

## Material Data Sheet

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 Panasonic Electronic Devices Co.,Ltd.  
 Circuit Components Business Unit  
 Engineering & Quality Planning Group  
 Environment Management Team  
 Person in charge:Yasuo Katsuki

Product P/N	ERG2SJ@@@
	Product Weight(mg)
	320.153

Part Name	Material Name	Chemical Name	CASNo.	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%)
Ceramic rod	Alumina (Al <sub>2</sub> O <sub>3</sub> )	Aluminum oxide; Al <sub>2</sub> O <sub>3</sub>	1344-28-1	217.11718	263.3	82.46	39.07195	32.218729
	Silica(SiO <sub>2</sub> )	Silica; Silicon dioxide	7631-86-9	29.51593		11.21		4.379966
	Others (Ceramic)	Barium oxide; BaO	1304-28-5	7.3724		2.8		1.094015
		Calcium oxide; CaO	1305-78-8	4.16014		1.58		0.617337
		Magnesium oxide; MgO	1309-48-4	3.65987		1.39		0.5431
	Iron(III) oxide; Fe <sub>2</sub> O <sub>3</sub>	1309-37-1	1.47448	0.56	0.218803			
Resistive film	Others (nonferrous metal)	Tin oxide; SnO <sub>2</sub>	18282-10-5	0.9797	1.01	97	0.149878	0.145381
	Sb(Antimony) and Sb alloy	Antimony trioxide; Sb <sub>2</sub> O <sub>3</sub>	1309-64-4	0.0303		3		0.004497
Varnish	Others (Thermosetting resin)	Dimethylpolysiloxane	63148-62-9	0.615	0.615	100	0.091262	0.091262
cap	Steel(0.20%C<)	Iron; Fe	7439-89-6	89.0844	91.5	97.36	13.577987	13.219526
	Sn(Tin)and Sn Alloy	Tin; Sn	7440-31-5	1.0065		1.1		0.149358
	Pure copper	Copper; Cu	7440-50-8	1.0065		1.1		0.149358
	Steel(0.20%C<)	Manganese; Mn	7439-96-5	0.2745		0.3		0.040734
		Carbon; C	7440-44-0	0.068625		0.075		0.010184
		Phosphorus; P	7723-14-0	0.0366		0.04		0.005432
		Sulphur	7704-34-9	0.022875		0.025		0.003395
Lead wire	Electric conductor (Cu,Al)	Copper; Cu	7440-50-8	232.6116	241.8	96.2	35.881487	34.51799
	Sn(Tin)and Sn Alloy	Tin; Sn	7440-31-5	9.1884		3.8		1.363497
Coating paint	Silica(SiO <sub>2</sub> )	Silica; Silicon dioxide	7631-86-9	71.119699	75.099999	94.7	11.144335	10.553685
	Alumina (Al <sub>2</sub> O <sub>3</sub> )	Aluminum oxide; Al <sub>2</sub> O <sub>3</sub>	1344-28-1	2.253		3		0.33433
	additives(pigment,dye(other colors))	Cobalt; Co	7440-48-4	1.502		2		0.222887
	Ti(Titanium) and Ti alloy	Titanium dioxide; TiO <sub>2</sub>	13463-67-7	0.2253		0.3		0.033433
Marking	Others (Thermosetting resin)	Acrylamide	79-06-1	0.448	0.56	80	0.083101	0.066481
	Others (Aluminium alloy)	Aluminum; Al	7429-90-5	0.112		20		0.01662