



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
CRCW0805 e3 (10R to less than 10M)	YES WITH EXEMPTION	16-Oct-2004	4.2950038	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)
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			3.7881900				
		Aluminium oxide	1344-28-1	3.6230200	95.640	956399	84.35429	0 - None
		Magnesium oxide	1309-48-4	0.0375000	0.990	9899	0.87311	0 - None
		Miscellaneous	System	0.0174300	0.460	4601	0.40582	0 - None
		Silicon dioxide	7631-86-9	0.1102400	2.910	29101	2.56670	0 - None
EP-QD-80	Other duromers			0.0644300				
		Epoxy resin	25068-38-6	0.0103088	16.000	160000	0.24002	0 - None
		Silicon dioxide	7631-86-9	0.0541212	84.000	840000	1.26010	0 - None
Glass electrical contact	Ceramics / glass			0.0031100				
		Lead silicate [Glass]	10099-76-0	0.0031069	99.900	999000	0.07234	7(c)-I
		Miscellaneous	System	0.0000031	0.100	1000	0.00007	0 - None
Glass enamel	Ceramics / glass			0.0257700				
		Chromium oxide (III)	1308-38-9	0.0005386	2.090	20900	0.01254	0 - None
		Lead silicate [Glass]	10099-76-0	0.0252314	97.910	979100	0.58746	7(c)-I
Glass layer	Ceramics / glass			0.0128800				
		Lead silicate [Glass]	10099-76-0	0.0064400	50.000	500000	0.14994	7(c)-I
		Palladium	7440-05-3	0.0021500	16.693	166925	0.05006	0 - None
		Ruthenium oxide	12036-10-1	0.0042900	33.307	333075	0.09988	0 - None
Nickel Plating	Nickel alloys			0.0839504				
		Miscellaneous	System	0.0000840	0.100	1000	0.00195	0 - None
		Nickel	7440-02-0	0.0838664	99.900	999000	1.95265	0 - None
Silver electrical contact alloy	Other special metals			0.1521434				
		Chromium	7440-47-3	0.0000013	0.001	9	0.00003	0 - None
		Copper	7440-50-8	0.0000021	0.001	14	0.00005	0 - None
		Copper oxide	1317-38-0	0.0038800	2.550	25502	0.09034	0 - None
		Silver	7440-22-4	0.1482600	97.448	974475	3.45192	0 - None
Silver layer	Other special metals			0.0085900				
		Miscellaneous	System	0.0000086	0.100	1000	0.00020	0 - None
		Silver	7440-22-4	0.0085814	99.900	999000	0.19980	0 - None
Sn99.9	Other special metals			0.1559400				
		Miscellaneous	System	0.0001559	0.100	1000	0.00363	0 - None
		Tin	7440-31-5	0.1557841	99.900	999000	3.62710	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.

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