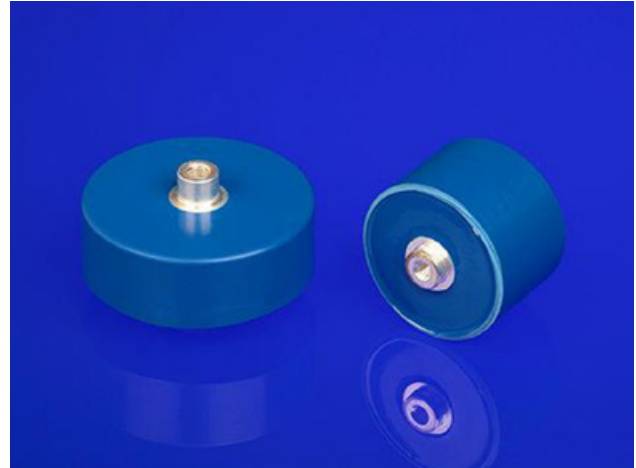




High Voltage DC Y5U Disc Capacitor Range

High Voltage DC Y5U Disc Capacitor Range

The CeramTec Group is a world leader in the design and manufacture of complex electronic ceramic components and assemblies used in a wide range of applications and cutting edge technologies. CeramTec UK specialises in the development and production of dielectric and ferroelectric materials and components. This dc high voltage range is encapsulated in an epoxy resin for moisture protection. The range employs a high permittivity type 2 Y5U ceramic dielectric that results in a high capacitance per unit volume. Voltage ratings range from 10 to 40kVdc in a variety of case sizes. Requests for custom capacitor designs are invited.



APPLICATIONS INCLUDE

- X-Ray Power Supplies :Baggage Handling & Medical Scanners
- High Voltage DC Power Supplies
- Power supplies for Electrostatic coating machines
- Multiplier Circuits
- Electrostatic copying machines
- Bypass, coupling and smoothing circuitry
- Power distribution

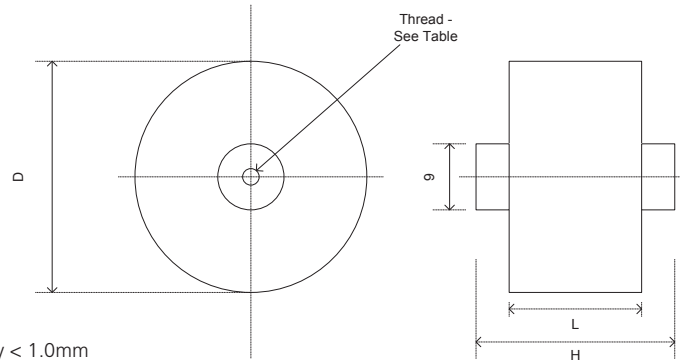
FEATURES

- Wide DC Voltage range
- Small Size
- Robust construction
- Epoxy resin encapsulated
- Variety of case sizes resulting in a wide capacitance range

Electrical Specification	
Capacitance Range	See Table (20°C/1Vrms/1kHz)
Capacitance Tolerance	+40% -20%
Tan Delta	< 150 x 10 ⁻⁴
Rated DC Voltage	10-40kVdc (see table)
Test Voltage (50 Hz)	1.5 x Rated Voltage / 1min
Temperature Characteristic	Y5U (+22% -56% over temperature range -30° to +85°C)
Capacitance- dc voltage characteristic	See Curve
Operating Temperature Range	-20°C +85°C
Torque Limit	M4 – 1Nm, M5 – 1.5 Nm

