



Ultra High Voltage Ceramic Capacitors

With metal terminals

For high voltage power supplies/lasers

UHV series

UHV-221A to UHV-253A

UHV-1A to UHV-12A


PRECAUTIONS
(1) During transportation and storage

Do not transport or store where the products will be exposed to high temperature or high humidity.

Do not expose to poisonous gases such as H₂SO₄, HCl, or HNO₃.

Avoid excessive impact such as that caused by falling.

(2) During operation

Avoid contact with electrolytes such as perspiration. Do not touch with bare hands.

Avoid excessive impact such as that caused by falling.

Do not apply solder to stud terminals.

Do not re-machine the terminals.

(3) Usage

Make sure that the products are not exposed to radiant heat from chambers or transformers.

(4) Others

The products listed on this catalog are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require a more stringent level of safety or reliability, or whose failure, malfunction or trouble could cause serious damage to society, person or property.

If you intend to use the products in the applications listed below or if you have special requirements exceeding the range or conditions set forth in the each catalog, please contact us.

(1) Aerospace/Aviation equipment

(2) Transportation equipment (electric trains, ships, etc.)

(3) Medical equipment

(4) Power-generation control equipment

(5) Atomic energy-related equipment

(6) Seabed equipment

(7) Transportation control equipment

(8) Public information-processing equipment

(9) Military equipment

(10) Electric heating apparatus, burning equipment

(11) Disaster prevention/crime prevention equipment

(12) Safety equipment

(13) Other applications that are not considered general-purpose applications

When designing your equipment even for general-purpose applications, you are kindly requested to take into consideration securing protection circuit/device or providing backup circuits in your equipment.

Ultra High Voltage Ceramic Capacitors

Product compatible with RoHS directive

With metal terminals

For high voltage power supplies/lasers

Overview of the UHV Series

FEATURES

- Products with a rated voltage Edc of 20 to 50 kV.
- Small ESR.
- Low-loss and low distortion factor.
- Molded type metal screw terminals for easy mounting.
- Uses high-reliability mold resin.

APPLICATION

High-voltage power circuits (for medical devices, lithography, industrial analyzers)

OPERATING TEMPERATURE RANGE, PRODUCT WEIGHT

Part No.	Temperature range		Individual weight (g)
	Operating temperature	Storage temperature	
	(°C)	(°C)	
UHV-221A	-30 to +85	-30 to +85	14
UHV-222A	-30 to +85	-30 to +85	25
UHV-223A	-30 to +85	-30 to +85	40
UHV-224A	-30 to +85	-30 to +85	53
UHV-1A	-30 to +85	-30 to +85	75
UHV-2A	-30 to +85	-30 to +85	115
UHV-3A	-30 to +85	-30 to +85	170
UHV-231A	-30 to +85	-30 to +85	28
UHV-232A	-30 to +85	-30 to +85	46
UHV-233A	-30 to +85	-30 to +85	63
UHV-4A	-30 to +85	-30 to +85	83
UHV-5A	-30 to +85	-30 to +85	138
UHV-6A	-30 to +85	-30 to +85	210
UHV-241A	-30 to +85	-30 to +85	22
UHV-242A	-30 to +85	-30 to +85	38
UHV-243A	-30 to +85	-30 to +85	72
UHV-7A	-30 to +85	-30 to +85	112
UHV-8A	-30 to +85	-30 to +85	173
UHV-9A	-30 to +85	-30 to +85	261
UHV-251A	-30 to +85	-30 to +85	25
UHV-252A	-30 to +85	-30 to +85	61
UHV-253A	-30 to +85	-30 to +85	88
UHV-10A	-30 to +85	-30 to +85	126
UHV-11A	-30 to +85	-30 to +85	199
UHV-12A	-30 to +85	-30 to +85	297

○ RoHS Directive Compliant Product: See the following for more details related to RoHS Directive compliant products. <http://www.tdk.co.jp/rohs/>

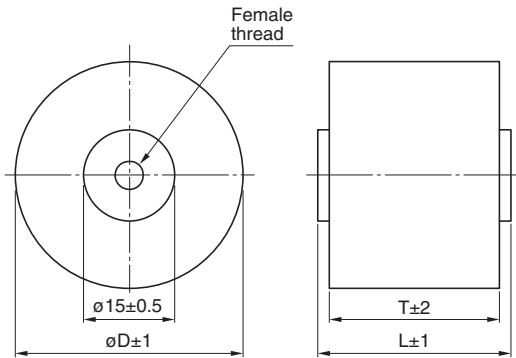
• All specifications are subject to change without notice.

