Vishay Lead-Free Family Summary Sheet - Capacitor Components

VISHAY.

LEAD FREE MATRIX - CAPACITORS
Last Update: 09 August 2015

Product Description			IPC/JEDEC Standard 609A - Pb Free "2nd-Level Interconnect" Status										Soldering & Reflow Profile					RoHS Status						China Pollution Act Information (ST/T11363-2006) - China RoHS Status									PCN Status	
Technology/ Product Line	Product Family	Vishay Division	Pb-free Qualification Report Available (Yes/No)	Pb-free Samples Available (Yes/No)	Pb-free Mass Production (Q'Y)	Pb/Pb-free Material Code Marking	How to Order Lead Free Part (Web)	Termination code (TR)	Termination Plating Finish	Plating Underlayer	Terminals Base Material/Alloy	Tin Lead (SnPb) Products/Termination available (Yes/No)	J-STD-020 Moisture Sensitivity Level Rating	Backward Compatibility	Peak Reflow Temperature (Deg C)	Time @ Peak Reflow Temperature (sec)	Maximum Number of Cycles Allowed @ Peak Reflow Temperature	RoHS Compliant (Yes/No/YwE)	Exemptions Used (Exemption # only)	RoHS Qualification Report Available (Yes/No)	RoHS Compliant Samples Available (Yes/No)	RoHS Compliant Mass Production (Q'Y)	Phthalate substances Present (DEHP/BBP/DBP/DIBP)	China ROHS Compliant (YES/NO) 符合 中国 RoHS (是/否)	EPUP (YEARS) 环保使用期限 (年)	Location of Hazardous Substance(s) 有毒有害物质所在部件	Pb 铅 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Hg 汞 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Cd 镉 X for C>MCV O for C<MCV 0,01 wt% (SJ/T11363-2006)	Cr(VI) 六价铬 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBB 多溴联苯 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBDE 多溴二苯醚 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Product Change Notification No#. / Ref#	Product Change Notification Date
ALUMINUM / ELECTROLYTIC																																		
ALU ROE	Radial EKA, EKB, EKC, EKE, EKV	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	Oct-04
ALU ROE	Snap-In EYN, EYH	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	Oct-04
ALU ROE	SMD Vertical ECA, ECL, ECV	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	1	Yes	230-250	10	2	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	N/A	N/A
ALU ROE	Axial ELM / EBM, EBC, EBR, EBL / EGL	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU ROE	Mounting Ring EGL	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5 / Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU ROE	DIN-PW+SL EYK, EYV	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5 / Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-004-2005	27 May 2005
ALU BCC	ST 101../102../103../104../106../500.. series	ALU	Yes	Yes	Yes	NA	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		-	-	Al	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	N/A	N/A
ALU BCC	Mounting Accessories for SL and ST series MAL804324011E3 (dia 25) MAL804324021E3 (dia 30) MAL804324031E3 (dia 35) MAL804324041E3 (dia 40) MAL804324051E3 (dia 50) MAL804324061E3 (dia 65)	ALU	Yes	Yes	Yes	NA	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		RoHS compliant passivation	Zn	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-004-2006	30 Jun 2006
ALU BCC	Mounting Accessories for SL and ST series MAL804323322 (dia 76)	ALU	Yes	Yes	Yes	NA	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		-	-	Stainless steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-004-2006	30 Jun 2006
ALU BCC	Axial 021../030../031../041../042../043../117../118../119../120../ 132../133../138.. series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	Mounting Ring 021../041../042../043../118../119../120../ 132../133../138.. series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5 / Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	Radial 013../036../038../046../047../048../116../134../136../ 140../142../146../148../150../151../152..series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	Radial 097.. series	ALU	Yes	Yes	Yes	e6	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		Sn/SnBi3	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	Snap-In + DIN-PW + SL 050../051../052../053../056.../057../ 058../059../093../094../095../096../100../156../157../158../ 159../162../163../193../197../198../199.. series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5 / Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	SMD Horizontal 085../ 139.. Series NOT suitable for Lead Free Reflow Soldering	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5	Cu	No	1	Yes	225	10	2	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	SMD Vertical 140../146../150../160.. 99xyz series Extended Lead Free Reflow Soldering acc.JEDEC J-STD 020	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	1	Yes	245-260	30-40	2	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	N/A	N/A
ALU BCC	SMD Vertical 140../150.. 97xyz series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	1	Yes	240-250	5-10	2	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	SMD Vertical 140../150.. 95xyz series NOT suitable for Lead Free Reflow Soldering	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	1	Yes	225	10	2	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	SMD Vertical 153 7wxyz series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	1	Yes	240-250	5-10	2	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	SMD Vertical 153 6wxyz series NOT suitable for Lead Free Reflow Soldering	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	1	Yes	225	10	2	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU BCC	SAL Axial 123 series Lead (Pb-) Free PNs: MAL2123xxxxxE3	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-002-2005 rev 4	31 Oct 2005
ALU BCC	SAL Axial 123 series Lead (Pb-) Containing PNs: MAL2123xxxxx	ALU	NA	NA	NA		N/A		SnPb5 + SnPb40		Cu	Yes	N/A	Yes	N/A	N/A	N/A	YwE	7b	Yes	Yes	Yes	No	No	50	solder coating	X	O	O	O	O	O	PCN-AC-002-2005 rev 4	31 Oct 2005
