THE DATASHEET OF

ST105C396MAK02

Small Footprint, High Volumetric Efficiency, High-CV SMPS Capacitors

Mini-TurboCap™

The Mini-TurboCap is constructed from state-of-the-art BME (Base Metal Electrode) MLC Capacitors achieving very high CV, as well as, ultra low ESR and ESL. The resulting, very large capacitance values allow for component and board space reduction. Stress relieving lead frames provide effective mechanical decoupling of the ceramic chips from the board, minimizing the stress created by board flexing, vibration and temperature cycling. High temperature solder is used to attach chips to the lead frame thus eliminating the risk of solder reflow during assembly to the board.

CAPACITANCE (MF)

	Voltage		
Cap (µF)	25V	50V	100V
8.2			
18			
39*			
82*			

Not RoHS Compliant

HOW TO ORDER

ST10	5	C	186	M	A	K	02
AVX Style	**Voltage** 25V = 3 50V = 5 100V = 1	**Temperature Coefficient** X7R = C	**Capacitance Code** (2 significant digits + number of zeros) 1 µF = 105 10 µF = 106	**Capacitance Tolerance** M = ±20%	**Test Level** A = Standard	**Termination** N = Straight Lead K = Leads formed in M = Leads formed out	**Number of Leads Per Side** 02 = 2

Additional stacked/lead configurations available upon request. Consult with AVX factory personnel for details.

ELECTRICAL SPECIFICATIONS

Temperature Coefficient
±15%, -55° to +125°C

Capacitance Test (MIL-STD-202, Method 305)
25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz

Dissipation Factor
5% Max @ 25°C, for 50VDC and 100VDC voltage ratings

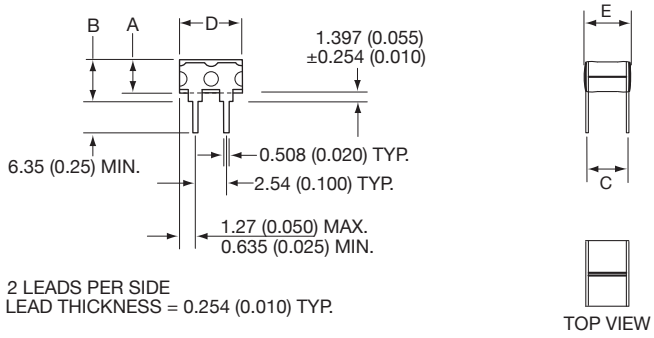
Insulation Resistance 25°C (MIL-STD-202, Method 302)
500 MΩ-µF (*100 MΩ-µF)

Insulation Resistance 125°C (MIL-STD-202, Method 302)
50 MΩ-µF (*10 MΩ-µF)

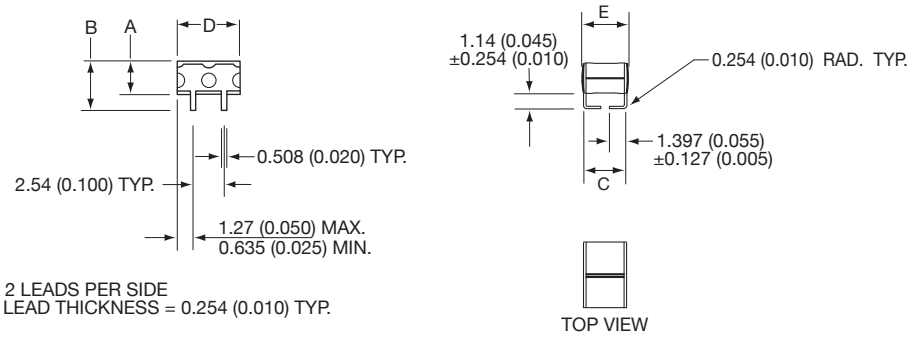
Dielectric Withstanding Voltage 25°C (Flash Test)
250% rated voltage for 5 seconds with 50 mA max charging current.

Life Test Capabilities (1000 hrs)
150% rated voltage at +125°C.

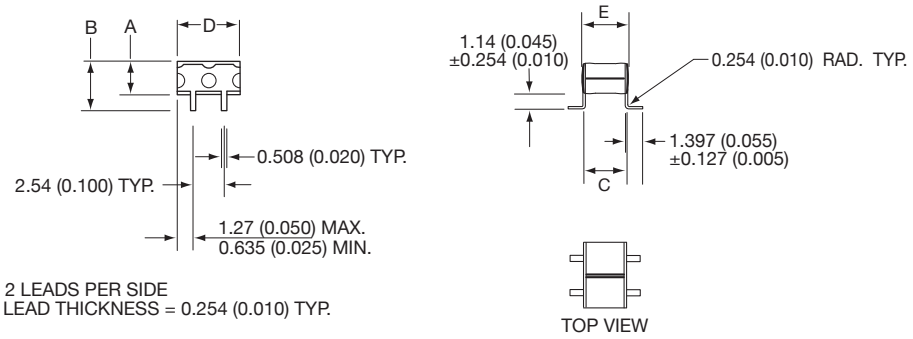
STYLE/DIMENSIONS



"N" STYLE LEADS



"K" STYLE LEADS



"M" STYLE LEADS

DIMENSIONS

millimeters (inches)

Style	A (max.)	B (max.)	C ± 0.635 (± 0.025)	D ± 0.635 (± 0.025)	E (max.)	No. of Leads Per Side
ST10	5.59 (0.220)	7.00 (0.275)	3.81 (0.150)	5.33 (0.210)	4.83 (0.190)	02

PART NUMBER AVAILABLE OPTIONS (2X2)

Part Number	Temperature Coefficeient	Voltage	Capacitance Code	Capacitance	Capacitance Tolerance	Number Of Leads	Lead Styles
ST103C826MA-02	X7R	25	826	82µF	±20%	2	N, K, M
ST105C186MA-02	X7R	50	186	18µF	±20%	2	N, K, M
ST105C396MA-02	X7R	50	396	39µF	±20%	2	N, K, M
ST101C825MA-02	X7R	100	825	8.2µF	±20%	2	N, K, M

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- Alternative Solution
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