High Voltage Ring Style Capacitors, Class 1 and Class 2 Ceramic

FEATURES

- High reliability
- Stackmounting is possible

APPLICATIONS

Ring style high voltage capacitors made from class 2 ceramic dielectric can be used as coupling and bypass capacitors, capacitors where low power ratings are required and larger capacitance changes where temperature can be tolerated.

QUICK REFERENCE DATA

DESCRIPTION	VALUE						
Ceramic Class	2					1	2
Ceramic Dielectric	R2000H (Z5U)	R6000 (Y5U)	R2000H (Z5U)	R6000 (Y5U)	R6000 (Y5U)	R85 (U2J)	R4000 (Y5U)
Type	HR22		HR30			HR35	
Voltage (V_p)	2800	2800	3500	5600	2800	3500	2000
Min. Capacitance (pF)	750	2000	1500	2500	5000	100	5000
Max. Capacitance (pF)	1000	3000	1500	2500	5000	100	5000
Mounting	Screw terminal						

MATERIAL

Capacitor elements made from class 1 or class 2 ceramic dielectric with noble metal electrodes.

FINISH

Noble metal electrode pure silver, inner and outer insulating rim completely protective lacquered.

MARKING

Type designator, capacitance value and tolerance, rated peak voltage, ceramic material code, manufacturer logo.

CAPACITANCE RANGE

100 pF to 5.0 nF

CAPACITANCE TOLERANCE

R85, R2000H: ± 20 %

R4000, R6000: -20 % to +50 %

CERAMIC DIELECTRIC

- R85 (U2J)
- R2000H (Z5U)
- R4000 (Y5U)
- R6000 (Y5U)

RATED VOLTAGE

- 2.0 kV_P
- 2.8 kV_P
- 3.5 kV_P
- 5.6 kV_P

DIELECTRIC STRENGTH TEST

300 % of rated voltage, 50 Hz, in dielectric fluid

DISSIPATION FACTOR

- R85: max. 0.07 % (1 MHz)
- R2000H: max. 0.5 % (1 kHz)
- R4000, R6000: max. 2.5 % (1 kHz)

INSULATION RESISTANCE

Min. 50 000 MΩ (at 25 °C)

OPERATING TEMPERATURE RANGE

- Class 1: -55 °C to +85 °C
- Class 2: -55 °C to +100 °C

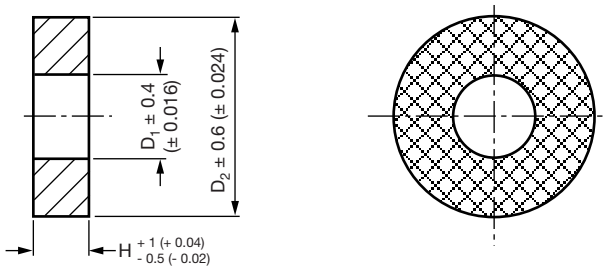
SAP PART NUMBER, ELECTRICAL AND DIMENSIONAL DATA

PART NUMBER	CERAMIC	CAP. VALUES (pF)	RATED VOLTAGE (kV_P)	D_1 mm (inch)	D_2 mm (inch)	H mm (inch)
TYPE HR22						
HR0022VR75138AX1	R2000H (Z5U)	750	2.8	10 (0.39)	22 (0.87)	7.5 (0.295)
HR0022VR10238AX1		1000				5.6 (0.220)
HR0022VR20291BB1	R6000 (Y5U)	2000				8.0 (0.315)
HR0022VR30291BB1		3000				5.3 (0.209)
TYPE HR30						
HR0030VT15238AX1	R2000H (Z5U)	1500	3.5	12 (0.47)	30 (1.81)	7.6 (0.295)
HR0030VW25291BB1	R6000 (Y5U)	2500	5.6			10.0 (0.394)
HR0030VR50291BB1		5000	2.8			5.0 (0.197)
TYPE HR35						
HR0035VT10138BJ1	R85 (U2J)	100	3.5	12 (0.47)	35 (1.38)	7.0 (0.276)
HR0035BB50291BA1	R4000 (Y5U)	5000	2.0			5.2 (0.205)

Note

- The surface temperature during operation must not exceed +100 °C

DIMENSIONS in millimeters (inches)



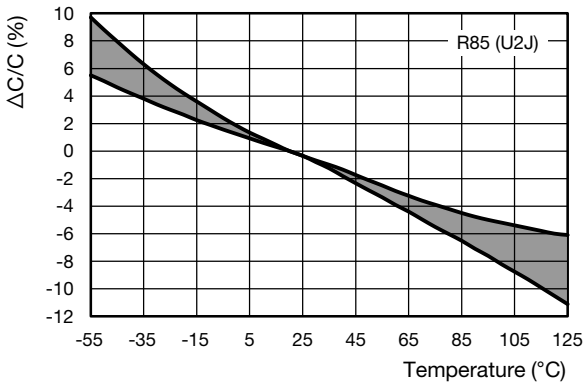
MOUNTING GUIDELINES

Ring style capacitors can be mounted in series.