ALU BCC	SAL Radial 128 series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu6Sn5	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-002-2005 rev 4	31 Oct 2005
ALU BCC	EDLC 196 series	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	HPC-55-04010	12 July 2004
ALU INDIA	Radial MAL5037../038../044../045../135../136../190../191../193..	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	2002
ALU INDIA	Snap-In MAL5014../157../159..	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	2002
ALU SPRAGUE	Mounting Accessories for ST series 1245860035A (dia 34.9 mm) 1245860036A (dia 50.8 mm) 1245860037A (dia 63.5 mm) 1245860038A (dia 76.2 mm)	ALU	Yes	Yes	Yes	NA	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		RoHS compliant passivation	Zn	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-901-2006	9 Jun 2006
ALU SPRAGUE	Axial TE, TVA Lead (Pb-) Free	ALU	Yes	Yes	Yes	e3	Add "-E3" to Standard Part Nrs http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	2006
ALU SPRAGUE	Axial TE, TVA Lead (Pb-) Containing	ALU	NA	NA	NA		N/A		SnPb5	Cu	Cu	Yes	N/A	Yes	N/A	N/A	N/A	No	No	No	No	No	No	No	50	solder coating	X	O	O	O	O	O	-	-
ALU SPRAGUE	Axial 34D, 40D NOT for new designs !! Lead (Pb-) Containing	ALU	NA	NA	NA		N/A		SnPb5	Cu	Cu	Yes	N/A	Yes	N/A	N/A	N/A	No	No	No	No	No	No	No	50	solder coating	X	O	O	O	O	O	-	-
ALU SPRAGUE	Axial 30D, 34D, 39D, 40D, 53D, 500D, 600D, 601D, 604D, 610D, 630D Lead (Pb-) Free	ALU	Yes	Yes	Yes	e3	Add "-E3" to Standard Part Nrs http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	2006
ALU SPRAGUE	Axial 30D, 34D, 39D, 40D, 53D, 500D, 600D, 601D, 604D, 610D, 630D Lead (Pb-) Containing	ALU	NA	NA	NA		N/A		SnPb5	Cu	Cu	Yes	N/A	Yes	N/A	N/A	N/A	No	No	No	No	No	No	No	50	solder coating	X	O	O	O	O	O	-	-
ALU SPRAGUE	Radial 510D, 510DX, 511D, 672D, 678D, 757D Lead (Pb-) Free	ALU	Yes	Yes	Yes	e3	Add "-E3" to Standard Part Nrs http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	2006
ALU SPRAGUE	Radial 510D, 510DX, 511D, 672D, 678D, 757D Lead (Pb-) Containing	ALU	NA	NA	NA		N/A		SnPb5	Cu	Cu	Yes	N/A	Yes	N/A	N/A	N/A	No	No	No	No	No	No	No	50	solder coating	X	O	O	O	O	O	-	-
ALU SPRAGUE	Axial 516D	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-001S-2005 Rev 0	28 Apr 2005
ALU SPRAGUE	Radial 515D, 517D	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-001S-2005 Rev 0	28 Apr 2005
ALU SPRAGUE	Snap-In 80D	ALU	Yes	Yes	Yes	e3	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% matte tin	Cu	Fe	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	PCN-AC-001S-2005 Rev 0	28 Apr 2005
ALU SPRAGUE	ST 36D, 36DE, 36DX, 36DY	ALU	Yes	Yes	Yes	NA	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		-	-	Al	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	-	2006
ALU SPRAGUE	OS-CON SMD 94SVP, 94SVPD	ALU	Yes	Yes	Yes	e4	Standard Part Nrs in datasheet http://www.vishay.com/capacitors/aluminum/		100% Ag	Cu	Fe or Cu	No	3	Yes	260	10	1	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	N/A	N/A
CERAMIC CAPACITOR																																		
DRALORIC Disc Capacitors Safety Standard Approved	VKO, VKP, W1X, WKO, WKP, WYO	DR	Yes	Yes	01/2004	e3	PN ends on "R"		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	01/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-013-2004 A	Oct 18, 2004
DRALORIC Disc capacitors HV Disc Class 1 Dielectric	HAU, HBU, HCU, HDU, HEU, HFU	DR	Yes	Yes	01/2004	e3	PN ends on "R"		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	01/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-013-2004 A	Oct 18, 2004
DRALORIC Disc capacitors DC & HV Disc Class 2 Dielectric	HSE, HSZ, HAZ, HAE, HAX, HBZ, HBE, HBX, HCZ, HCE, HCX, HDE, HEE, HFZ, HFE, HGZ, HHZ, HIZ	DR	Yes	Yes	01/2004	e3	PN ends on "R"		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	01/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-013-2004 A	Oct 18, 2004
DRALORIC Disc capacitors Impulse Class 2 Dielectric	HAK, HBK, HCK, HIK, IBC	DR	Yes	Yes	01/2004	e3	PN ends on "R"		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	01/2005	No	No	50	Ceramics, Electrode	X	O	O	O	O	O	CC-013-2004 A	Oct 18, 2004
DRALORIC Disc capacitors Impulse Class 1 Dielectric	IEL	DR	Yes	Yes	01/2004	e3	PN ends on "R"		matte Sn100	Ni	Cu	Yes	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	01/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-013-2004 A	Oct 18, 2004
DRALORIC SL Capacitors Feedthru Class 1 Dielectric	DDLK 03.., DDML 03.., DUML 03.., DZML 03..,	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Feedthru Class 2 Dielectric	DDLK 03.., DDML 03.., DUML 03.., DZML 03.., DVML 04.., DVZL 04.., DDML 08..	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Feedthru Class 1 Dielectric	DDMZ 0315	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Feedthru Class 2 Dielectric	DDMZ 0315	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Filter Class 2 Dielectric	DDNL 04.., DDML 04..	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Filter Class 2 Dielectric	DDML 03.., DDMZ 03..	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Tubular Class 1 Dielectric	RDPT.., RDQT.., RDLT.., MDLT..	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Tubular Class 2 Dielectric	RDPT.., RDQT.., RDLT.., MDLT..	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Tubular Class 1 Dielectric	RDLL.., RDQL.., MDLL..	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
DRALORIC SL Capacitors Tubular Class 2 Dielectric	RDLL.., RDQL.., MDLL..	DR	Yes	Yes	04/2004	e3	PN ends on "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I	Yes	Yes	02/2005	No	No	50	Electrode	X	O	O	O	O	O	CC-001-2005 0	Apr 4, 2005
CERAMIC BCC - MLC Leaded	AXIAL KAP A...	BC	No	Yes	01/2002	e3	Standard PN		matte Sn100	None	Cu-clad Steel	No	N/A	Yes	N/A	N/A	N/A	Yes		No	Yes	01/2002	No	Yes			O	O	O	O	O	O	NA	Compliant from release date
CERAMIC BCC - MLC Leaded	MONO KAP K..., 1C..., 2C..., 3C...	BC	No	Yes	01/2002	e3	Standard PN		matte Sn100	None	Cu-clad Steel	No	N/A	Yes	N/A	N/A	N/A	Yes		No	Yes	01/2002	No	Yes			O	O	O	O	O	O	NA	Compliant from release date
