

# Material Data Sheet

Date : Mar/22/2011  
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Product P/N	ER16GEY1000V		
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)
			4.81295

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		4.0572	4.2	96.6	87.264326	84.29733		
		Silica; Silicon dioxide	7631-86-9		0.0882		2.1		1.832556		
		Magnesium oxide; MgO	1309-48-4		0.042		1		0.872646		
		Calcium oxide; CaO	1305-78-8		0.0126		0.3		0.261794		
Top Terminal	Other special metals	Silver; Ag	7440-22-4		0.032982	0.03404	96.891889	0.707323	0.685339		
		Palladium; Pd	7440-05-3		0.000443		1.301411		0.009205		
	Glass	Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monoxide; Lead(2+) oxide	1317-36-8		0.000307		0.901881		0.006379		
		Cupric oxide; CuO	1317-38-0		0.000205		0.602233		0.00426		
Bottom Terminal	Other special metals	Silver; Ag	7440-22-4		0.027845	0.02856	97.496498	0.593421	0.578564		
		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monoxide; Lead(2+) oxide	1317-36-8		0.000429		1.502101		0.008914		
	Glass	Silica; Silicon dioxide	7631-86-9		0.000286		1.001401		0.005943		
		Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monoxide; Lead(2+) oxide	1317-36-8		0.004997		43.987675		0.236074		
Resistive Element	Glass	Ruthenium(IV) oxide; RuO2	12036-10-1		0.00434	0.01136	38.204226	0.09174	0.09174		
		Boron oxide; B2O3	1303-86-2		0.001704		15		0.035405		
		Other antimony compounds	--		0.000213		1.875		0.004426		
		Manganese dioxide; MnO2	1313-13-9		0.000106		0.933099		0.002203		
First Protective Coating	Glass	Lead(II) oxide; Lead oxide (PbO); C.I. Pigment Yellow 46; Lead monoxide; Lead(2+) oxide	1317-36-8		0.009832	0.01788	54.988813	0.371542	0.204324		
		Silica; Silicon dioxide	7631-86-9		0.004578		25.604027		0.095119		
		Boron oxide; B2O3	1303-86-2		0.002307		12.902685		0.047934		
		Zinc oxide; ZnO	1314-13-2		0.000751		4.200224		0.015604		
Second Protective Coating	EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-me	29690-82-2		0.027945	0.0405	69	0.841481	0.590621		
		Ceramics	Silica; Silicon dioxide	7631-86-9			0.009315		23	0.193541	
	Others (Powder, etc)	Carbon black; C	1333-86-4		0.00324		8		0.067319		
		EP (Epoxy resin)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde, polymer with (chloromethyl)oxirane and 2-me	29690-82-2			0.001701		0.00279	60.967741	0.05799
Marking 1	Ceramics	Silica; Silicon dioxide	7631-86-9		0.00851	0.00279	30.501793	0.05799	0.017682		
		Others (Powder, etc)	Titanium dioxide; Pigment white 6; TiO2	13463-67-7			0.000238		8.530466	0.004945	
	Other special metals	Silver; Ag	7440-22-4		0.047136		0.09882		47.698845	2.053254	0.9794
		EP (Epoxy resin)	Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820; Araldite GY 250	25068-38-6			0.041208		41.700061	0.85619	
Side Terminal	Others (Powder, etc)	Carbon black; C	1333-86-4		0.005831	0.00851	5.900623	0.05799	0.121153		
		Other nonferrous metal	Potassium titanate; Potassium titanium oxide; K2Ti6O13	12056-51-8			0.004645		4.700466	0.096511	
	Nickel and Nickel alloy	Nickel; Ni	7440-02-0		0.223		0.223		100	4.633333	4.633333
		Other nonferrous metal	Tin; Sn	7440-31-5			0.156		0.156	100	3.241256