Type CS (Capstick®) Metallized Polymer Network

Radial Multi-pin Metallized Polymer Network for DC to DC Converters



The Type CS multi-pin metallized polymer network is ideal for the low ESR/ESL requirements in DC to DC converters and switching power supply applications. This unique, robust, capacitor design offers high ripple current capability and high capacitance in a small package. It is available with straight pins on 0.10" centers for through-hole mounting or with gull wing leads for surface mount assembly. Type CS (Capstick®) is encapsulated in a rugged conformal coating and is packaged in anti-static tubes for easy handling.

Highlights

- Rugged conformal coated case meets UL94V-0
- Low ESR/ESL
- High ripple current
- High capacitance in a small package
- Non-inductive design
- Non-polar
- Surface mount or through hole assembly
- Multi-pin leads on 0.10" centers

Specifications

RoHS Compliant

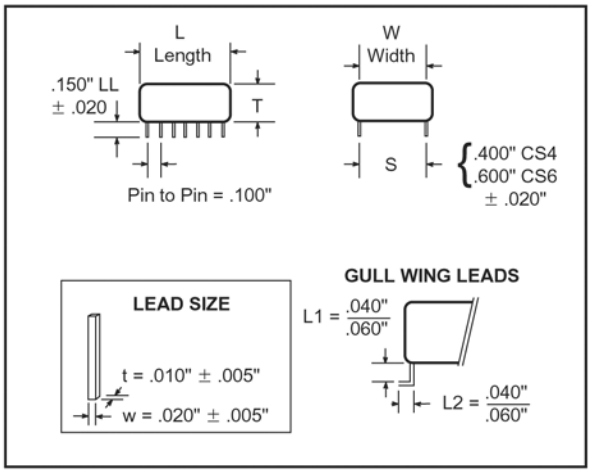
Capacitance Range:	**0.33 µF to 20.0 µF**
Voltage Range:	**50 Vdc, 100 Vdc, 250 Vdc, 400 Vdc, 500 Vdc**
Capacitance Tolerance:	**±10%**
Operating Temperature Range for 50, 100 and 250 Vdc:	**–55 °C to +125 °C (with 50% Vdc derating >85 °C)**
Operating Temperature Range for 400 and 500 Vdc:	**–55 °C to +125 °C with no derating**
Construction:	**Multilayer metallized polymer dielectric**
Temperature Coefficient:	**+6% from –55 °C to +85 °C**
Dielectric Withstand Voltage:	**1.3 x rated voltage: 50/100/250/500 Vdc** **1.6 x rated voltage: 400 Vdc**
Dissipation Factor (DF):	**≤1.0% @ 1 kHz**
Total Self Inductance (L):	**<6 nH typical (CS6)** **< 4 nH typical (CS4)**
Lead Material:	**Tinned copper alloy frame**
Insulation Resistance:	**≥1000 MΩ • µF - need not exceed 1000 MΩ**

Part Numbering System

405	K	100	CS	4	G	–	FA
Cap				Pin	"Optional"		
(µF)	Tolerance	Voltage	Series	Spacing	(*)		
334 = 0.33 µF	K = ±10%	050 = 50 Vdc	CS	4 = 0.4" (10.0 mm)	Blank = Straight Pins		Blank = 5/6 RoHS
405 = 4.0 µF		100 = 100 Vdc		6 = 0.6" (15.0 mm)	G = Gull Wing		FA = 6/6 RoHS
206 = 20.0 µF		400 = 400 Vdc					