BCC RFI new Series	VY1.., VY2..	BC	Yes	Yes	01/2005	e3	Standard PN		matte Sn100	None	Cu-clad Steel	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	01/2005	No	Yes	50	Ceramics	X	O	O	O	O	O	N/A	Compliant from release date
BCC Disc-Capacitors - Gen. Purpose Class 1	Cleartext Code D.../Code S....	BC	Yes	Yes	02/2004	e3	16th digit of PN is "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	01/2005	No	Yes			O	O	O	O	O	O	CC-017-2004 B	Aug 16, 2005
BCC Disc-Capacitors - Gen. Purpose Class 2	Cleartext Code D.../ Code S..../Code H...	BC	Yes	Yes	02/2004	e3	16th digit of PN is "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	01/2005	No	Yes			O	O	O	O	O	O	CC-017-2004 B	Aug 16, 2005
BCC Disc Capacitors - Low loss Class 2	Cleartext Code F...	BC	Yes	Yes	02/2004	e3	16th digit of PN is "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-II	Yes	Yes	01/2005	No	No	50	Ceramics	X	O	O	O	O	O	CC-017-2004 B	Aug 16, 2005
BCC - GAP KAP	Cleartext Code S...	BC	Yes	Yes	02/2004	e3	16th digit of PN is "R"		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	01/2005	No	Yes			O	O	O	O	O	O	CC-017-2004 B	Aug 16, 2005
CERAMITE Disc Capacitors Lower Voltage Class 1	GA.., HK.., HM.., TC.., TG.., TS..	CR	Yes	Yes	03/2004	e3	PN starts with 56*R		matte Sn100	Ni	Cu or Cu-clad Steel	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	02/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-015-2004 A	Oct 18, 2004
CERAMITE Disc Capacitors Lower Voltage Class 2	GA.., HK.., HM.., TC.., TG.., TS..	CR	Yes	Yes	03/2004	e3	PN starts with 56*R		matte Sn100	Ni	Cu or Cu-clad Steel	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	02/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-015-2004 A	Oct 18, 2004
CERAMITE Disc Capacitors AC Line Rated	440L, 30LV, 30LVS, 25Y, 125L, 20VL	CR	Yes	Yes	03/2004	e3	PN ends on "-R"		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	02/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-015-2004 A	Oct 18, 2004
CERAMITE Disc Capacitors Low DF Class 2	1DFO.., 2DFO.., 3DFO..	CR	Yes	Yes	03/2004	e3	PN starts with 56*R		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I, 7(c)-II	Yes	Yes	02/2005	No	No	50	Ceramics, Electrode	X	O	O	O	O	O	CC-015-2004 A	Oct 18, 2004
CERAMITE Disc Capacitors High Voltage Class 1 & 2	20GA.., 20TS.., 30GA.., 30TS.., 60GA..,	CR	Yes	Yes	03/2004	e3	PN starts with 56*R		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	02/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-015-2004 A	Oct 18, 2004
CERAMITE Disc Capacitors High Voltage Class 2	Dual Disc, higher Capacitance values	CR	Yes	Yes	03/2004	e3	PN starts with 565R		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	02/2005	No	Yes	50	Electrode	X	O	O	O	O	O	CC-015-2004 A	Oct 18, 2004
DRALORIC - HF Power Capacitors	Plate Capacitors	DR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
DRALORIC - HF Power Capacitors	Barrel Style Capacitors	DR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
DRALORIC - HF Power Capacitors	Feed-Through Capacitors	DR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
DRALORIC - HF Power Capacitors	Tubular Capacitors	DR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
DRALORIC - HF Power Capacitors	Pot Capacitors	DR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
DRALORIC - HF Power Capacitors	Watercooled Power RF-Capacitors	DR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
DRALORIC - HV Capacitors	HV Disc, Ring-styled	DR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
DRALORIC - HV Capacitors	Capacitor Stacks, Cascades	DR	Yes	Yes	04/2004	e3	Standard PN		hot-dip Sn100	None	Cu	No	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	Yes	NA	No	No	50	Solder, Ceramics	X	O	O	O	O	O	NA	NA
CERAMITE - Radial leaded HV Capacitors	75GA.....100GA....150 GA...	CR	Yes	Yes	01/2006	e3	PN starts with "615R"		matte Sn100	Ni	Cu	No	N/A	Yes	N/A	N/A	N/A	Yes		Yes	Yes	03/2005	No	Yes	50		0	O	O	O	O	O	CC-015-2004 A	Oct 18, 2004
CERAMITE - Axial leaded HV Capacitors	660C series	CR	Yes	Yes	02/2006	e3	PN ends on "ZZ"		matte Sn100	Ni	Cu-clad Steel	Yes	N/A	Yes	N/A	N/A	N/A	Out of Scope		NA	Yes	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
CERAMITE - Heavy Duty HV Capacitors	715C series	CR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	7(c)-I, 7(c)-II	NA	Yes	NA	No	No	50	Electrode	X	O	O	O	O	O	NA	Compliant from release date

Vishay Lead-Free Family Summary Sheet - Capacitor Components

Product Description			IPC/JEDEC Standard 609A - Pb Free "2nd-Level Interconnect" Status										Soldering & Reflow Profile					RoHS Status						China Pollution Act Information (ST/T11363-2006) - China RoHS Status									PCN Status	
Technology/ Product Line	Product Family	Vishay Division	Pb-free Qualification Report Available (Yes/No)	Pb-free Samples Available (Yes/No)	Pb-free Mass Production (Q/Y)	Pb/Pb-free Material Code Marking	How to Order Lead Free Part (Web)	Termination code (TR)	Termination Plating Finish	Plating Underlayer	Terminals Base Material/Alloy	Tin Lead (SnPb) Products/Termination available (Yes/No)	J-STD-020 Moisture Sensitivity Level Rating	Backward Compatibility	Peak Reflow Temperature (Deg C)	Time @ Peak Reflow Temperature (sec)	Maximum Number of Cycles Allowed @ Peak Reflow Temperature	RoHS Compliant (Yes/No/YwE)	Exemptions Used (Exemption # only)	RoHS Qualification Report Available (Yes/No)	RoHS Compliant Samples Available (Yes/No)	RoHS Compliant Mass Production (Q/Y)	Phthalate substances Present (DEHP/BBP/DBP/DIBP)	China ROHS Compliant (YES/NO) 符合中国 RoHS (是/否)	EPUP (YEARS) 环保使用期限 (年)	Location of Hazardous Substance(s) 有毒有害物质所在部件	Pb 铅 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Hg 汞 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Cd 镉 X for C>MCV O for C<MCV 0,01 wt% (SJ/T11363-2006)	Cr(VI) 六价铬 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBB 多溴联苯 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBDE 多溴二苯醚 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Product Change Notification No#. / Ref#	Product Change Notification Date
