

ThermoFuse Varistor

Material Data Sheet

Product Class	Thermofuse Varistor B722xxR*V87 B722xxW*V87
Date	30.09.2019
IMDS ID if available	
Version	5.02

Product Part (IMDS: semi component)	Material Class (IMDS: Material)	Material (Classification) VDA 231	Substance	TMPS** [wt%]	CAS if applicable	typical mass of material [wt-%]	Traces see 1)
Active Part	Ceramic	3B	ZnO Bi2O3 Sb2O3 Co3O4 NiO others*)	91 4,0 2,5 1 0,5 1	1314-13-2 1304-76-3 1309-64-4 1308-06-1 1313-99-1	69,9	
Encapsulation	Duromer	2D Halogen-free coating	SiO2 Epoxy Pyromellitic dianhydride Phosphated epoxy others*)	46 40 6,5 5 2,5	60676-86-0 25036-25-3 89-32-7	12,1	
Termination	Composite	4D	Cu or Ag Glass frit (boro-silicate)	95 5	7440-50-8 7440-22-4	0,5	
High melting point solder	Heavy Metal	1C8	Sn Ag Cu	98,8 0,5 0,7	7440-31-5 7440-22-4 7440-50-8	2,0	
Low melting point solder	Heavy Metal	1C8	Sn Bi	42 58	7440-31-5 7440-69-9	0,5	
Ceramic box	Ceramic	3B	Al2O3 CaO SiO2 MgO others*)	94,1 2,9 1,0 0,7 1,3	1344-28-1 1305-78-8 15468-32-3 1309-48-4	5,7	
Ceramic slider	Ceramic	3B	Al2O3 CaO SiO2 MgO others*)	94,1 2,9 1,0 0,7 1,3	1344-28-1 1305-78-8 15468-32-3 1309-48-4	0,7	
Leads	Heavy Metal	1A 1C12 1C8	Fe Cu Sn	100 100 100	7439-89-6 7440-50-8 7440-31-5	7,0 0,2 0,3	
Coil Spring	Iron and steel	1A	Fe Cr Ni Si Mn others*)	67,8 20,0 10,5 0,4 1,2 0,1	7439-89-6 7440-47-3 7440-02-0 7440-21-3 7439-96-5	0,6	
Hot melt adhesive	Thermoplastic	2A	Polyamide Paraffin wax Additive others*)	85 10 4 1	63428-84-2 8002-74-2 6683-19-8	0,5	
Sum in total:						100	
sizes L*W [mm]	weight range [g]	part numbers	material number	sizes L*W [mm]	weight range [g]	part numbers	material number
22*17	3,0-10,9	NT14K130*-K680*	B72214R2*V87 B72214W2*V87	28*23	5,0-22,5	NT20K50*-K1000*	B72220R2*V87 B72220W2*V87
Not Part of a Product Class							

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Contact	Mr. Christoph Ronner			Important remarks: 1) The declaration limit is 0.1% as defined by IEC 62474 (IEC PAS 61906). Traces are product parts, substances etc. that are below a percentage of 0.1 % by weight, if not otherwise regulated. 2) This Material Data Sheet contains typical values of the respective products set forth herein. We expressly point out that all values and statements contained herein are based on our best present knowledge and cannot be regarded as binding statements or binding product specifications, unless otherwise explicitly agreed in writing. TDK ELECTRONICS AG AND ITS AFFILIATES HEREBY EXPRESSLY DISCLAIM ANY REPRESENTATION OR WARRANTY, WHETHER EXPRESS, IMPLIED OR STATUTORY, WITH REGARD TO THE STATEMENTS AND VALUES CONTAINED HEREIN, INCLUDING BUT NOT LIMITED TO ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR SUITABILITY FOR ANY PURPOSE.			
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	Tel: +43 3462 800 2139	mailto: functional.ppd-eqpm.db@tdk-electronics.tdk.com					
*) others: (not declarable or prohibited substances acc. GADSL)							
**) typical mass percentage of substance							
<p>The products set forth herein are "RoHS-compatible". RoHS-compatible means that products are compatible with the requirements according to Art. 4 (substance restrictions) of Directive 2011/65/EU of the European Parliament and of the Council of June 8th, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.</p> <p>RoHS - Exemptions for the Product Class / Product according to Annex III: (<input checked="" type="checkbox"/> valid <input type="checkbox"/> not valid)</p> <p><input checked="" type="checkbox"/> no exemptions;</p> <p><input type="checkbox"/> Exemption 6 (a): Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight;</p> <p><input type="checkbox"/> Exemption 6 (b): Lead as an alloying element in aluminium containing up to 0,4 % lead by weight;</p> <p><input type="checkbox"/> Exemption 6 (c): Copper alloy containing up to 4 % lead by weight;</p> <p><input type="checkbox"/> Exemption 7 (a): Lead in high melting temperature type solder (i.e. lead-based alloys containing 85 % by weight or more lead);</p> <p><input type="checkbox"/> Exemption 7 (c)-I: 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;</p> <p><input type="checkbox"/> Exemption 7 (c)-II: Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher;</p> <p><input type="checkbox"/> Exemption 7 (c)-III: Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC;</p> <p><input type="checkbox"/> Exemption 15: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages;</p> <p><input type="checkbox"/> Other Exemption than above</p>							