Type CS (Capstick®) Metallized Polymer Network

Capacitor Outline Drawing



Test Method and Performance

Accelerated Dry Life	
Test Conditions	
Temperature:	+85 °C ±5 °C
Applied Voltage:	1.25 x rated voltage
Test Duration:	1000 hours performance
Requirements	
Capacitance :	Change of ≤5.0%
Dissipation Factor:	≤1.0% @ 1 kHz
Insulation Resistance:	≥1K MΩ • µF, need not exceed 1 K MΩ
Humidity	
Test Conditions	
Temperature:	+85 °C ±2.0 °C
Applied Voltage:	Zero voltage
Humidity:	85% ±2% RH
Test Duration:	21 days
Performance Requirements	
Capacitance	Change of ≤7.0%
Dissipation Factor	≤1.0% @ 1 kHz
Insulation Resistance	≥ 30% of limit value
Soldering	
Test Conditions	
Thru Hole Soldering Temperature:	260 °C, 5 sec.
SMD Reflow Soldering Temperature:	220 °C, 30 sec.
Performance Requirements	
Capacitance:	Change of ≤ 2%
Capacitance Drift:	≤2.0% over 2 years between 0 °C and 35 °C and a RH of between 35% and 65%
Vibration	Conforms to MIL-STD-202 Method 204D

Note: The 400 Vdc rating can handle a 450 Vdc surge and is built to a 640 Vdc high potential.

Ratings — RoHS Compliant

Catalog Part Number	Cap (µF)	DC Voltage	ESR Ω @ 500 kHz	RMS Current @ 500 kHz	W Max. Inches	W Max. (mm)	T Max. Inches	T Max. (mm)	L Max. Inches	L Max. (mm)	Nom. L.S. Inches	Nom. L.S. (mm)	Leads Per Side	Tube Quantity
50 Vdc														
106K050CS4*	10.00	50	0.0030	15.3	0.5	(12.7)	0.32	(8.1)	0.620	(15.7)	0.4	(10)	5	32
206K050CS4*	20.00	50	0.0025	17.8	0.5	(12.7)	0.32	(8.1)	1.150	(29.2)	0.4	(10)	9	16
100 Vdc														
205K100CS4*	2.00	100	0.009	8.3	0.5	(12.7)	0.25	(6.4)	0.450	(11.4)	0.4	(10)	3	44
405K100CS4*	4.00	100	0.007	11.5	0.5	(12.7)	0.25	(6.4)	0.450	(11.4)	0.4	(10)	3	44
475K100CS4*	4.70	100	0.006	12.2	0.5	(12.7)	0.25	(6.4)	0.525	(13.3)	0.4	(10)	3	38
685K100CS4*	6.80	100	0.005	13.7	0.5	(12.7)	0.25	(6.4)	0.700	(17.8)	0.4	(10)	5	35
106K100CS4*	10.00	100	0.003	15.3	0.5	(12.7)	0.25	(6.4)	0.995	(25.3)	0.4	(10)	7	20
250 Vdc														
105K250CS6*	1.00	250	0.012	5.2	0.7	(17.8)	0.30	(7.6)	0.440	(11.2)	0.6	(15)	3	44
400 Vdc														
334K400CS6*	0.33	400	0.012	6.0	0.7	(17.8)	0.32	(8.1)	0.435	(11.0)	0.6	(15)	3	44
474K400CS6*	0.47	400	0.011	6.2	0.7	(17.8)	0.32	(8.1)	0.460	(11.7)	0.6	(15)	3	42
105K400CS6*	1.00	400	0.008	9.5	0.7	(17.8)	0.32	(8.1)	0.880	(22.4)	0.6	(15)	7	22
500 Vdc														
474K500CS6*	0.47	500	0.011	6.2	0.7	(17.8)	0.32	(8.1)	0.625	(15.9)	0.6	(15)	4	32
105K500CS6*	1.00	500	0.008	9.5	0.7	(17.8)	0.32	(8.1)	1.135	(28.8)	0.6	(15)	8	16

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.

LifeElectronics
Живое партнерство

ООО «ЛайфЭлектроникс» **“LifeElectronics” LLC**

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
- *Формирование склада под заказчика.*

- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

Тел: +7 (812) 336 43 04 (многоканальный)
Email: org@lifeelectronics.ru

www.lifeelectronics.ru