CERAMITE - RF Duty Capacitors	5F.., 7F.. Series	CR	No	Yes	<-- 2000	e4	Standard PN		Ag	None	Brass / Cu	No	N/A	Yes	N/A	N/A	N/A	YwE	6(c), 7(c)-I, 7(c)-II	NA	No	NA	No	No	50	Solder	X	O	O	O	O	O	NA	NA
FILM CAPACITOR																																		
DC capacitors	2222 370	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 370 91	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 371	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 372	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 373	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 470	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 471 9	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 365/ 366 / 367 BFC23657xxxx/8xxxx, BFC23667xxxx/8xxxx and BFC23677xxxx/8xxxx - EOL)	BC																					No											
DC capacitors	2222 368	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 369	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 465	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 466	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 467 / 469	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 468	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
DC capacitors	2222 347	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 380	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 379 10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 379	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 378	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 376	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 375 10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 375 > 10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 479 10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 479 >10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC /pulse capacitors	2222 383	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 336 10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 338 2 < = 10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 338 2 > 10mm pitch	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 338 4 < 37,5mm	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 338 4 pitch 37,5 and 55 mm	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 338 6	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 338 1	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	2222 339	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
precision	2222 416 / 417 / 418/419/420 5mm	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
precision	2222 416 / 417 / 418/419/420 10mm	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
precision	2222 416 / 417 / 418/419/420 15mm	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
precision	2222 422	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
IPD	2222 401	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
IPD	2222 405	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Trimmer	2222 808 / 809	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
CDI	2215 314 , 313	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
others	2215 366,367, 368, 369, 347, 361	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
others	2215 360, running, 2215 312, 2215 357 - EOL	BC																					Contact vpecm.surveys@vishay.com											
snubber	2222 386	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
AC&Pulse	2222 385	BC	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1817 standard	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1818	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1820	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1820-615/25x-1	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1822 (pcm > 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1822 (pcm <= 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1830	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1836	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1840 (pcm <= 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1840 (pcm > 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1841 (pcm <= 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1841 (pcm > 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1844	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
Film ERO radial DC	1846	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	1710 pcm 10	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	1710 (pcm >10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	1772	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	1774	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	1778 (pcm 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
RFI	1778 (pcm > 10)	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial DC	MKT 1813 Polyester wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial DC	MKT 1813 Polycarbonate wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial DC	MKP 1839 Polyester wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial DC	MKP 1839 Polycarbonate wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial DC	MKP 1845 Polycarbonate wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial AC	MKP 1842 Polycarbonate wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial RFI	F 1773 Polyester wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO	1848	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO	1849	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
FILM ERO Axial RFI	F 1773 Polycarbonate wrapped	RO	Yes	Yes	Yes	Yes	Standard PN		100% matte tin	Dependent on Part number - Nickel underlayer	Copper or Copper clad steel	No	N/A	Yes	N/A	N/A	N/A	Yes	No	Yes	Yes	Yes	No	Yes			O	O	O	O	O	O	available with Marketing	available with Marketing
MLCC																																		
