



Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH)

Dear customer,

the Vishay Aluminum Capacitor and Energy Storage part numbers / series as listed in the Annex do **NOT** contain any of the total of **211 substances** of the REACH Candidate List of Substances of Very High Concern (SVHC) in more than 0.1 % wt/wt as defined by the REACH Directive:

as published in ECHA/PR/08/38 of October 28, 2008;
and as published in ECHA/PR/10/01 of January 13, 2010;
and as published in ECHA/PR/10/05 of March 30, 2010;
and as published in ECHA/PR/10/12 of June 18, 2010;
and as published in ECHA/PR/10/26 of December 15, 2010;
and as published in ECHA/PR/11/15 of June 20, 2011;
and as published in ECHA/PR/11/26 of December 19, 2011;
and as published in ECHA/PR/12/16 of June 18, 2012;
and as published in ECHA/PR/12/39 of December 19, 2012;
and as published in ECHA/PR/13/26 of June 20, 2013;
and as published in ECHA/PR/13/40 of December 16, 2013;
and as published in ECHA/PR/14/11 of June 16, 2014;
and as published in ECHA/PR/14/18 of December 17, 2014;
and as published in ECHA/PR/15/09 of June 15, 2015;
and as published in ECHA/PR/15/18 of December 17, 2015;
and as published in ECHA/PR/16/07 of June 20, 2016;
and as published in ECHA/PR/17/02 of January 12, 2017;
and as published in ECHA/PR/17/14 of July 10, 2017;
and as published in ECHA/PR/18/01 of January 15, 2018;
and as published in ECHA/PR/18/11 of June 27, 2018;
and as published in ECHA/PR/19/01 of January 15, 2019;
and as published in ECHA/PR/19/12 of July 16, 2019;
and as published in ECHA/PR/20/02 of January 16, 2020;
and as published in ECHA/PR/20/05 of June 25, 2020;
and as published in ECHA/NR/21/05 of January 19, 2021.

<http://echa.europa.eu/web/guest/candidate-list-table>

The Vishay Aluminum Capacitor part numbers / series as listed in the Annex also do NOT contain any of the substances of the REACH Authorization List in the REACH Directive Annex XIV and of the REACH Restriction List in the REACH Directive Annex XVII.

This data is accurate to the best of our knowledge.

Gerald Tatschl
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REACH, RoHS, and Hazardous Substances Coordinator Aluminum Capacitors Division



ANNEX

| VISHAY BCCOMPONENTS | |
|---------------------|----------------------------------|
| SERIES | REACH-211 COMPLIANT PART NUMBER |
| Radial | MAL2013xxxxE3 |
| | MAL2036xxxxE3 |
| | MAL2038xxxxE3 |
| | MAL2046xxxxE3 |
| | MAL2047xxxxE3 |
| | MAL2048xxxxE3 |
| | MAL2097xxxxE3 |
| | MAL2116xxxxE3 |
| | MAL2134xxxxE3 |
| | MAL2136xxxxE3 |
| | MAL2140xxxxE3 |
| | MAL2142xxxxE3 |
| | MAL2146xxxxE3 |
| | MAL2148xxxxE3 |
| | MAL2150xxxxE3 |
| | MAL2151xxxxE3 |
| | MAL2152xxxxE3 |
| | MAL2160xxxxE3 |
| | MAL2170xxxxE3 |
| | MAL2190xxxxE3 |
| MAL2246xxxxE3 | |
| MAL2250xxxxE3 | |
| MAL2260xxxxE3 | |
| Axial | MAL2021xxxxE3 |
| | MAL2030xxxxE3 |
| | MAL2031xxxxE3 |
| | MAL2041xxxxE3 |
| | MAL2042xxxxE3 |
| | MAL2043xxxxE3 |
| | MAL2118xxxxE3 |
| | MAL2119xxxxE3 |
| | MAL2120xxxxE3 |
| | MAL2125xxxxE3 |
| | MAL2126xxxxE3 |
| | MAL2132xxxxE3 |
| | MAL2133xxxxE3 |
| | MAL2138xxxxE3 |
| | MAL2139xxxxE3 |
| SMD | MAL214095xxxE3, 97xxxE3, 99xxxE3 |
| | MAL214699xxxE3 |
| | MAL215095xxxE3, 97xxxE3, 99xxxE3 |
| | MAL215299xxxE3 |
| | MAL21536xxxE3 |
| | MAL21537xxxE3 |
| | MAL216099xxxE3 |
| | MAL218097xxxE3 |
| | MAL218197xxxE3 |
| | MAL2182xxxxE3 |
| | MAL2183xxxxE3 |
| | MAL2184xxxxE3 |
| | MAL2185xxxxE3 |
| | MAL2186xxxxE3 |
| | MAL219299xxxE3 |
| | MAL2246xxxxE3 |
| | MAL2250xxxxE3 |
| MAL2260xxxxE3 | |



