Product Brief 2016

CeraLink™

DC Link and Snubber Capacitors

Ceralink™ is a family of very compact capacitors for stabilizing voltages in the DC link. They are therefore suitable for use as either snubber or DC link capacitors. These products based on PLZT ceramics are designed to provide engineers with compact components optimized for fast-switching converters, converters with very tight space requirements and converters that need to withstand high operating temperatures.

The basic component is a ceramic chip which either is manufactured with lead frames (LP series), or which can be combined modularly to form capacitors with higher capacitance values (SMD and SP types).

The key benefits of the CeraLink™ technology are:

- High operating and peak temperatures
- Low ESL
- Low ESR
- High capacitance density and small size
- Low losses at high frequencies and high temperatures
- Supports fast switching semiconductors and high switching frequencies
- Supports further miniaturization of power electronics at the system level
- Reduction of total system cost
- Increased robustness against short circuit by internal series electrode design

www.epcos.com

CeraLink™, LP, SMD and SP Series

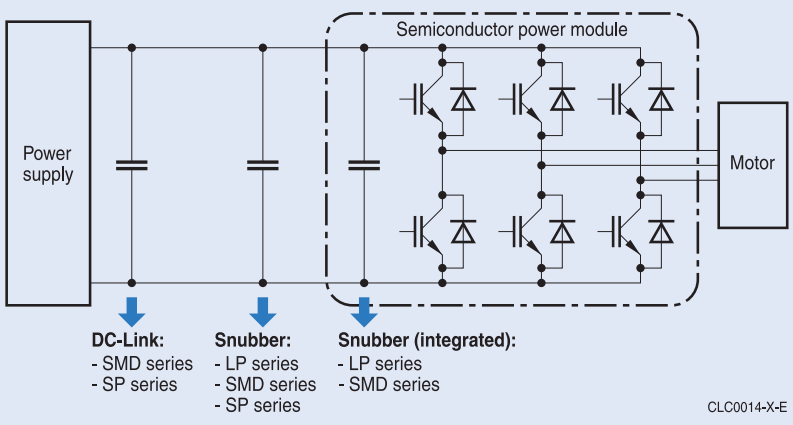
Technical data

Loss factor @ 0 V_{DC}, 0.5 V_{RMS}, 1 kHz, 25 °C	tan δ	< 0.02
Device temperature allowed for all operating time	T_{device}	–40 °C … 125 °C
Device temperature allowed for 5% of operating time	$T_{device, max}$	+125 °C … 150 °C

Ordering code	$C_{nom, typ}$ @ V_{op}, 25 °C, quasistatic µF	V_{op} V	V_R V	V_{WS} V	I_{op1} @ 100 kHz, 85 °C A_{RMS}	I_{op2} @ 100 kHz, 105 °C A_{RMS}	ESL nH	Approx. weight g	Packing	Pcs. per packing unit
Low profile series – LP (L leads)										
B58031I5105M002	> 1	400	500	650	7.5	5.2	2.5	1.3	cut tape	100
B58031I5105M062									taped on reel	1000
B58031I7504M002	> 0.5	600	700	1000	5.4	4.4			cut tape	100
B58031I7504M062									taped on reel	1000
B58031I9254M002	> 0.25	800	900	1300	3.6	2.9			cut tape	100
B58031I9254M062									taped on reel	1000
Low profile series – LP (J leads)										
B58031U5105M002	> 1	400	500	650	7.5	5.2	2.5	1.2	cut tape	100
B58031U5105M062									taped on reel	1000
B58031U7504M002	> 0.5	600	700	1000	5.4	4.4			cut tape	100
B58031U7504M062									taped on reel	1000
B58031U9254M002	> 0.25	800	900	1300	3.6	2.9			cut tape	100
B58031U9254M062									taped on reel	1000
Surface mountable device series – SMD										
B58032I5505M062	> 5	400	500	650	15.3	11.7	2.5	6	taped on reel	250
B58032I7255M062	> 2.5	600	700	1000	14	10.5			taped on reel	250
B58032I9125M062	> 1.25	800	900	1300	10	7.8			taped on reel	250
Solder pin series – SP										
B58033I5206M001	> 20	400	500	650	31.5	24.5	3.5	31	tube	20
B58033I7106M001	> 10	600	700	1000	26	17.7			tube	20
B58033I9505M001	> 5	800	900	1300	19	13			tube	20

Note: Full product range to be released in 2016. Samples available. For details contact our locale sales office.

