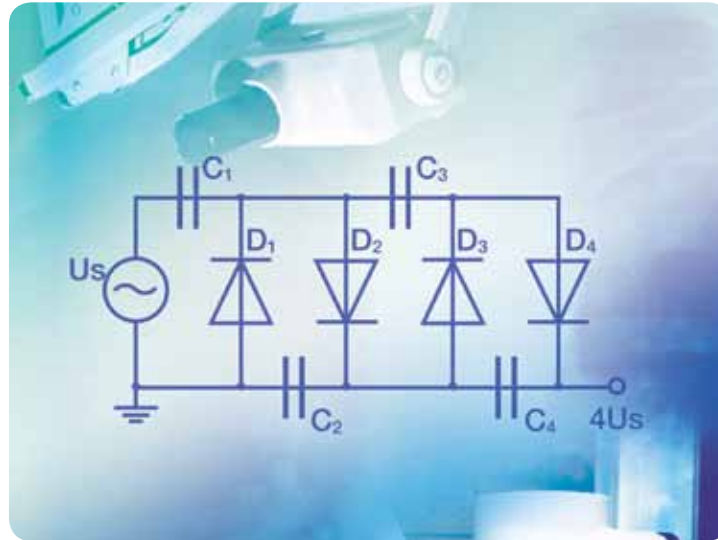


## High-Voltage Ceramic Capacitor Arrays



### FEATURES

- Customized for your application
- Single-layer ceramic technology
- X7R, Y5R, X5U, N750, and N4700 dielectrics
- Broad range of rated voltages up to 6 kV
- Terminations suitable for solder and wire bonding

### APPLICATIONS

- Voltage multipliers
- Any application where high voltages are required at infrequent intervals

### RESOURCES

- For technical questions contact [ceramiccaps@vishay.com](mailto:ceramiccaps@vishay.com)





# HIGH-VOLTAGE CERAMIC CAPACITOR ARRAYS

## Custom Solutions



Capacitors - Customized Devices

### End Product Examples

- X-ray equipment
- Power supply for night vision equipment
- Electronic flashtube
- Laser equipment

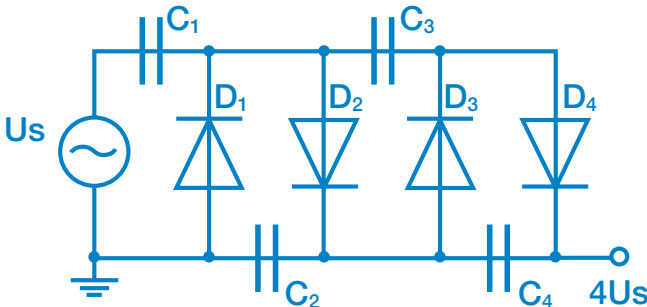


### Customized Devices for Customer Applications

Customized high-voltage ceramic capacitor arrays from Vishay Intertechnology are designed and delivered to meet the unique requirements of your application. Our R&D and product marketing teams will help you select a solution that maximizes efficiency and reliability. And with Vishay's broad offering of diodes, capacitors, and resistors, we can provide the full range of components needed to build a complete solution to suit your specifications.

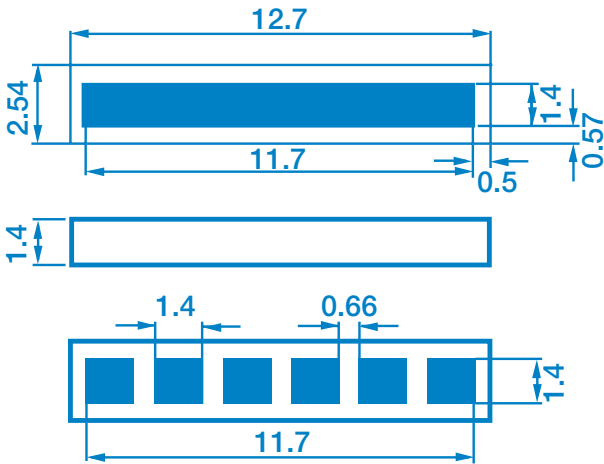
### About Voltage Multipliers

A voltage multiplier is an electrical circuit that converts AC electrical power from a lower voltage to a higher DC voltage by means of capacitors and diodes combined into a network. Voltage multipliers can be used to generate voltages of a few volts to tens of volts or higher. Shown below, the most common type of voltage multiplier is the half-wave series multiplier, also called the Villard cascade.



