



Material Declaration Sheet

Vishay Inter-technology

Date: 12/20/2021

Part / Product Family Details

Part / Family Series	RoHS Compliance Status	RoHS Compliance Date Code	Total product Weight (mg)	Value Range	Product Type	Manufacturing Location	Number of Exemptions Used
CRCW2512 e3 (10R to less than 1M)	YES WITH EXEMPTION	16-Oct-2004	39.4498021	10R to less than 1M	Resistor	Vishay BCcomponents Beyschlag	1

Technical Information

Terminal Plating / Grid Array Material	Terminal Base Alloy	JESD-97 Pb-Free Material Code Marking	J-STD-20D MSL Rating	Reflow Peak Process Body Temperature	Reflow Maximum number of cycles	Reflow Max.Time at Peak Temperature (sec)	Soldering Compatibility (SnPb/Pb-Free)
Sn	Other	e3	1	260 ° C	3	40	Backward & Forward

Material Composition

Homogenous Material Name	Material Classification	Substance Name	CAS number	Weight of Substance (mg)	With respect to Homogenous Material		% with respect to Total Product Weight	RoHS Exemptions Used
					%	ppm		
Ceramic substrate	Ceramics / glass			36.09629				
		Aluminium oxide	1344-28-1	34.47196	95.50	955000	87.38	0 - None
		Magnesium oxide	1309-48-4	0.35735	0.99	9900	0.91	0 - None
		Miscellaneous System		0.21658	0.60	6000	0.55	0 - None
		Silicon dioxide	7631-86-9	1.05040	2.91	29100	2.66	0 - None
EP-QD-80	Other duromer			0.55259				
		Epoxy resin	25068-38-6	0.08841	16.00	160000	0.22	0 - None
		Silicon dioxide	7631-86-9	0.46418	84.00	840000	1.18	0 - None
Glass electrical contact	Ceramics / glass			0.01698				
		Lead silicate [Glass]	10099-76-0	0.01681	99.00	990000	0.04	7(c)-I
		Miscellaneous System		0.00017	1.00	10000	0.00	0 - None
Glass enamel	Ceramics / glass			0.23670				
		Chromium oxide (III)	1308-38-9	0.00497	2.10	20997	0.01	0 - None
		Lead silicate [Glass]	10099-76-0	0.23173	97.90	979003	0.59	7(c)-I
Glass layer	Ceramics / glass			0.16569				
		Lead silicate [Glass]	10099-76-0	0.08284	50.00	499970	0.21	7(c)-I
		Palladium	7440-05-3	0.02762	16.67	166697	0.07	0 - None
Nickel plating	Nickel alloys			0.05523	33.33	333333	0.14	0 - None
		Ruthenium oxide	12036-10-1					
		Miscellaneous System		0.50370				
Silver electrical contact	Other special metals			0.00050	0.10	1000	0.00	0 - None
		Nickel	7440-02-0	0.50320	99.90	999000	1.28	0 - None
				0.83196				
Silver layer	Other special metals			0.11046				
		Bismuthous oxide	1304-76-3	0.02547	3.06	30614	0.06	0 - None
		Chromium	7440-47-3	0.00001	0.00	9	0.00	0 - None
		Copper	7440-50-8	0.00001	0.00	14	0.00	0 - None
		Copper oxide	1317-38-0	0.00849	1.02	10205	0.02	0 - None
Sn99.9	Other special metals			0.79798	95.92	959157	2.02	0 - None
		Silver	7440-22-4					
		Miscellaneous System		0.11035	99.90	999000	0.28	0 - None
Sn99.9	Other special metals			0.93543				
		Miscellaneous System		0.00094	0.10	1000	0.00	0 - None
		Tin	7440-31-5	0.93449	99.90	999000	2.37	0 - None

EU-RoHS Directive-2011/65/EU MCV of 0.1% by mass (1000 PPM) in homogeneous material for: Lead (Pb), Mercury, Hexavalent Chromium, Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE) and MCV of 0.01% by mass cadmium

Exemption Used 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

Note :- (i) All information is based on data received from our vendors & subjected to change without prior notice.
(ii) Substance weight are derived from MSDS.