



# Material Declaration Sheet

Vishay General Semiconductor - PDD

Date 28/Jul/18

## Part / Product Family Details

Vishay Part Number	RoHS Compliance Status	RoHS Compliance Date Code dd-mm-yyyy	Total product Weight (gm)	Resistance value	3rd Party Lab ICP Test Report Available	Manufacturing Location	Number of Exemptions Used
P2SMAnnnA-M3 P4SMAnnnA-M3 SMA5Jxx (A) -M3 SMAJxx (A) -M3 SMAZ5919B-M3 to SMAZ5945B-M3 P4SMAnnnCA-M3 SMA5JxxC (A) -M3 SMAJxxC (A) -M3	YES WITH EXEMPTION	01-12-2004	0.064	N/A	Yes	China	Two

## Technical Information: refer to <http://www.vishay.com/how/leadfree/#summary>

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)

## Material Composition

Homogenous Material Name	Material Classification	Substance Name	CAS number	Weight of Substance (gm)	With respect to Homogenous Material		% with respect to Total Product Weight	RoHS Exemptions Used
					%	ppm		
Chip	Electronics (e.g. pc boards, displays)	Silicon and others (business secret)	-	0.00190	100.00	1000000	2.97	Exemption No:7(c)-I
Lead Frame	Copper (e.g. copper amounts in cable harnesses)	Copper	7440-50-8	0.02300	100.00	1000000	35.94	
Solder 92.5	Other special metals	Lead	7439-92-1	0.00231	92.50	925000	3.61	Exemption No:7(a)
		Tin	7440-31-5	0.00013	5.00	50000	0.20	
Encapsulation	Other duromers	Silver	7440-22-4	0.00006	2.50	25000	0.10	
		Silica	60676-86-0	0.02802	80.00	800000	43.78	
		Epoxy Resin	29690-82-2	0.00349	10.00	100000	5.45	
Surface finish	Other special metals	Phenol Resin	9003-35-4	0.00332	9.50	95000	5.18	
		Carbon Black	1333-86-4	0.00017	0.50	5000	0.27	
		Tin	7440-31-5	0.00160	100.00	1000000	2.50	

**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

This MDS valid for  
List of PN's

**Exemption Used** 7(a) - Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)

**2nd 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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into your Design

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