Main applications



Symbols and terms

C_{nom}, typ (@ V_{op}, quasistatic, 25 °C): typical nominal capacitance

V_R: rated voltage, reference DC voltage for the reliability tests

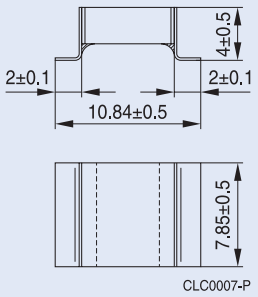
V_{op}: operating voltage, optimized DC voltage in terms of capacitance value

V_{WS}: withstand voltage, 100% end of line test for ≥ 7 seconds

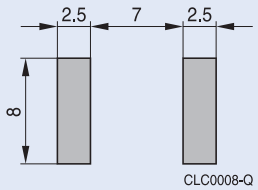
CeraLink™, LP, SMD and SP Series

Dimensional drawings and recommended solder pad layout in mm

LP (L leads)

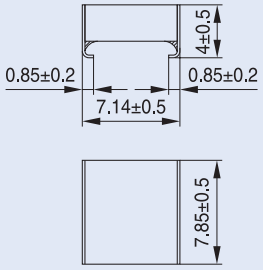


CLC0007-P

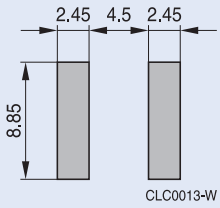


CLC0008-Q

LP (J leads)

