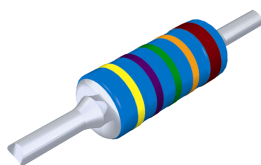


Balance of materials MRS16

valid as of KW 49 / 01



Part	Material	Weight (mg)	% of part	% of component
Substrate (Ceramic)	Al ₂ O ₃	6,94	85,00	5,645
	SiO ₂	0,81	10,00	0,659
	Glazeformer* MgO, BaO, CaO, SrO	0,36	4,39	0,293
	Trace elements TiO ₂ , Na ₂ O, K ₂ O, Fe ₂ O ₃	< 0,05	< 0,61	< 0,041
	<i>subtotal</i>	<i>8,16</i>	<i>100</i>	
Resistive layer (Metal film)	Nickel	0,004	40,00	0,003
	Chromium	0,006	60,00	0,005
<i>subtotal</i>	<i>0,07</i>	<i>100</i>		
Termination (Cap with leads)	Copper	98,470	87,48	80,09
	Iron	8,150	7,24	6,87
	Tin	5,730	5,09	4,66
	Nickel	0,150	0,13	0,12
	trace elements C, Mn, Si	< 0,042	< 0,04	< 0,03
	P (as NiP _x)	< 0,017	< 0,02	< 0,01
<i>subtotal</i>	<i>112,60</i>	<i>100</i>		
Insulation (Lacquer)	Polyurethane	1,17	61,00	0,95
	Pigments and fillers	0,67	35,00	0,54
	Phenolic resin	0,05	2,70	0,04
	Epoxi resin	0,03	1,30	0,02
<i>subtotal</i>	<i>1,92</i>	<i>100</i>		
All parts	total	122,95		100

*) The glaze forming metal oxides exist as silicates in ceramics.

Differences for values < 10 Ω

Resistive layer (Metal film)	Nickel	0,009	90,00	0,007
	Phosphorus	0,001	10,00	0,001
<i>subtotal</i>	<i>0,010</i>	<i>100</i>		

Differences for values > 332 KΩ

Resistive layer (Metal film)	Chromium	0,004	40,00	0,03
	Silicon	0,006	60,00	0,05
<i>subtotal</i>	<i>0,010</i>	<i>100</i>		

None of the materials used for the resistor production is contained in the "EACEM (European Association of Consumer Electronics Manufacturer) List of Hazardous Substances".