



# Capacitor Array Design Guide

Inquiry date: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_

\_\_\_\_\_

Fax: \_\_\_\_\_

\_\_\_\_\_

Email: \_\_\_\_\_

## APPLICATION DATA

Actual component use: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Physical environment: \_\_\_\_\_

\_\_\_\_\_

Shock level: \_\_\_\_\_ Vibration level: \_\_\_\_\_

Assembly hermeticity requirements: \_\_\_\_\_

Case material: \_\_\_\_\_

Termination type: \_\_\_\_\_

Physical dimensions: Length: \_\_\_\_\_ Width: \_\_\_\_\_ Height: \_\_\_\_\_

Physical, form factor, and mounting means: \_\_\_\_\_

\_\_\_\_\_

Capacitance: \_\_\_\_\_  $\mu$ F \_\_\_\_\_ tolerance (%)

Working voltage: 85 °C \_\_\_\_\_, 125 °C \_\_\_\_\_, other temperature \_\_\_\_\_ °C

Equivalent series resistance: (ESR) \_\_\_\_\_  $\Omega$ , frequency \_\_\_\_\_ (Hz), \_\_\_\_\_ °C

Ripple current-magnitude: \_\_\_\_\_ A, frequency \_\_\_\_\_ (Hz)

Impedance limit: \_\_\_\_\_  $\Omega$ , frequency \_\_\_\_\_ (Hz)

DC leakage: \_\_\_\_\_  $\mu$ A

Application temperature: \_\_\_\_\_ °C Maximum temperature: \_\_\_\_\_ °C



## CAPACITOR ASSEMBLY (Example)

Each Vishay custom capacitor assembly will be documented with a Vishay drawing as shown below, and assigned a unique part number. If there is a customer drawing, it will be noted here and all revisions will be fully documented.

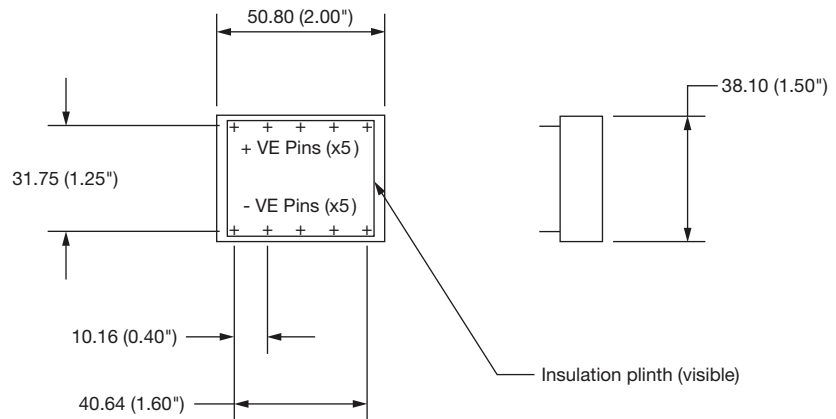
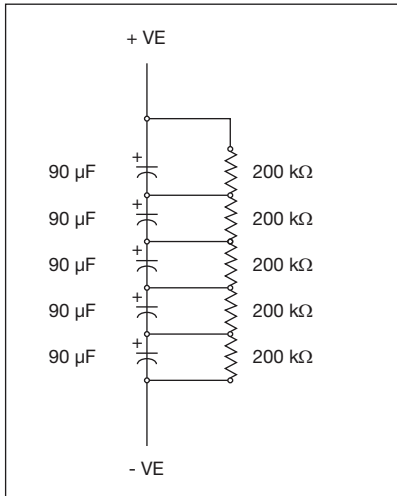
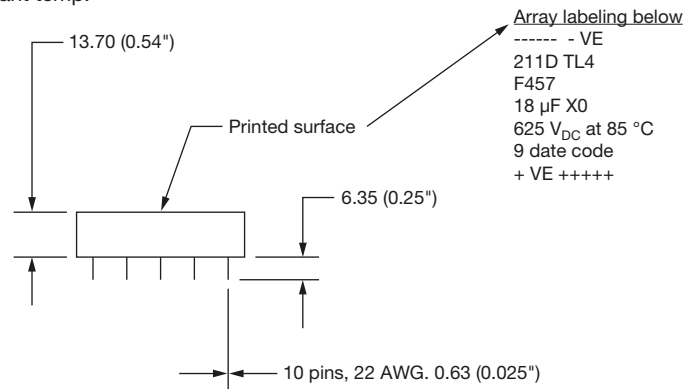
### Notes

Dimensions shown are metric, values in parenthesis indicate inch equivalent.

Electrical parameters:

- a) Temperature range: -55 °C to 200 °C
- b) Capacitance at 120 Hz, 25 °C: 18 μF ± 20 %
- c) Voltage at 85 °C = 625 V<sub>DC</sub>
- d) Voltage at 200 °C = 300 V<sub>DC</sub>
- e) % dissipation factor at 120 Hz and 25 °C = 50 % max.
- f) Decay time (from 625 V to 3.5 V): < 2 min
- g) Reverse voltage capability: none
- h) Surge voltage capability: 1.15 times rated voltage at relevant temp.
- i) Max. RMS ripple at 40 kHz and 85 °C = 1.5 A
- j) Max. weight = TBD (should be less than 100 g)
- k) Resistors: RN55D2003F
- l) Capacitor sections: five pieces 134D (HT90-125L21)
- m) Vishay SAP part number: 211D186X0625XTL4
- n) Vishay non-standard number: 211DTL4

REV.	DATE	REVISION	APPROVALS	DWN BY
A	1/09	Change ripple from 2.0A to 1.5A		R. P.
B	3/09	Remove preliminary, add marking, add Vishay SAP part number		R. P.



<b>Note</b> This sheet and all attached documents are the proprietary data of Vishay Tansitor and shall not be disclosed to unauthorized and / or third parties without our written consent. These documents shall be returned to us immediately upon request.	DATE: 11-26-08		TANSITOR ELECTRONICS, INC. PO BOX 230 WEST ROAD BENNINGTON, VT. 05201	
	DRAWN BY: R. P.			
	APPROVALS:			
	Standard tolerances ..XX ± 0.010 Fractions ± 1/64 ..XXX ± 0.005 Angular ± 0°30' ..XXXX ± 0.0005 Finish 125√	TITLE: Cap. Module, 18 μF at 300 V <sub>DC</sub> at 200 °C	SCALE: None	DWG. NO.: 211D186X0625XTL 4