

# Material Data Sheet

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Product P/N	ERT1TYJ@@@U				
Product Classification	Electric/Electronic component (Passive component)				
Product Name	Chip Resistor	Substitute P/N	No	Weight TOTAL (mg)	40,0277
Pb	Pb free	Packaging Material	Not included		

Part Name		Material Name	Chemical Name	CASNo.	pose of	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		Alumina (Al2O3)	Aluminum oxide ; Alumina; Corundum; Al2O3	1344-28-1		34,5828	35,8	96,6	89,438138	86,397239
		Silica (SiO2)	Silica; Silicon dioxide	7631-86-9		0,7518		2,1		1,878202
		Others (Ceramic)	Magnesium oxide; MgO	1309-48-4		0,358		1		0,894382
Top Terminal		Ag(silver) and Ag alloy	Silver; Ag	7440-22-4		0,210029	0,21675	96,899191	0,541509	0,524715
		Pd(Palladium) and Pd alloy	Palladium; Pd	7440-05-3		0,002818		1,300116		0,007041
		Lead glass	Lead(II) oxide; Lead monoxide; Lead oxide yellow; Litharge;	1317-36-8		0,001951		0,900116		0,004875
		Others (Glass)	Cupric oxide; CuO	1317-38-0		0,001301		0,600231		0,003251
Bottom Terminal		Ag(silver) and Ag alloy	Silver; Ag	7440-22-4		0,331558	0,34006	97,499852	0,849566	0,828325
		Lead glass	Lead(II) oxide; Lead monoxide; Lead oxide yellow; Litharge;	1317-36-8		0,005101		1,50003		0,012744
		Others (Glass)	Silica; Silicon dioxide	7631-86-9		0,003401		1,000118		0,008497
Resistive Element		Lead glass	Lead(II) oxide; Lead monoxide; Lead oxide yellow; Litharge;	1317-36-8		0,173623	0,3946	43,999746	0,985823	0,433761
		Others (Glass)	Ruthenium(IV) oxide; RuO2	12036-10-1		0,150738		38,200203		0,376585
			Boron oxide; B2O3	1303-86-2		0,05919		15		0,147873
			Other antimony compounds	-		0,007379		1,869995		0,018435
First Protective Coating		Lead glass	Lead(II) oxide; Lead monoxide; Lead oxide yellow; Litharge;	1317-36-8		0,097541	0,17735	54,999152	0,443075	0,243689
		Others (Glass)	Silica; Silicon dioxide	7631-86-9		0,045402		25,600226		0,113427
			Boron oxide; B2O3	1303-86-2		0,022879		12,90048		0,057158
			Zinc oxide; ZnO	1314-13-2		0,007449		4,20017		0,01861
			Chromium(III) oxide; Pigment green 17 (C.I.); Cr2O3	1308-38-9		0,004079		2,299972		0,010191
Second Protective Coating		Epoxy resin (EP)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde	29690-82-2		0,680981	0,98693	68,999928	2,465624	1,701279
		Silica (SiO2)	Silica; Silicon dioxide	7631-86-9		0,226994		23,000011		0,567093
		additives (pigment, dye (black))	Carbon black; C	1333-86-4		0,078955		8,000061		0,197252
Marking 1		Epoxy resin (EP)	Epichlorohydrin, o-cresol, formaldehyde polymer; Formaldehyde	29690-82-2		0,004684	0,00768	60,989582	0,019191	0,011705
		Silica (SiO2)	Silica; Silicon dioxide	7631-86-9		0,002343		30,507813		0,005854
Side Terminal		additives (pigment, dye (white))	Titanium dioxide; Pigment white 6; TiO2	13463-67-7		0,000653	0,44028	8,502605	1,099947	0,001632
		Ag(silver) and Ag alloy	Silver; Ag	7440-22-4		0,210012		47,699645		0,524673
		Epoxy resin (EP)	Bisphenol A, epichlorohydrin polymer; Epoxy resin; Epon 820;	25068-38-6		0,183597		41,700055		0,458676
		additives (pigment, dye (black))	Carbon black; C	1333-86-4		0,025977		5,900109		0,064898
Middle Terminal		Others (nonferrous metal)	Potassium titanate; Potassium titanium oxide; K2Ti6O13	12056-51-8		0,020694	4,700191	0,0517		
		Ni (Nickel) and Ni alloy	Nickel; Ni	7440-02-0		0,9	0,9	100	2,248446	2,248446
Outer Terminal		Sn (Tin) and Sn Alloy	Tin; Sn	7440-31-5		0,764	0,764	100	1,908681	1,908681