



Material Declaration Sheet

Vishay Inter-technology

Date 3/7/2018

Part / Product Family Details

Part / Family Series	RoHS Compliance Status	RoHS Compliance Date Code dd-mmm-yyyy	Total product Weight (mg)	Value Range	3rd Party Lab ICP Test Report Available	Manufacturing Location	Number of Exemptions Used
CRCW0603 e3 (10R to less than 10M)	YES WITH EXEMPTION	16-Oct-2004	2.1219021	10R to less than 10M	Yes	Israel	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)
Tin (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			1.7951300				
		Aluminium Oxide	1344-28-1	1.7168600	95.64	956399	80.91	0 - None
		Magnesium oxide	1309-48-4	0.0177700	0.99	9899	0.84	0 - None
		Silicon dioxide	7631-86-9	0.0522400	2.91	29101	2.46	0 - None
EP-QD 80	Other duromers	Miscellaneous	System	0.0082600	0.46	4601	0.39	0 - None
				0.0405300				
Glass electrical contact	Ceramics / glass	Epoxy resin	25068-38-6	0.0064848	16.00	160000	0.31	0 - None
		Silicon dioxide	7631-86-9	0.0340452	84.00	840000	1.60	0 - None
Glass enamel	Ceramics / glass			0.0017000				
		Lead silicate [Glass]	10099-76-0	0.0016983	99.90	999000	0.08	7(c)-1
Glass layer	Ceramics / glass	Miscellaneous	System	0.0000017	0.10	1000	0.0001	0 - None
				0.0129400				
Nickel Plating	Nickel alloys	Chromium oxide (III)	1308-38-9	0.0002704	2.09	20900	0.01	0 - None
		Lead silicate [Glass]	10099-76-0	0.0126696	97.91	979100	0.60	7(c)-1
Silver electrical contact alloy	Other special metals			0.0063660				
		Lead silicate [Glass]	10099-76-0	0.0031830	50.00	500000	0.15	7(c)-1
Silver layer	Other special metals	Palladium	7440-05-3	0.0010610	16.67	166667	0.05	0 - None
		Ruthenium oxide	12036-10-1	0.0021220	33.33	333333	0.10	0 - None
Sn99.9	Other special metals	Miscellaneous	System	0.0622502	0.10	1000	0.003	0 - None
		Nickel	7440-02-0	0.0621879	99.90	999000	2.93	0 - None
Sn99.9	Other special metals			0.0831219				
		Bismuthous oxide	1304-76-3	0.0025400	3.06	30558	0.12	0 - None
Sn99.9	Other special metals	Chromium	7440-47-3	0.0000007	0.001	8	0.00003	0 - None
		Copper	7440-50-8	0.0000012	0.001	14	0.00006	0 - None
Sn99.9	Other special metals	Copper oxide	1317-38-0	0.0008500	1.02	10226	0.04	0 - None
		Silver	7440-22-4	0.0797300	95.92	959194	3.76	0 - None
Sn99.9	Other special metals			0.0042440				
		Miscellaneous	System	0.0000042	0.10	1000	0.0002	0 - None
Sn99.9	Other special metals	Silver	7440-22-4	0.0042398	99.90	999000	0.20	0 - None
				0.1156200				
Sn99.9	Other special metals	Miscellaneous	System	0.0001156	0.10	1000	0.01	0 - None
		Tin	7440-31-5	0.1155044	99.90	999000	5.44	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)-1 - 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.

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