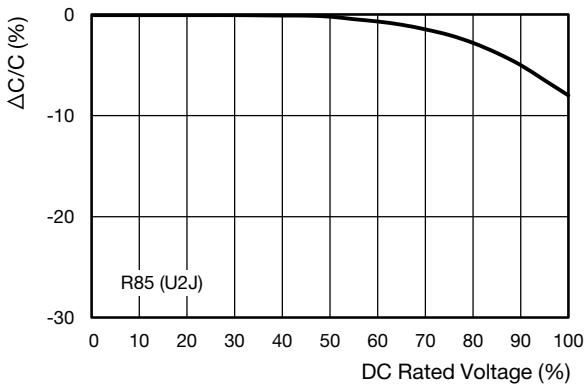
- Avoid installation in which too much pressure or torque is applied to the capacitor elements
- Use spring washers in order to prevent the generation of physical stress to the capacitor elements and noble metal electrodes
- The capacitor elements must not be used as a mechanical support for other devices or components

CERAMIC CHARACTERISTICS (TYPICAL)

CAPACITANCE CHANGE VS. TEMPERATURE



DC VOLTAGE DEPENDENCE OF CAPACITANCE



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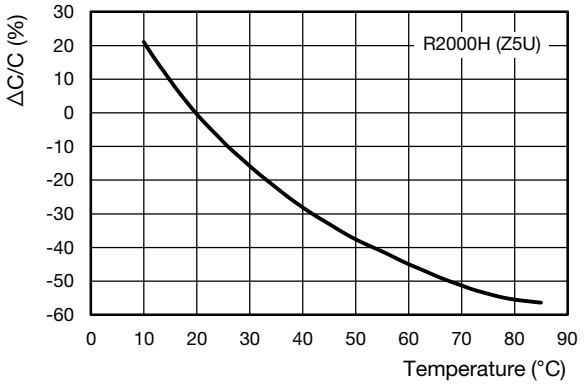

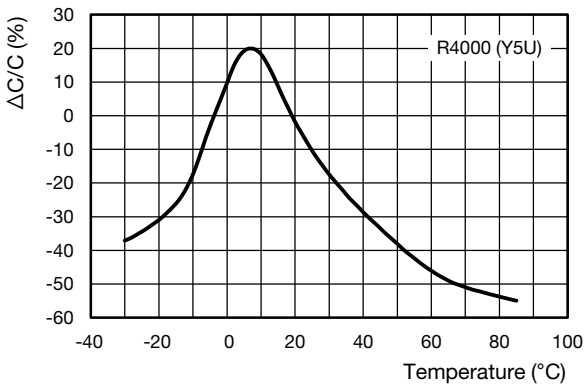

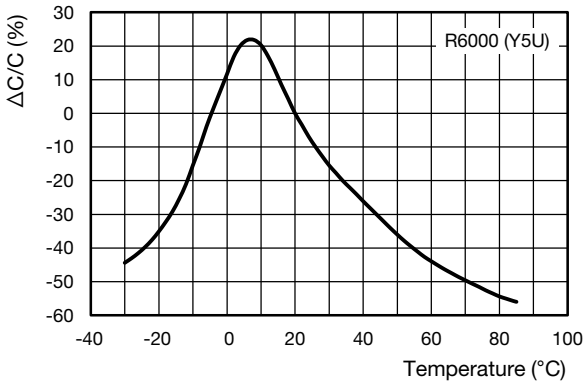

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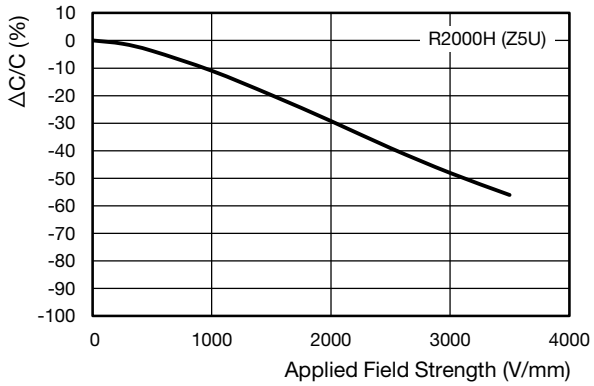

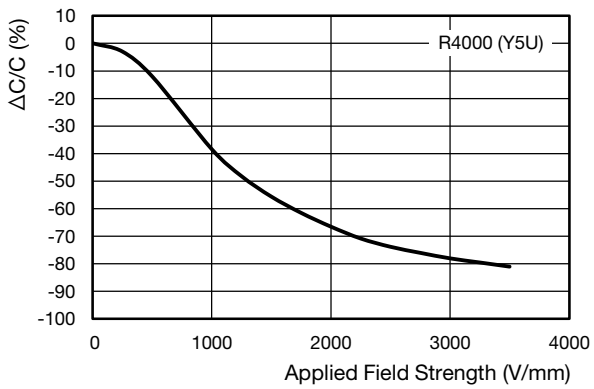

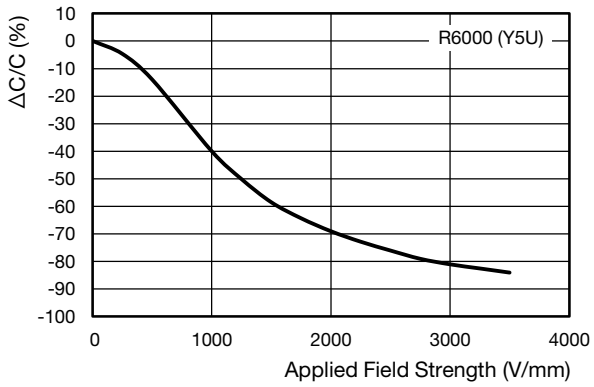

RELATED DOCUMENTS

General Information	www.vishay.com/doc?22071

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