| VISHAY BCCOMPONENTS | |
|--|---------------------------------|
| SERIES | REACH-211 COMPLIANT PART NUMBER |
| SI, PW, and SL | MAL2050xxxxxE3 |
| | MAL2051xxxxxE3 |
| | MAL2052xxxxxE3 |
| | MAL2053xxxxxE3 |
| | MAL2056xxxxxE3 |
| | MAL2057xxxxxE3 |
| | MAL2058xxxxxE3 |
| | MAL2059xxxxxE3 |
| | MAL2090xxxxxE3 |
| | MAL2093xxxxxE3 |
| | MAL2094xxxxxE3 |
| | MAL2095xxxxxE3 |
| | MAL2096xxxxxE3 |
| | MAL2156xxxxxE3 |
| | MAL2157xxxxxE3 |
| | MAL2158xxxxxE3 |
| | MAL2159xxxxxE3 |
| | MAL2162xxxxxE3 |
| | MAL2163xxxxxE3 |
| | MAL2193xxxxxE3 |
| | MAL2198xxxxxE3 |
| | MAL2199xxxxxE3 |
| | MAL2256xxxxxE3 |
| MAL2257xxxxxE3 | |
| MAL2259xxxxxE3 | |
| MAL2299xxxxxE3 | |
| ST | MAL2101xxxxxE3 |
| | MAL2102xxxxxE3 |
| | MAL2103xxxxxE3 |
| | MAL2104xxxxxE3 |
| | MAL2106xxxxxE3 |
| | MAL2110xxxxxE3 |
| | MAL2500xxxxxE3 |
| | MAL2501xxxxxE3 |
| SAL | MAL2123xxxxxE3 |
| | MAL2128xxxxxE3 |
| Double layer capacitors | MAL2196xxxxxE3 |
| | MAL2220xxxxxE3 |
| | MAL2225xxxxxE3 |
| | MAL2230xxxxxE3 |
| | MAL2235xxxxxE3 |
| Accessories (clamps, cap nuts, washers) | MAL8043055xxE3 |
| | MAL804313001E3 |
| | MAL8043240xxE3 |
| | MAL804323321E3 |
| | MAL804324921E3 |



| VISHAY SPRAGUE | |
|----------------|------------------------------------|
| SERIES | REACH-211 COMPLIANT PART NUMBER |
| Axial | 34D (+ suffix "E3") ⁽¹⁾ |
| | 39D (+ suffix "E3") ⁽¹⁾ |
| | 53D (+ suffix "E3") ⁽¹⁾ |
| Radial | 516D (all PNs) |
| | 515D (all PNs) |
| | 517D (all PNs) |
| SI | 757D (all PNs) |
| | 80D (all PNs) |
| ST | 36D (all PNs) |
| | 36DX (all PNs) |
| | 36DE (all PNs) |
| | 36DY (all PNs) |

Note

⁽¹⁾ **IMPORTANT:** affected are only part numbers with suffix "E3". Example: 39D907G003EJ6E3 (part numbers without suffix "E3" contain lead (Pb). Consequently, these PNs are incompliant to REACH-191 directive and above)

| VISHAY ROEDERSTEIN | |
|--------------------|---------------------------------|
| SERIES | REACH-211 COMPLIANT PART NUMBER |
| Radial | MALREKA and EKA (all PNs) |
| | MALREKB and EKB (all PNs) |
| | MALREKC and EKC (all PNs) |
| | MALREKE and EKE (all PNs) |
| | MALREKV and EKV (all PNs) |
| SMD | MALSECA and ECA (all PNs) |
| | MALSECL and ECL (all PNs) |
| | MALSECV and ECV (all PNs) |
| SI, PW, and SL | MALIEYH and EYH (all PNs) |
| | MALIEYK and EYK (all PNs) |
| | MALIEYN and EYN (all PNs) |
| | MALIEYV and EYV (all PNs) |

| VISHAY OS-CON | |
|---------------|---------------------------------|
| SERIES | REACH-211 COMPLIANT PART NUMBER |
| SMD | 94SVP (all PNs) |
| | 94SVPD (all PNs) |