MLCC VITRAMON	**VJ Commercial Series (Document # 45199)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ Commercial Series (Document # 45199)** Termination code "B" (polymer layer 100% matte tin plated)	VT				e3	Standard PN	B TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ Commercial Series (Document # 45199)** Termination code "E" (AgPd)	VT				e4	Standard PN	E TR	Ag/Pd	None	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ Commercial Series (Document # 45199)** Termination code "F" (AgPd)	VT				e4	Standard PN	F TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ X8R Series (Document # 45006)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 003 2012 MLC 005 2012	15.Nov.2012 01.Jan.2013
MLCC VITRAMON	**VJ X8R Series (Document # 45006)** Termination code "E" (AgPd)	VT				e4	Standard PN	E TR	Ag/Pd	None	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 003 2012 MLC 005 2012	15.Nov.2012 01.Jan.2013
MLCC VITRAMON	**VJ X8R Series (Document # 45006)** Termination code "F" (AgPd)	VT				e4	Standard PN	F TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 003 2012 MLC 005 2012	15.Nov.2012 01.Jan.2013
MLCC VITRAMON	**VJ High Q Series (Document # 45050)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ High Q Series (Document # 45050)** Termination code "E" (AgPd)	VT				e4	Standard PN	E TR	Ag/Pd	None	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ High Q Series (Document # 45050)** Termination code "F" (AgPd)	VT				e4	Standard PN	F TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ HIFREQ (Document # 45071)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ HIFREQ (Document # 45071)** Termination code "E" (AgPd)	VT				e4	Standard PN	E TR	Ag/Pd	None	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ HIFREQ (Document # 45071)** Termination code "N" (non-magnetic)	VT				e4	Standard PN	N TR	Ag/Pd	Ag	Ceramics	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ HIFREQ (Document # 45071)** Termination code "L" (tin/lead min 4% lead)	VT				N/A	N/A	L TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**QUAD HIFREQ (Document # 45221)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**QUAD HIFREQ (Document # 45221)** Termination code "L" (tin/lead min 4% lead)	VT				N/A	N/A	L TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ OMD Series (Document # 45198)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ OMD Series (Document # 45198)** Termination code "B" (polymer layer 100% matte tin plated)	VT				e3	Standard PN	B TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ OMD Series (Document # 45198)** Termination code "E" (AgPd)	VT				e4	Standard PN	E TR	Ag/Pd	None	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ OMD Series (Document # 45198)** Termination code "F" (AgPd)	VT				e4	Standard PN	F TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ OMD Series (Document # 45198)** Termination code "N" (non-magnetic)	VT				e4	Standard PN	N TR	Ag/Pd	Ag	Ceramics	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ HVArcGuard Series (Document # 45197)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ HVArcGuard Series (Document # 45197) - X7R only** Termination code "B" (polymer layer 100% matte tin plated)	VT				e3	Standard PN	B TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012

Vishay Lead-Free Family Summary Sheet - Capacitor Components

Product Description			IPC/JEDEC Standard 609A - Pb Free "2nd-Level Interconnect" Status										Soldering & Reflow Profile					RoHS Status						China Pollution Act Information (ST/T11363-2006) - China RoHS Status									PCN Status	
Technology/ Product Line	Product Family	Vishay Division	Pb-free Qualification Report Available (Yes/No)	Pb-free Samples Available (Yes/No)	Pb-free Mass Production (Q/Y)	Pb/Pb-free Material Code Marking	How to Order Lead Free Part (Web)	Termination code (TR)	Termination Plating Finish	Plating Underlayer	Terminals Base Material/Alloy	Tin Lead (SnPb) Products/Termination available (Yes/No)	J-STD-020 Moisture Sensitivity Level Rating	Backward Compatibility	Peak Reflow Temperature (Deg C)	Time @ Peak Reflow Temperature (sec)	Maximum Number of Cycles Allowed @ Peak Reflow Temperature	RoHS Compliant (Yes/No/YwE)	Exemptions Used (Exemption # only)	RoHS Qualification Report Available (Yes/No)	RoHS Compliant Samples Available (Yes/No)	RoHS Compliant Mass Production (Q/Y)	Phthalate substances Present (DEHP/BBP/DBP/DIBP)	China ROHS Compliant (YES/NO) 符合中國 RoHS (是/否)	EPUP (YEARS) 环保使用期限 (年)	Location of Hazardous Substance(s) 有毒有害物质所在部件	Pb 铅 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Hg 汞 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Cd 镉 X for C>MCV O for C<MCV 0,01 wt% (SJ/T11363-2006)	Cr(VI) 六价铬 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBB 多溴联苯 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBDE 多溴二苯醚 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Product Change Notification No#. / Ref#	Product Change Notification Date
MLCC VITRAMON	**VJ HVArcGuard Series (Document # 45197)** Termination code "E" (AgPd)	VT				e4	Standard PN	E TR	Ag/Pd	None	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ HVArcGuard Series (Document # 45197)** Termination code "F" (AgPd)	VT				e4	Standard PN	F TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ HVArcGuard Series (Document # 45197)** Termination code "N" (non-magnetic)	VT				e4	Standard PN	N TR	Ag/Pd	Ag	Ceramics	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ...31 / VJ..34 Automotive MLCC (Document # 45040)** Termination code "X" (100% matte tin plated) Detail ratings see datasheet : http://www.vishay.com/doc?45050	VT				e3	Standard PN	X TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	detail ROHS status see datasheet http://www.vishay.com/doc?45050	7c-I and/or 7cI+7cII and or 7cI+7cIII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45050	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ...31 / VJ..34 Automotive MLCC (Document # 45040)** Termination code "B" (polymer layer 100% matte tin