UHV series

UHV-221A to UHV-253A, UHV-1A to UHV-12A

■ SHAPE & DIMENSIONS

Molded type



Part No.	ϕD	T	L	Internal screw
UHV-221A	20	19	23	ISO M4
UHV-222A	25	19	23	ISO M4
UHV-223A	30	19	23	ISO M4
UHV-224A	34	19	23	ISO M4
UHV-1A	38	19	23	ISO M5
UHV-2A	48	19	23	ISO M5
UHV-3A	60	19	23	ISO M5
UHV-231A	25	22	25	ISO M4
UHV-232A	30	22	25	ISO M4
UHV-233A	34	22	25	ISO M4
UHV-4A	38	22	25	ISO M5
UHV-5A	48	22	25	ISO M5
UHV-6A	60	22	25	ISO M5
UHV-241A	20	28	32	ISO M4
UHV-242A	25	28	32	ISO M4
UHV-243A	34	28	32	ISO M4
UHV-7A	38	28	32	ISO M5
UHV-8A	48	28	32	ISO M5
UHV-9A	60	28	32	ISO M5
UHV-251A	20	31	35	ISO M4
UHV-252A	30	31	35	ISO M4
UHV-253A	34	31	35	ISO M4
UHV-10A	38	31	35	ISO M5
UHV-11A	48	31	35	ISO M5
UHV-12A	60	31	35	ISO M5

□ MARKING

Item	Marking example
1. Part No.	1 → UHV-5A
2. Nominal capacitance and tolerance code	2 → 172K
3. Rated voltage	3 → 30kV
4. Manufacturer's name (TDK or TDK logo mark)	4 → TDK
5. Lot No.	5 → 1234

UHV series UHV-221A to UHV-253A, UHV-1A to UHV-12A

■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

Class 2 (Temperature Stable)

Temperature Characteristics: Z5T (+10 to +85°C, +22/-33%)

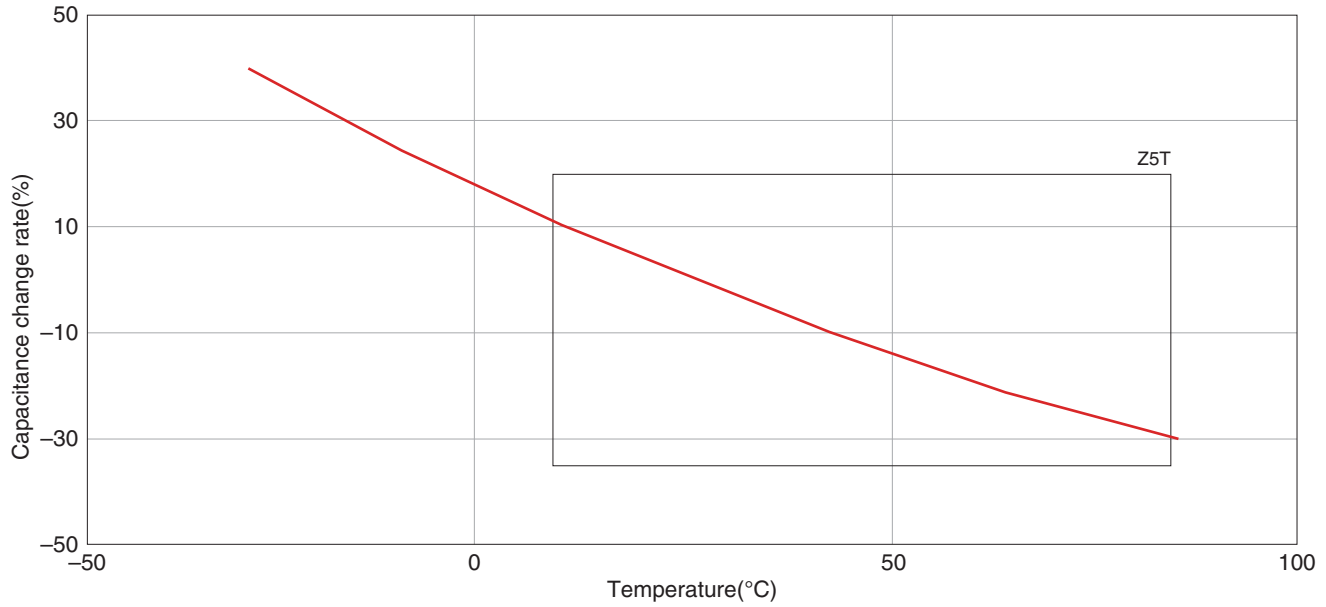
Part No.	Rated voltage	Capacitance	Withstanding voltage	Dissipation factor	Insulation resistance	AC Corona starting voltage
	(kV)	(pF)±10% nom.	(kV) [1min, in oil]	(tanδ) (%) max.	(MΩ) min.	(kV) min. [3PC*]
UHV-221A	20	200	30	0.2	100000	10
UHV-222A	20	400	30	0.2	100000	10
UHV-223A	20	700	30	0.2	100000	10
UHV-224A	20	1,000	30	0.2	100000	10
UHV-1A	20	1,400	30	0.2	100000	10
UHV-2A	20	2,500	30	0.2	100000	10
UHV-3A	20	4,000	30	0.2	100000	10
UHV-231A	30	200	45	0.2	100000	15
UHV-232A	30	400	45	0.2	100000	15
UHV-233A	30	700	45	0.2	100000	15
UHV-4A	30	940	45	0.2	100000	15
UHV-5A	30	1,700	45	0.2	100000	15
UHV-6A	30	2,700	45	0.2	100000	15
UHV-241A	40	100	60	0.2	100000	20
UHV-242A	40	200	60	0.2	100000	20
UHV-243A	40	400	60	0.2	100000	20
UHV-7A	40	700	60	0.2	100000	20
UHV-8A	40	1,300	60	0.2	100000	20
UHV-9A	40	2,000	60	0.2	100000	20
UHV-251A	50	100	75	0.2	100000	25
UHV-252A	50	200	75	0.2	100000	25
UHV-253A	50	400	75	0.2	100000	25
UHV-10A	50	560	75	0.2	100000	25
UHV-11A	50	1,000	75	0.2	100000	25
UHV-12A	50	1,700	75	0.2	100000	25

