

Material Data Sheet

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 Company : Automotive & Industrial Systems Company, Panasonic Corporation
 Address : 401 Sadamasa-cho, Fukui City, Fukui Japan
 Department : Device Solutions Business Division Environment Management Section
 Approved by : Hirohazu Yamada
 Prepared by : Takeshi Tani
 Telephone : +81-776-56-8028

Product P/N	IERJ8ENF88@V			
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)				949487

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
Substrate	Ceramics	Aluminum oxide ; Alumina; Corundum; Al ₂ O ₃	1344-28-1		8.1144	8.4	96.8	88.468676	85460.734
		Silica; Silicon dioxide	7631-86-9		0.1764		2.1	1.857846	
		Magnesium oxide; MgO	1309-48-4		0.0284		1	0.834889	
Top Terminal	Other special metals	Silver; Ag	7440-22-4		0.0252	0.06605	0.3	0.265407	
		Palladium; Pd	7440-05-3		0.064		0.67408		
		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-39-8		0.000859		0.009047		
Bottom Terminal	Other special metals	Cupric oxide; CuO	1317-39-0		0.000395	0.04984	0.50106	0.004182	
		Silica; Silicon dioxide	7631-86-9		0.000199		0.002096		
		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-39-8		0.048593		0.524927		
Resistive Element	Glass	Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-39-8		0.000748	0.02509	1.500803	0.007878	
		Silica; Silicon dioxide	7631-86-9		0.000499		1.001204	0.005256	
		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-39-8		0.01102		43.992015	0.26389	
First Protective Coating	Glass	Ruthenium(IV) oxide; RuO ₂	12036-10-1		0.000957	0.00358	38.203593	0.100792	
		Boron oxide; B ₂ O ₃	1303-86-2		0.003758		15.001996	0.03958	
		Other antimony compounds	-		0.000469		1.872256	0.00494	
Second Protective Coating	Glass	Manganese dioxide; MnO ₂	1313-13-9		0.000233	0.00358	0.93014	0.002454	
		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monooxide; Lead(2+) oxide	1317-39-8		0.019578		54.99438	0.374962	
		Silica; Silicon dioxide	7631-86-9		0.009114		25.601124	0.039389	
Marking 1	EP (Epoxy resin)	Boron oxide; B ₂ O ₃	1303-86-2		0.004593	0.10129	12.901886	0.043374	
		Zinc oxide; ZnO	1314-13-2		0.001496		4.202248	0.015756	
		Chromium(III) oxide; Pigment green 17 (C.I.); Cr ₂ O ₃	1308-38-9		0.000819		2.300562	0.008626	
Marking 2	EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29890-82-2		0.069889	0.00408	68.998913	1.066809	
		Ceramics	Silica; Silicon dioxide	7631-86-9	0.023297		23.000297	0.245364	
		Others (Powder,etc)	Carbon black; C	1333-86-4	0.000194		8.000079	0.008352	
Side Terminal	EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol	29890-82-2		0.002488	0.21496	80.980382	0.042983	
		Ceramics	Silica; Silicon dioxide	7631-86-9	0.001245		30.514706	0.013113	
		Others (Powder,etc)	Titanium dioxide; Pigment white 6; TiO ₂	13463-87-7	0.000347		8.504902	0.003655	
Middle Terminal	EP (Epoxy resin)	Silver; Ag	7440-22-4		0.102534	0.00408	47.699105	2.263983	
		Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820; Araldite GY 250	25069-38-6		0.089639		41.700317	0.944079	
		Others (Powder,etc)	Carbon black; C	1333-86-4	0.012883		3.900168	0.133578	
Outer Terminal	Other nonferrous metals	Potassium titanate; Potassium titanium oxide; K ₂ TiO ₃	12058-51-8		0.010104	0.265	4.70041	0.106416	
		Nickel and Nickel alloys	Nickel; Ni	7440-02-0	0.333		100	3.507157	3.507157
		Tin; Sn	7440-31-5		0.265	100	2.790981	2.790981	

RoHS exemption 7e(1)
 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