plated) Detail ratings see datasheet : http://www.vishay.com/doc?45050	VT				e3	Standard PN	B TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	detail ROHS status see datasheet http://www.vishay.com/doc?45050	7c-I and/or 7cI+7cII and or 7cI+7cIII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45050	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ...31 / VJ..34 Automotive MLCC (Document # 45040)** Termination code "E" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45050	VT				e4	Standard PN	E TR	Ag/Pd	None	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45050	none or 7cII or 7cIII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45050	N/A	None / Ceramic	O	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ...31 / VJ..34 Automotive MLCC (Document # 45040)** Termination code "F" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45050	VT				e4	Standard PN	F TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45050	7c-I and/or 7cI+7cII and or 7cI+7cIII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45050	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Safety Certified Capacitors C0G(NP0) (Document # 45007)** **VJ Safety Certified Capacitors X7R (Document # 45020)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Source Energy Capacitor (SEC) (Document # 45210)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni		N/A	N/A	Yes	260	40	3	Yes	none				Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Controlled Discharge Capacitors (CDC) (Document # 45203)** Termination code "X" (100% matte tin plated)	VT				e3	Standard PN	X TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Controlled Discharge Capacitors (CDC) (Document # 45203)** Termination code "L" (tin/lead min 4% lead)	VT				N/A	N/A	L TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Non-Magnetic Series (Document # 45128)** Termination code "N" (non-magnetic)	VT				e4	Standard PN	N TR	Ag/Pd	Ag	Ceramics	N/A	N/A	Yes	260	40	3	YwE	7c-I				Contact vpecm.surveys@vishay.com	No	50	Glass	X	O	O	O	O	O	MLC 001 2012	08.Mar.2012
MLCC VITRAMON	**VJ Hi-Rel Series (Document # 45200)** Process Codes 2L,2M,68,5G Termination code "X" (100% matte tin plated) Detail ratings see datasheet : http://www.vishay.com/doc?45200	VT				e3	Standard PN	X TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	detail ROHS status see datasheet http://www.vishay.com/doc?45200	7c-I and/or 7cI+7cII and or 7cI+7cIII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45200	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Hi-Rel Series (Document # 45200)** Process Codes 2L,2M,68,5G Termination code "F" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45200	VT				e4	Standard PN	F TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45200	7c-I and/or 7cI+7cII and or 7cI+7cIII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45200	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Hi-Rel Series (Document # 45200)** Process Codes 2L,2M,68,5G Termination code "N" (non-magnetic) Detail ratings see datasheet : http://www.vishay.com/doc?45200	VT				e4	Standard PN	N TR	Ag/Pd	Ag	Ceramics	N/A	N/A	Yes	260	40	3	detail ROHS status see datasheet http://www.vishay.com/doc?45200	7c-I and/or 7cI+7cII and or 7cI+7cIII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45200	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**VJ Hi-Rel Series (Document # 45200)** Process Codes 2L,2M,68,5G Termination code "L" (tin/lead min 4% lead all values / all voltages of series : http://www.vishay.com/doc?45200	VT				N/A	N/A	L TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**CDR-MIL-PRF-55681 (Document # 45026)** Termination code "Y" and "W" (100% matte tin plated) Detail ratings see datasheet : http://www.vishay.com/doc?45026	VT				e3	Standard PN	"Y" / "W" TR	100% matte tin	Ni	Ag	N/A	N/A	Yes	260	40	3	detail ROHS status see datasheet http://www.vishay.com/doc?45026	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45026	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**CDR-MIL-PRF-55681 (Document # 45026)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45026	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45026	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45026	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**CDR-MIL-PRF-55681 (Document # 45026)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC03029 (Document # 45042)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45042	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45042	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45042	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC03029 (Document # 45042)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC03028 (Document # 45043)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45043	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45043	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45043	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC03028 (Document # 45043)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05006 (Document # 45048)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45048	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45048	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45048	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05006 (Document # 45048)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05007 (Document # 45049)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45049	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45049	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45049	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05007 (Document # 45049)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05001 (Document # 45068)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45068	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45068	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45068	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05001 (Document # 45068)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05002 (Document # 45069)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45069	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45069	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45069	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05002 (Document # 45069)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05003 (Document # 45070)** Termination code "M" (AgPd) Detail ratings see datasheet : http://www.vishay.com/doc?45070	VT				e4	Standard PN	M TR	Ag/Pd	Ag	Ceramics	N/A	N/A	N/A	N/A	N/A	N/A	detail ROHS status see datasheet http://www.vishay.com/doc?45070	7c-I and/or 7cI+7cII				Contact vpecm.surveys@vishay.com	detail ROHS status see datasheet http://www.vishay.com/doc?45070	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A