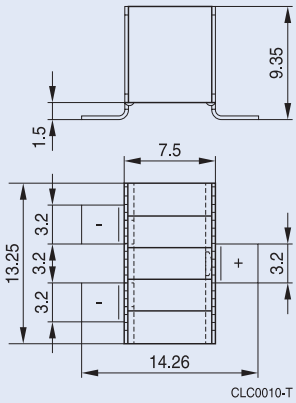


CLC0009-S

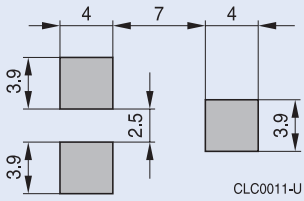


CLC0013-W

SMD

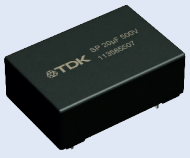


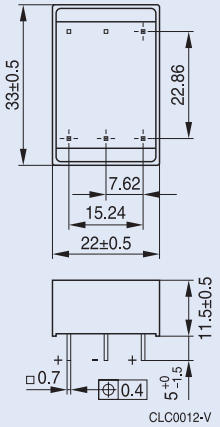
CLC0010-T



CLC0011-U

SP



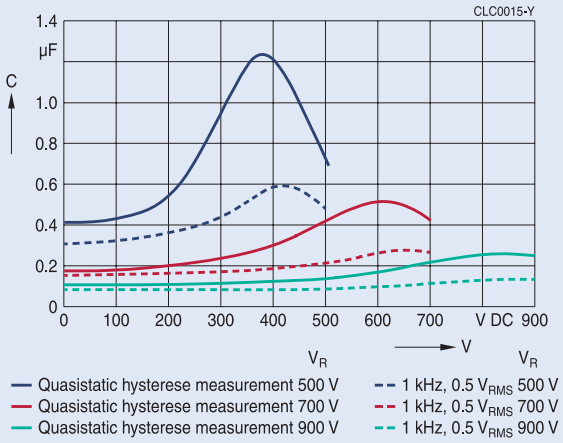


CLC0012-V

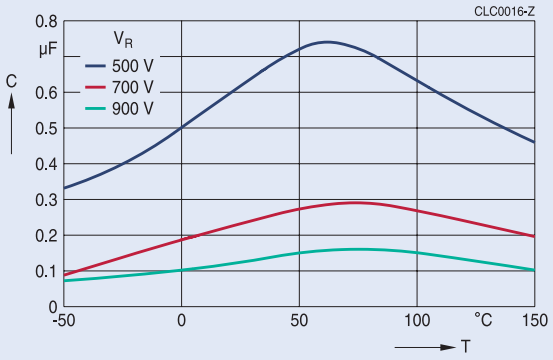
CeraLink™, LP, SMD and SP Series

Example of technical characteristics LP series

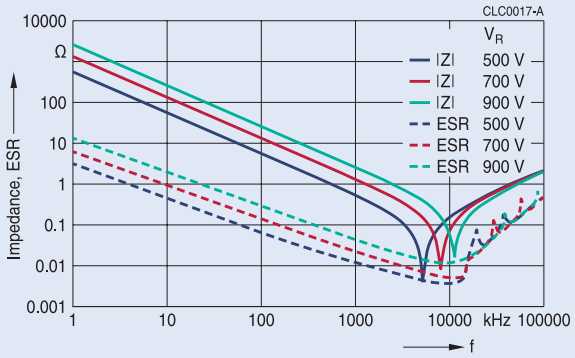
Capacitance versus DC voltage (@ 25 °C)



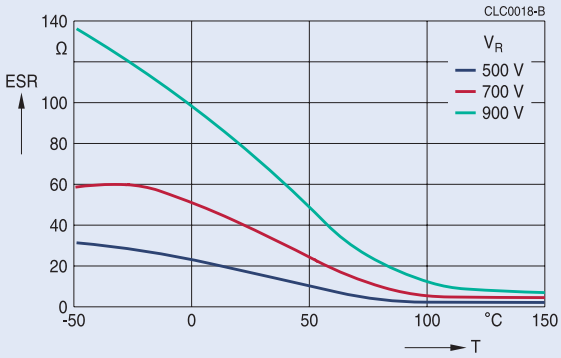
C @ V_{op}, 1 kHz, 0.5 V_{RMS}



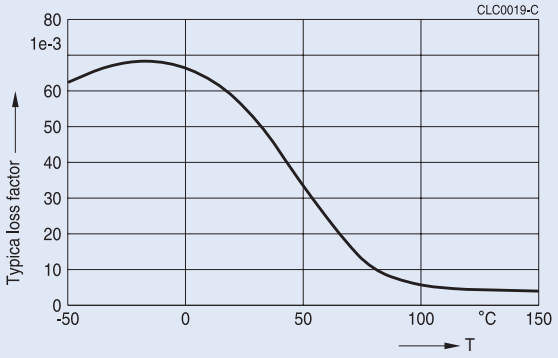
Impedance and ESR versus frequency @ 0 V_{DC}, 25 °C, 0.5 V_{RMS}



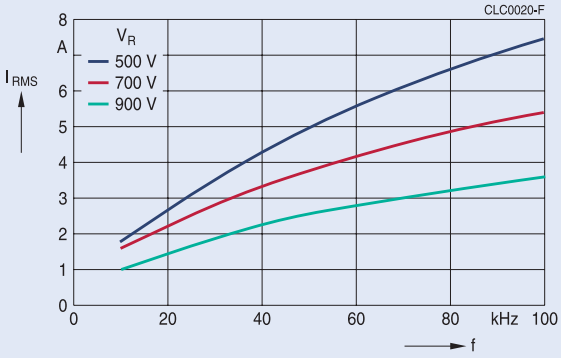
ESR @ V_{op}, 1 kHz, 0.5 V_{RMS}



Loss factor versus temperature @ V_{op}, 1 kHz, 0.5 V_{RMS}



Permissible current @ V_{op}, 85 °C



Structure of ordering codes: The ordering code for one and the same product can be represented differently in data sheets, data books, other publications and the website of EPCOS, or in order-related documents such as shipping notes, order confirmations and product labels. **The varying representations of the ordering codes are due to different processes employed and do not affect the specifications of the respective products.** Detailed information can be found on the Internet under www.epcos.com/orderingcodes.

Important information: Some parts of this publication contain statements about the suitability of our products for certain areas of application. These statements are based on our knowledge of typical requirements that are often placed on our products. We expressly point out that these statements cannot be regarded as binding statements about the suitability of our products for a particular customer application. It is incumbent on the customer to check and decide whether a product is suitable for use in a particular application. This publication is only a brief product survey which may be changed from time to time. Our products are described in detail in our data sheets. The *Important notes* (www.epcos.com/ImportantNotes) and the product-specific *Cautions and warnings* must be observed. All relevant information is available through our sales offices.

Edition 03/2016 · Printed in Germany · PB 03161.