

IEC QUALITY ASSESSMENT SYSTEM (IECQ)

covering Electronic Components,
Assemblies, Related Materials and Processes

For rules and details of the IECQ visit www.iecq.org

IECQ Certificate of Conformity Qualification

IECQ Certificate No.: IECQ-C BSI 14.0001 Issue No.: 8 Status: Current

Supersedes: <u>IECQ-C BSI 14.0001 Issue 7</u> **Issue Date: 2021/09/29 Org Issue: 2005/04/22**

CB Reference No.: E1273/F Issue 21 Expiration: 2024/09/30

Dongguan Littelfuse Electronics Co Ltd

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The organization has developed and implemented procedures and related processes which have been assessed by the IECQ Certification Body issuing this certificate and found to comply with the applicable requirements of the IECQ Approved Component Scheme "Qualification Approval" which is in accordance with the Basic Rules IECQ 01 "Rules of Procedure", IECQ 03-1 "IECQ General Requirements for all Schemes" and IECQ 03-3 Annex C "IECQ Approved Components Scheme" of the IEC Quality Assessment System for Electronic Component (IECQ), and in respect of standard(s) or specification(s):

For a complete list of standards and specifications see the attached schedule of scope.

Process Manual Reference: DG1-QA75-0008 & DG1-QA75-0033

Details of Components/Assemblies/Materials:

Surge Suppression Varistors.

Series: LA, CIII, ZA, E (UltraMOV) and 25S (UltraMOV).

-- Attached Schedule: E1273_F Scope Issue 21.pdf --

Issued by the Certification Body (CB): BSI

Kitemark Court, Davy Avenue Knowlhill, Milton Keynes MK5 8PP United Kingdom

Authorized person:

Paul Turner

PT____





The validity of this certificate is maintained through on-going surveillance audits by the IECQ CB issuing this certificate.

This Certificate of Conformity may be suspended or withdrawn in accordance with the Rules of Procedure of the IECQ System and its Schemes.

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Schedule of Scope to Certificate of Approval

Approved Component - Qualification Approval

IECQ Certificate No.: IECQ-C BSI 14.0001
CB Certificate No.: E1273/F

Schedule Number: IECQ-C BSI 14.0001-S Rev No.: 21 Revision Date: 2021/09/29 Page 1 of 2

Approved Standard(s)/Specification(s)	Title		
BS EN IEC 61051-1 {2018}	Varistors for use in electronic equipment. Generic specification.		
BS IEC 61051-2 {1992, +A1:2009}	Harmonized system of quality assessment for electric components. Varistors for use in electronic equipment. Sectional specification for surge suppression varistors.		
IEC 61051-2-2 {1991-02}	Varistors for use in electronic equipment - Part 2: Blank detail specification for zinc oxide surge suppression varistors. Assessment level E.		
BS EN 60950-1 {2006 + A2 2013}	Information technology equipment. Safety. General requirements - Annex Q Components.		
IEC 60950-1 {Ed2.2, 2013-05}	Information technology equipment – Safety – Part 1: Annex Q – Voltage Dependent Resistors (VDRs)		
EN 62368-1:2014 {2014}	Audio/video, information and communication technology equipment - Part 1: Safety Requirements – Annex G Components		
IEC 62368-1 {2018}	Audio/video, information and communication technology equipment - Part 1: Safety Requirements – Annex G Components		

Test Report	Dated	Accepted by BSI
TR001_Pb Free_IECQ-CECC	June 2005	23 June 2005
TR005_SONG LONG	January 2006	10 February 2006
TR006_SONG LONG Pb free	January 2006	10 February 2006
TR012 and TR013	July 2009	16 October 2009
TR014	January 2010	26 April 2010
TRC020	October 2013	10 January 2014
TRC021	December 2013	13 March 2014
TRC029	November 2015	20 January 2016
TRC041	September 2020	17 November 2020

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Schedule Number: IECQ-C BSI 14.0001-S Rev No.: 21 Revision Date: 2021/09/29 Page 2 of 2

Surge suppression Varistors are available in LA, CIII, ZA, E and 25S series in voltages as shown in the table opposite.

For full performance parameters of these devices see Table 2 of CECC 42 201-006 and/or the manufacturers data sheets.

These series of varistors are also available as a Pb Free device and have been qualified to CECC 42 201-006 using the additional criteria as published in Circular Letter 62. Pb Free devices are identified by the suffix "P" being added to the basic style reference.

Series LA, CIII, ZA and E are Halogen Free components. All of series LA, CIII, E, 25S and ZA values marked with * with diameters 14mm, 20mm and 25mm have additionally been tested to and are compliant with Annex Q of IEC 60950-1/BS EN 60950-1 & Annex G of IEC 62368-1/EN 63268-1.

All ratings of E (UltraMOV) Series with diameter of 10mm have also been tested to and are compliant with Annex Q of IEC 60950-1/BS EN 60950-1 & Annex G of IEC 62368-1/EN 62368-1.

Examples as below:

LA Series:	V150LA5 V150LA5P**	Standard varistors Pb Free varistors	
CIII Series:	V130LA5C V130LA5CP	Standard Varistors Pb Free Varistors	
ZA Series:	V24ZA50 V24ZA50P	Standard varistors Pb Free varistors	
E (Ultra MOV) Series:	V07E300 V07E300P	Standard varistors Pb Free varistors	
25S (UltraMOV) Series:	V25S115 V25S115P	Standard varistor Pb Free varistors	

All of the above series of varistors have radial leads with a category e3 surface finish. (For category explanation see Circular Letter 62)

Test report TRC020 introduced an alternative resin material from AKZO NOBEL but this applies to the LA, CIII, ZA and E (Ultra MOV) series only.

**A new Cu paste introduced by test report TRC021 on Pb Free version of series LA only.

Voltage			aristor Se	eries	
Identifier	LA	CIII	ZA	Е	25\$
8			✓		
12			√		
18			√		
22 24			✓ ✓		
27			✓		
33			▼		
39			· /		
47			√		
56					
68			√		
82			✓		
100			✓		
115					✓
120			√ *		
130	✓	✓		✓	✓
140	✓	✓		✓	√
150	✓	✓	√ *	✓	✓
175	✓	✓		✓	✓
180			√ *		
230		✓		\frac{\sqrt{\chi}}{\sqrt{\chi}}	✓
250	✓	✓		✓	✓
275	✓	✓		✓	✓
300	✓	✓		✓	√
320	✓	✓		✓	✓ ✓
385	✓	✓ ✓ ✓ ✓ ✓		✓	\checkmark
420	\	√		✓	✓
440				✓	✓
460	✓	✓			✓
480	✓	✓		✓	
510	√	✓		√	✓
550	✓	✓			√
575	√ √	✓		✓	
625	✓	✓		✓	✓
660	✓	✓			
680	✓	✓			
750					✓
1000	✓				

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