MLCC VITRAMON	**DSCC05003 (Document # 45070)** Termination code "Z" (tin/lead min 4% lead) Termination code "U" (hot solder dipped/lead min 4% lead) all values / all voltages of series	VT				N/A	N/A	"Z" / "U" TR	Sn/Pb	Ni	Ag	YES	N/A	Yes	260	40	3	No	N/A	NA	NA	NA	Contact vpecm.surveys@vishay.com	No	50	Ceramic/Glass/Termination	X	O	O	O	O	O	N/A	N/A

Vishay Lead-Free Family Summary Sheet - Capacitor Components

Product Description			IPC/JEDEC Standard 609A - Pb Free "2nd-Level Interconnect" Status										Soldering & Reflow Profile					RoHS Status						China Pollution Act Information (ST/T11363-2006) - China RoHS Status									PCN Status	
Technology/ Product Line	Product Family	Vishay Division	Pb-free Qualification Report Available (Yes/No)	Pb-free Samples Available (Yes/No)	Pb-free Mass Production (Q/Y)	Pb/Pb-free Material Code Marking	How to Order Lead Free Part (Web)	Termination code (TR)	Termination Plating Finish	Plating Underlayer	Terminals Base Material/Alloy	Tin Lead (SnPb) Products/Termination available (Yes/No)	J-STD-020 Moisture Sensitivity Level Rating	Backward Compatibility	Peak Reflow Temperature (Deg C)	Time @ Peak Reflow Temperature (sec)	Maximum Number of Cycles Allowed @ Peak Reflow Temperature	RoHS Compliant (Yes/No/YwE)	Exemptions Used (Exemption # only)	RoHS Qualification Report Available (Yes/No)	RoHS Compliant Samples Available (Yes/No)	RoHS Compliant Mass Production (Q/Y)	Phthalate substances Present (DEHP/BBP/DBP/DIBP)	China ROHS Compliant (YES/NO) 符合 中国 RoHS (是/否)	EPUP (YEARS) 环保使用期限 (年)	Location of Hazardous Substance(s) 有毒有害物质 所在部件	Pb 铅 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Hg 汞 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Cd 镉 X for C>MCV O for C<MCV 0,01 wt% (SJ/T11363-2006)	Cr(VI) 六价铬 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBB 多溴联苯 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBDE 多溴二苯醚 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Product Change Notification No#. / Ref#	Product Change Notification Date
MLCC Vishay Basic Commodity	VJ..W1BC - C0G(NP0)*, X5R, X7R , Y5V dielectrics * selected items are with Ag/Ni/Sn termination, see datasheet : http://www.vishay.com/doc?28548	Vishay	Yes	Yes	Yes	e3	Standard Part number	-	100% matte Sn	Ni	Ni/Cu	NO	1	Yes	260	10	2	Yes	None	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	N/A	N/A
MLCC Vishay Basic Commodity	VJ..W1BC HighQ	Vishay	Yes	Yes	Yes	e3	Standard Part number	-	100% matte Sn	Ni	Ag	NO	1	Yes	260	10	2	Yes	None	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	N/A	N/A
MLCC Vishay Basic Commodity	VJ..W1BC Ultra High Q / Low ESR	Vishay	Yes	Yes	Yes	e3	Standard Part number	-	100% matte Sn	Ni	Cu/Cu	NO	1	Yes	260	10	2	Yes	None	Yes	Yes	Yes	Contact vpecm.surveys@vishay.com	Yes	N/A		O	O	O	O	O	O	N/A	N/A
ESTA																																		
ESTA	power caps (med.volt.) indoor acc. IEC 60871	ES	NA	NA	NA	NA	N/A		Pb/Sn	None	BRASS	N/A	N/A	NA	N/A	N/A	N/A	YwE	6	NA	NA	NA	No	No	50	solder-contact	X	O	O	O	O	O	Y	NA
ESTA	power caps (med.volt.) outdoor acc. IEC 60871	ES	NA	NA	NA	NA	N/A		Pb/Sn	None	BRASS	N/A	N/A	NA	N/A	N/A	N/A	YwE	6c	NA	NA	NA	No	No	50	solder-contact	X	O	O	O	O	O	Y	NA
ESTA	power caps (inductive heating) acc. IEC 60110	ES	NA	NA	NA	NA	N/A		Pb/Sn	None	BRASS, Cu	N/A	N/A	NA	N/A	N/A	N/A	YwE	6c	NA	NA	NA	No	No	50	solder-contact	X	O	O	O	O	O	Y	NA
ESTA	power caps (low volt. PFC) acc. IEC 61071 and 61881	ES	Yes	Yes	Yes	Yes	Standard PN		100% Sn	None	BRASS	NO	N/A	NA	N/A	N/A	N/A	Yes		Yes	Yes	Yes	No	YES			O	O	O	O	O	O	Y	4/05
ESTA	PEC rectangular acc. IEC 61071 and 61881	ES	NA	NA	NA	NA	N/A		Pb/Sn	None	BRASS, Cu	N/A	N/A	NA	N/A	N/A	N/A	YwE	6c	NA	NA	NA	No	No	50	solder-contact	X	O	O	O	O	O	Y	NA
ESTA	PEC tubular	ES	Yes	Yes	Yes	Yes	Standard PN		100% Sn	None	BRASS, Cu	NO	N/A	NA	N/A	N/A	N/A	Yes		Yes	Yes	Yes	No	YES			O	O	O	O	O	O	Y	4/05
ESTA	PEC lamp caps	ES	Yes	Yes	Yes	Yes	Standard PN		100% Sn	None	STEEL	NO	N/A	NA	N/A	N/A	N/A	Yes		Yes	Yes	Yes	No	YES			O	O	O	O	O	O	Y	4/05
ESTA	PEC (GLI, HDMKP, GTO)	ES	Yes	Yes	Yes	Yes	Standard PN		100% Sn	None	BRASS, Cu	NO	N/A	NA	N/A	N/A	N/A	Yes		Yes	Yes	Yes	No	YES			O	O	O	O	O	O	Y	4/05
ESTA	PEC tubular caps <1500VDC	ES	Yes	Yes	Yes	Yes	Standard PN		100% Sn	None	BRASS, Cu	NO	N/A	NA	N/A	N/A	N/A	Yes		Yes	Yes	Yes	No	YES			O	O	O	O	O	O	Y	4/05
ESTA	PEC tubular caps <1000VAC	ES	Yes	Yes	Yes	Yes	Standard PN		100% Sn	None	BRASS, Cu	NO	N/A	NA	N/A	N/A	N/A	Yes		Yes	Yes	Yes	No	YES			O	O	O	O	O	O	Y	4/05
ESTA	ESTAsym-/ESTAmat-Relais	ES	Yes	Yes	Yes	Yes	Standard PN		100% Sn	None	Cu	NO	N/A	NA	N/A	N/A	N/A	Yes		Yes	Yes	Yes	No	No	50	solder-contact	X	O	O	O	O	O	Y	4/05
ESTA High Voltage Units	painting units DUERR etc.	ES	NA	NA	NA	NA	N/A		NA	NA	NA	N/A	N/A	NA	N/A	N/A	N/A	YwE	6c	NA	NA	NA	No	No	50	solder-contact	X	O	O	O	O	O	Y	NA
ESTA High Voltage Units	miscellaneous	ES	NA	NA	NA	NA	N/A		NA	NA	NA	N/A	N/A	NA	N/A	N/A	N/A	YwE	6c	NA	NA	NA	No	No	50	solder-contact	X	O	O	O	O	O	Y	4/05

Notes:
NA indicates that the item is not applicable (I.e. not converting to Pb-Free)
○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。 indicate all homogeneous materials' hazardous substances content are below the ST/T11363-2006 MCV limit