HIGH VOLTAGE DC Y5U CAPACITOR RANGE

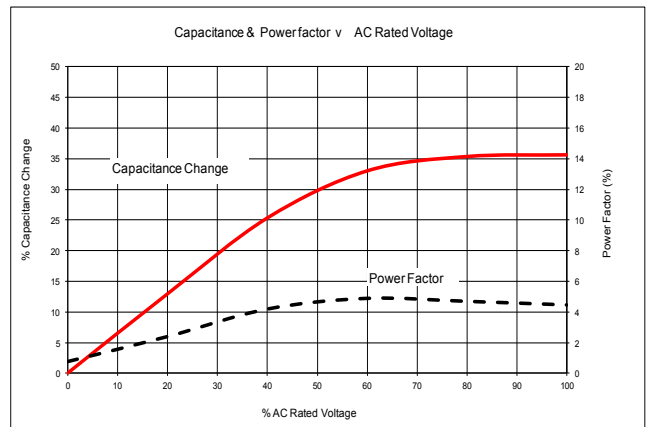
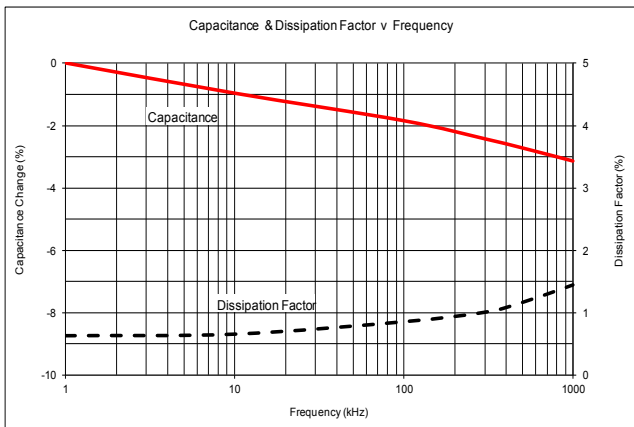
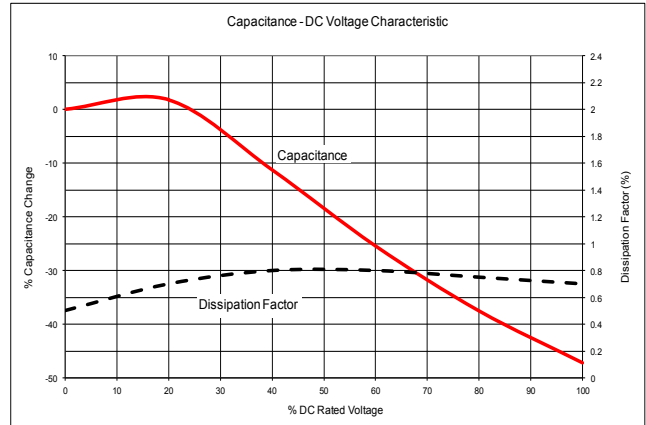
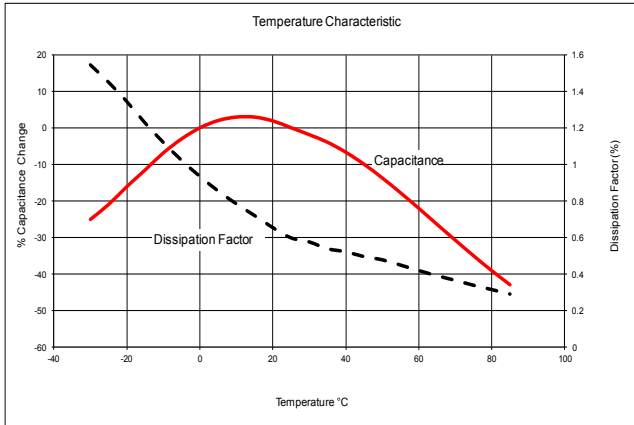
Outline Drawing:



High Voltage Disc capacitors: Y5U CLASS 2 Ceramic

Part Number	Cap Value pF	Rated Voltage kVdc	Rated Voltage kVrms	'D' mm	'H' (mm) /- L -	'H' (mm) /- S -	'L' mm	Thread Size (mm)
3E10/Y112V/4-0	1100	10	2	22	26.7	19.7	14	M4
3E10/Y202V/4-0	2000	10	2	27	26.7	19.7	14	M4
3E10/Y362V/4-0	3600	10	2	36	26.7	19.7	14	M4
3E10/Y802V/5-0	8000	10	2	50	26.7	19.7	14	M5
3E10/Y103V/5-0	10000	10	2	56	26.7	19.7	14	M5
3E20/Y561V/4-0	560	20	4	22	33.3	26.3	20.5	M4
3E20/Y102V/4-0	1000	20	4	27	33.3	26.3	20.5	M4
3E20/Y182V/4-0	1800	20	4	36	33.3	26.3	20.5	M4
3E20/Y382V/5-0	3800	20	4	50	33.3	26.3	20.5	M5
3E20/Y382V/5-0	5000	20	4	56	33.3	26.3	20.5	M5
3E20/Y722V/5-0	7200	20	4	66	33.3	26.3	20.5	M5
3E30/Y401V/4-0	400	30	6.4	22	38.3	31.3	26	M4
3E30/Y701V/4-0	700	30	6.4	27	38.3	31.3	26	M4
3E30/Y132V/4-0	1300	30	6.4	36	38.3	31.3	26	M4
3E30/Y272V/5-0	2700	30	6.4	50	38.3	31.3	26	M5
3E30/Y362V/5-0	3600	30	6.4	56	38.3	31.3	26	M5
3E30/Y502V/5-0	5000	30	6.4	66	38.3	31.3	26	M5
3E40/Y301V/4-0	300	40	8	22	45	38	32	M4
3E40/Y511V/5-0	510	40	8	27	45	38	32	M4
3E40/Y102V/4-0	1000	40	8	36	45	38	32	M4
3E40/Y212V/5-0	2100	40	8	50	45	38	32	M5
3E40/Y272V/5-0	2700	40	8	56	45	38	32	M5
3E40/Y402V/5-0	4000	40	8	66	45	38	32	M5