* PC : Pico coulomb.

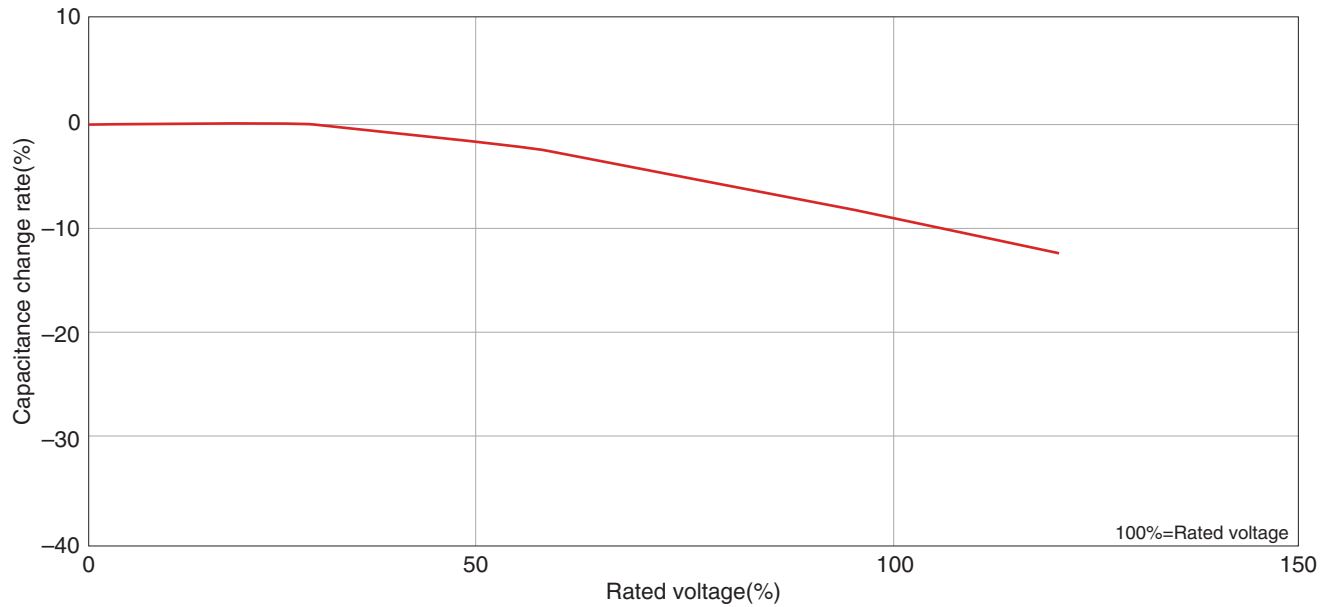
UHV series UHV-221A to UHV-253A, UHV-1A to UHV-12A

ELECTRICAL CHARACTERISTICS

CAPACITANCE VS. TEMPERATURE CHARACTERISTICS



CAPACITANCE VS. DC BIAS CHARACTERISTICS



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