### Specifications

| Mechanical        |         |         |           |
|-------------------|---------|---------|-----------|
|                   | L       | W       | T         |
| <b>Dimensions</b> | 12.7 mm | 2.54 mm | See table |
| <b>Tolerance</b>  | ±0.2 mm | ±0.2 mm | ±0.2 mm   |



All sizes are in mm



# HIGH-VOLTAGE CERAMIC CAPACITOR ARRAYS

## Custom Solutions



Capacitors - Customized Devices

| Electrical                        |                |                         |             |             |             |             |
|-----------------------------------|----------------|-------------------------|-------------|-------------|-------------|-------------|
| <b>Dielectric</b>                 |                | X7R                     | Y5R         | X5U         | N750        | N4700       |
| <b>Temperature Coefficient</b>    |                |                         |             |             |             |             |
| <b>Operating Temperature</b>      |                | -55 to +125 °C          |             |             |             |             |
| <b>Dielectric Strength</b>        |                | 1.2 times rated voltage |             |             |             |             |
| <b>Dissipation Factor (DF)</b>    |                | < 2.5 %                 | < 2.5 %     | < 2.5 %     | < 0.30 %    | < 0.30 %    |
| <b>Insulation Resistance (IR)</b> |                | 100 gigohms             | 100 gigohms | 100 gigohms | 100 gigohms | 100 gigohms |
| <b>Pads</b>                       |                | 6                       | 6           | 6           | 6           | 6           |
| <b>Rated Voltage 6 kV</b>         | Met Size       | 1.4                     | 1.4         | 1.4         | 1.4         | 1.4         |
|                                   | Thickness (mm) | 1.4                     | 1.4         | 1.4         | 1           | 1.2         |
|                                   | C - Value (pF) | 60                      | 40          | 100         | 5           | 40          |
| <b>Rated Voltage 4 kV</b>         | Met Size       | 1.4                     | 1.4         | 1.4         |             | 1.4         |
|                                   | Thickness (mm) | 1                       | 1           | 1           |             | 0.8         |
|                                   | C - Value (pF) | 80                      | 56          | 120         |             | 56          |
| <b>Rated Voltage 2 kV</b>         | Met Size       | 1.4                     | 1.4         | 1.4         |             | 1.4         |
|                                   | Thickness (mm) | 0.6                     | 0.6         | 0.6         |             | 0.6         |
|                                   | C - Value (pF) | 120                     | 100         | 200         |             | 75          |

Other designs with different dimensions or capacitance values are available on request



# HIGH-VOLTAGE CERAMIC CAPACITOR ARRAYS

## Custom Solutions



Capacitors - Customized Devices

### WORLDWIDE SALES CONTACTS

#### THE AMERICAS

##### UNITED STATES

VISHAY AMERICAS  
ONE GREENWICH PLACE  
SHELTON, CT 06484  
UNITED STATES  
PH: +1-402-563-6866  
FAX: +1-402-563-6296

#### ASIA

##### SINGAPORE

VISHAY INTERTECHNOLOGY ASIA PTE LTD.  
37A TAMPINES STREET 92 #07-00  
SINGAPORE 528886  
PH: +65-6788-6668  
FAX: +65-6788-0988

##### P.R. CHINA

VISHAY CHINA CO., LTD.  
15D, SUN TONG INFOPORT PLAZA  
55 HUAI HAI WEST ROAD  
SHANGHAI 200030  
P.R. CHINA  
PH: +86-21-5258 5000  
FAX: +86-21-5258 7979

##### JAPAN

VISHAY JAPAN CO., LTD.  
SHIBUYA PRESTIGE BLDG. 4F  
3-12-22, SHIBUYA  
SHIBUYA-KU  
TOKYO 150-0002  
JAPAN  
PH: +81-3-5466-7150  
FAX: +81-3-5466-7160

#### EUROPE

##### GERMANY

VISHAY ELECTRONIC GMBH  
DR.-FELIX-ZANDMAN-PLATZ 1  
95100 SELB  
GERMANY  
PH: +49-9287-71-0  
FAX: +49-9287-70435

##### FRANCE

VISHAY S.A.  
199, BD DE LA MADELEINE  
06003 NICE, CEDEX 1  
FRANCE  
PH: +33-4-9337-2727  
FAX: +33-4-9337-2726

##### UNITED KINGDOM

VISHAY LTD.  
SUITE 6C, TOWER HOUSE  
ST. CATHERINE'S COURT  
SUNDERLAND ENTERPRISE PARK  
SUNDERLAND SR5 3XJ  
UNITED KINGDOM  
PH: +44-191-516-8584  
FAX: +44-191-549-9556