		0.000034		0.555465		0.005398
			Boron oxide; B2O3	1303-86-2		0.000028		0.457442		0.004446
Bottom Terminal		Other special metals	Silver; Ag	7440-22-4		0.007606	0.007801	97.50032	1.238487	1.207528
	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		0.000117		1.499808		0.018575
		Silica; Silicon dioxide	7631-86-9		0.000078	0.999872		0.012384		
Resistive Element		Glass	Ruthenium(IV) oxide; RuO2	12036-10-1		0.002521	0.00588	42.874149	0.933828	0.400552
			Silica; Silicon dioxide	7631-86-9		0.001176		20		0.186702
			Boron oxide; B2O3	1303-86-2		0.000418		7.108844		0.066362
			Manganese dioxide; MnO2	1313-13-9		0.000142		2.414966		0.022544
	EU RoHS exemption 7(c)-I		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-36-8		0.001623		27.602041		0.257668
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	0.933828	0.51343
			Silica; Silicon dioxide	7631-86-9		0.001506		25.612245		0.239093
			Boron oxide; B2O3	1303-86-2		0.000759		12.908164		0.120499
			Zinc oxide; ZnO	1314-13-2		0.000247		4.200681		0.039214
			Chromium(III) oxide; Pigment green 17 (C.I.); Cr2O3	1308-38-9		0.000136		2.312926		0.021592
Second Protective Coating		Ceramics	Silica; Silicon dioxide	7631-86-9		0.005353	0.00799	66.996244	1.268652	0.850001
		EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29690-82-2		0.002397		30		0.380548
			Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820; Araldite GY 250	25068-38-6		0.00008		1.001252		0.012701
		Others (Powder,etc)	Carbon black; C	1333-86-4		0.00016		2.002504		0.025402
Marking 1		EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29690-82-2		0.000164	0.00037	44.324323	0.05906	0.026355
		Ceramics	Kaolin; Aluminum silicate hydroxide	1332-58-7		0.000079		21.351352		0.012542
			Silica; Silicon dioxide	7631-86-9		0.000026		7.027027		0.004128
		Others (Powder,etc)	Titanium dioxide; Pigment white 6; TiO2	13463-67-7		0.000079		21.351352		0.012542
Side Terminal			Iron(III) oxide; Pigment red 101 (C.I.); Fe2O3	1309-37-1		0.000022		5.945946		0.003493
		Other special metals	Silver; Ag	7440-22-4		0.02418	0.0532	45.451127	8.446346	3.838815
		EP (Epoxy resin)	Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820; Araldite GY 250	25068-38-6		0.024178		45.447369		3.838815
	Others (Powder,etc)	Carbon black; C	1333-86-4		0.004842	9.101504		0.768716		
Middle Terminal		Nickel and Nickel alloys	Nickel; Ni	7440-02-0		0.043	0.043	100	6.826676	6.826676
Outer Terminal		Other nonferrous metals	Tin; Sn	7440-31-5		0.04	0.04	100	6.350396	6.350396

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