×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。indicates that the hazardous substance content contained in any one of the homogeneous materials of the part exceeded the MCV limits specified in the Standard SJ/T 11363-2006
This Document is subjected to change without notice

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Product Description			Pb Free "2nd-Level Interconnect" Status								Soldering			RoHS Status					China Pollution Act Information (ST/T11363-2006)									PCN-Status	
Technology/ Product Line	Product Family	Vishay Division	Pb-free Qual. Complete and Report Available (Q/Y)	Pb-free Samples available (Q/Y)	Pb-free Massproduction (Q/Y)	Termination Finish	Underlaer	Lead or Base material	How to Order-Web (Lead Free)	Tin Lead (SnPb) Products/Termination available after Conversion	Moisture Sensitivity Level	STD-020D-01 compliant (Temp. Peak Tc in ℃/ Time Peak tp in sec / Cycles)	Backward Compatibility	RoHS Qual. Complete and Report Available (Q/Y)	RoHS-Compl Samples (Q/Y)	RoSH-Compl Massproduction (Q/Y)	Exemptions Used	Phthalate substances Present (DEHP/BBP/DBP/DIBP)	China ROHS Compliant (YES/NO) 符合 中国 RoHS (是/否)	EPUP (YEARS) 环保使用期限 (年)	Location of Hazardous Substance(s) 有毒有害物质 所在部件	Pb 铅 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Hg 汞 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Cd 镉 X for C>MCV O for C<MCV 0,01 wt% (SJ/T11363-2006)	Cr(VI) 六价铬 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBB 多溴联苯 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	PBDE 多溴二苯醚 X for C>MCV O for C<MCV 0,1 wt% (SJ/T11363-2006)	Product Change Notification No#. / Ref#	Product Change Notification Date
Tantalum																													
Conformal	591D/592D/W - All cases, except X25H, M & R cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	591D/592D/W - X25H, M & R cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	594D/595D - all cases except C, D & R	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	594D/595D - C, D & R case	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	572D all cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Ag	No	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	T95 A, B, S, V, X, Y cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	T95 C, D, R & Z cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	T96 R case	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	195D all cases, except G, H, R & Z	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	195D G, H, R & Z cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	695D all cases, except G & H cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal	695D G, H cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn / Gold	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal, Multi Anode	597D, T97, T98 all cases, except V case	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal, Multi Anode	597D, T97, T98 V case	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Ag	YES	2a	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal, DMD	194D Gold all cases, except H & G cases	SP	Yes	Yes	Yes	Standard Part	100%	None	Ni	YES	1	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal, DMD	194D Gold, H & G cases	SP	Yes	Yes	Yes	Standard Part	100%	None	Ni	YES	1	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Conformal Military	CWR06, CWR16 Gold	SP	Yes	Yes	Yes	Standard Part number	100% Au	Ni	Ag	YES	1	✓	✓	NA	NA	Yes	No	No	YES	NA		O	O	O	O	O	O	NA	NA
Conformal Military	CWR06, CWR16 SnPb	SP	No	No	No	NA	60/40 Sn/Pb	Ni	Ag	No	1	No	✓	No	No	No	No	No	NO	50	TERMINATION	X	O	O	O	O	O	NA	NA
Molded Chip Commercial	293D, 593D, 893D, TR3, TF3 all cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Alloy42	YES	1	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Molded Chip Specialty	TH3, TP3, TL3, T83, T86, TH4, TH5 all cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Alloy42	YES	1	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Molded Chip Military	CWR11, 04053 & 95158	SP	No	No	No	NA	90/10 Sn/Pb	Ni	Alloy42	No	1	No	✓	No	No	No	No	No	NO	50	TERMINATION	X	O	O	O	O	O	NA	NA
MAP	298D, 298W, TR8, TL8 all cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Cu	No	1	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
MAP, Specialty	TM8, TP8 all cases	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	Ni	Cu	YES	1	✓	✓	Yes	Yes	Yes	No	No	Yes	NA		O	O	O	O	O	O	NA	NA
Leaded	173D, 199D, 299D, 489D, 499D, 790D, ETPQ, ETQW	SP	Yes	Yes	Yes	add "-E3"	100% Sn	None	Steel	YES	NA	✓	✓	2/06	1/06	Yes	No	No	YES	NA		O	O	O	O	O	O	NA	NA
Hermetics	150D, 152D, 550D, CECC (CTS1, CTS13, 749DX)	SP	Yes	Yes	Yes	add "-E3"	100% Sn	None	Ni	YES	NA	✓	✓	4/06	4/06	Yes	7 (a)	No	NO	50	Anode eyelet seal solder	X	O	O	O	O	O	NA	NA
Wets	109D, 135D, 136D, 138D, T16, CECC (769D, 735D, 735DE, CT79, 738D, CT9), ST, STE, T11, HE3, M34, M35	SP	Yes	Yes	Yes	Refer to data sheet	100% Sn	None	Ni or Cu	YES	NA	ü	NA	2/06	2/06	Yes	No	No	YES	NA		O	O	O	O	O	O	NA	NA

● Please contact your local Vishay Sales Office

√ indicates that the item is complete or compliant. If product is complete/compliant less than a year the actual date is shown.
NA indicates that the item is not applicable (I.e. not converting to Pb-Free)
BC=Vishay Bccomponets, CR=Vishay Ceremite, DR=Vishay Draloric, ES=Vishay ESTA, RO=Vishay Roderstein, SP=Vishay Sprague, VT=Vishay Vitramon
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○：表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T11363-2006 标准规定的限量要求以下。 indicate all homogeneous materials' hazardous substances content are below the ST/T11363-2006 MCV limit
×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。indicates that the hazardous substance content contained in any one of the homogeneous materials of the part exceeded the MCV limits specified in the Standard SJ/T 11363-2006
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