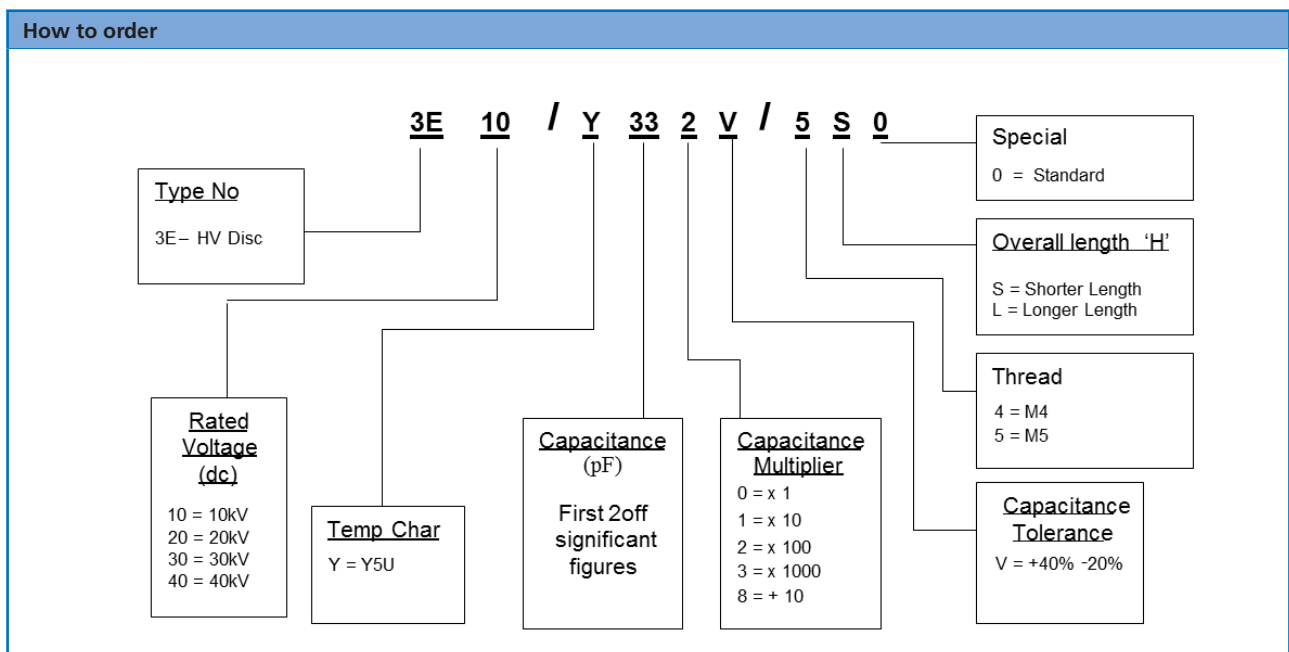
High Voltage DC Y5U Disc Capacitor Range



The above RF load conditions are based on the maximum body temperature rise of 45°C from an ambient temperature of 30°C.

HIGH VOLTAGE DC Y5U CAPACITOR RANGE

Test Specification			
Group	Test	Spec/Test	Comments
0	Dimensions	Internal Drawing/ Test Specification	Internal Drawing / Test Specification
	Capacitance		+40% -20% (1Vrms/1kHz) @ 20°C
	Tan Delta		$\leq 150 \times 10^{-4}$ (1Vrms/1kHz) @ 20°C
	Insulation Resistance		$\geq 10^{10}$ ohms (1Vrms/1kHz) @ 20°C
	Voltage proof		1.5 x Un/60sec (20-40kVdc rated)
	Partial Discharge		<5pC – See Internal drawing/ Specification for Test Voltage
1a	Robustness of Terminations	IEC 68-2 Ud	4mm Thread -1Nm, 5mm Thread -1.5Nm
1b	Rapid Change of Temperature	IEC 68-2 Ud	-20°C to +85°C 5 cycles, 1Hour Soak, 0.5°C/min
2	Damp Heat Steady State	IEC 68-2 Ca	40°C + 2°C / 90-95 % R.H. / 21 Days
3	Endurance		1.2 x rated Voltage/1000Hours/60°C
4	Temperature Coefficient		Y5U (EIA, (+22% -56% over temperature range -30°C to +85°C. (Ref Temp 25°C): See Graph
5	DC Voltage Coefficient		See Graph
	Post Test Criteria		
	Capacitance		< + 20%
	Tan delta		< 500×10^{-4}
	Insulation Resistance		> 1×10^9 ohms





The measured values mentioned before were determined for test samples and are applicable as standard values. The values were determined on the basis of DIN-/DIN-VDE standards and if these were not available, on the basis of CeramTec standards. The values indicated must not be transferred to arbitrary formats, components or parts featuring different surface qualities. They do not constitute a guarantee for certain properties. We expressly reserve the right to make technical changes.

CeramTec UK Limited

Vauxhall Industrial Estate

Ruabon

Wrexham

LL14 6HY

United Kingdom

Phone +44 (0) 1978 810 456

electroc ceramics@ceramtec.co.uk

www.ceramtec.com

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