



Material Declaration Sheet

Vishay Inter-technology

Date 10/26/2020

Part / Product Family Details

Part / Family Series	RoHS Compliance Status	RoHS Compliance Date Code dd-mm-yyyy	Total product Weight (mg)	Value Range	3rd Party Lab ICP Test Report Available	Manufacturing Location	Number of Exemptions Used
VR37 series	YES WITH EXEMPTION	01-Oct-2004	461.796	All R values	Yes		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)
Pure matte tin	CU Alloy	e3	Not Applicable	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		
Ceramics	Ceramics / glass	Aluminium Oxide	1344-28-1	149.00000	46.77181	467718	15.091079	0 - None
		Barium oxide	1304-28-5	69.69000	8.12081	81208	2.620205	0 - None
		Magnesium oxide	1309-48-4	12.10000	0.08054	805	0.025986	0 - None
		Miscellaneous	System	1.50000	1.00671	10067	0.324819	0 - None
		Silicon dioxide	7631-86-9	65.59000	44.02013	440201	14.203241	0 - None
						197.00000		
Cu-ETP 1	Copper alloys	Copper	7440-50-8	196.80300	99.90000	999000	42.616870	0 - None
		Miscellaneous	System	0.19700	0.10000	1000	0.042660	0 - None
EP-QD 50	Other duromer			35.00000				
		CI Blue 15	147-14-8	0.10000	0.28571	2857	0.021655	0 - None
		Epoxy resin	2386-87-0	17.45000	49.85714	498571	3.778725	0 - None
		Quartz	14808-60-7	17.45000	49.85714	498571	3.778725	0 - None
Glass layer	ceramic/glass			1.20000				
		Aluminum oxide	1344-28-1	0.81000	67.50000	675000	0.175402	0 - None
		Lead Silicate	10099-76-0	0.30000	25.00000	250000	0.064964	7(c)-I
Nickel plating	Nickel alloy	Ruthenium dioxide	12036-10-1	0.09000	7.50000	75000	0.019489	0 - None
				1.66000				
		Miscellaneous	System	0.00166	0.10000	1000	0.000359	0 - None
Sn99.9	Other special metals	Nickel	7440-02-0	1.65834	99.90000	999000	0.359107	0 - None
				4.80000				
Steel	uSystemloyed, low alloyed	Miscellaneous	System	0.00480	0.10000	1000	0.001039	0 - None
		Tin	7440-31-5	4.79520	99.90000	999000	1.038381	0 - None
Steel	uSystemloyed, low alloyed			73.13600				
		Carbon	7440-44-0	0.03000	0.04102	410	0.006496	0 - None
		Copper	7440-50-8	0.02000	0.02735	273	0.004331	0 - None
		Iron	7439-89-6	72.92000	99.70466	997047	15.790522	0 - None
		Manganese	7439-96-5	0.15000	0.20510	2051	0.032482	0 - None
		Phosphorus	7723-14-0	0.01000	0.01367	137	0.002165	0 - None
		Sulphur	7704-34-9	0.00600	0.00820	82	0.001299	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. piezoelectric 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.

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