

## Ceramic Singlelayer DC Disc Capacitors, 500 V<sub>DC</sub> General Purpose



### FEATURES

- High capacitance in small sizes
- Low losses
- Wide range of different lead styles
- Material categorization:  
for definitions of compliance please see  
[www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### APPLICATIONS

- Bypassing
- Resonant circuits
- Coupling

### DESIGN

The capacitors consist of a ceramic disc which is silver plated on both sides. Connection leads are made of tinned copper having diameters of 0.6 mm.

The capacitors may be supplied with straight or kinked leads having a lead spacing of 5.0 mm or 7.5 mm.

Coating is made of blue colored flame retardant epoxy resin in accordance with UL 94 V-0.

### CAPACITANCE RANGE

10 pF to 10 nF

### RATED VOLTAGE

500 V<sub>DC</sub>

### DIELECTRIC STRENGTH

1250 V<sub>DC</sub>, 2 s      Component test

### INSULATION RESISTANCE AT 500 V<sub>DC</sub>

≥ 5000 MΩ (60 s)

### TOLERANCE ON CAPACITANCE

± 10 %, ± 20 %, - 20 % / + 50 %

### DISSIPATION FACTOR

C < 100 pF: max. 3.0 % (1 MHz)

C ≥ 100 pF: max. 3.0 % (1 kHz)

### QUICK REFERENCE DATA

DESCRIPTION	VALUE
Ceramic Class	2
Ceramic Dielectric	Y5T, Y5U
Voltage (V <sub>DC</sub> )	500
Min. Capacitance (pF)	10
Max. Capacitance (pF)	10 000
Mounting	Radial

### MARKING

Marking indicates, capacitance, tolerance code, and rated voltage.

### OPERATING TEMPERATURE RANGE

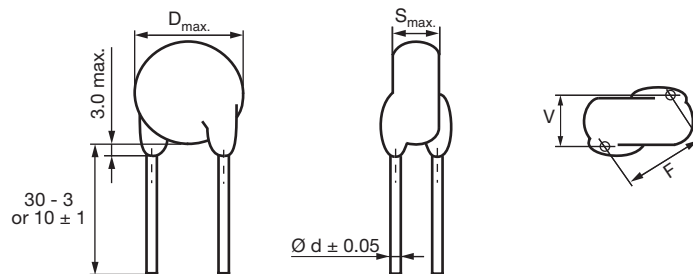
-40 °C to +85 °C

### TEMPERATURE CHARACTERISTICS

Y5T, Y5U

### SECTIONAL SPECIFICATIONS

Climatic category (according to EN 60068-1):  
40/085/21


**DIMENSIONS** in millimeters

**ORDERING INFORMATION**

CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER D <sub>max.</sub> (mm)	BODY THICKNESS S <sub>max.</sub> (mm)	LEAD SPACING <sup>(1)</sup> F (mm) ± 1 mm	LEAD DIAMETER <sup>(1)</sup> d (mm) ± 0.05 mm	WIDTH <sup>(1)</sup> V (mm) ± 0.5 mm	ORDERING CODE					
							MISSING DIGITS SEE ORDERING CODE BELOW					
Y5T (2D3)												
10	± 10, ± 20	6.0	3.0	5.0	0.6	1.6	HSZ100#AQ####KR					
12							HSZ120#AQ####KR					
15						1.5	HSZ150#AQ####KR					
18						1.3	HSZ180#AQ####KR					
22						1.1	HSZ220#AQ####KR					
27						1.3	HSZ270#AQ####KR					
33						1.4	HSZ330#AQ####KR					
39							HSZ390#AQ####KR					
47						1.2	HSZ470#AQ####KR					
56							HSZ560#AQ####KR					
68						1.4	HSZ680#AQ####KR					
82							HSZ820#AQ####KR					
100							HSZ101#AQ####KR					
120						1.1	HSZ121#AQ####KR					
150							HSZ151#AQ####KR					
180						1.6	HSZ181#AQ####KR					
220							HSZ221#AQ####KR					
270						1.3	HSZ271#AQ####KR					
330							HSZ331#AQ####KR					
390						1.2	HSZ391#AQ####KR					
470							HSZ471#AQ####KR					
560							HSZ561#AQ####KR					
680		7.0				1.1	HSZ681#AQ####KR					
820							HSZ821#AQ####KR					
1000		8.0				1.2	HSZ102#AQ####KR					
1200							HSZ122#AQ####KR					
1500		9.0				1.1	HSZ152#AQ####KR					
1800							HSZ182#AQ####KR					
2200		11.0		7.5		1.2	HSZ222#AQ####KR					
2700							HSZ272#AQ####KR					
3300		15.0					HSZ332#AQ####KR					
3900							HSZ392#AQ####KR					
4700		1.1				HSZ472#AQ####KR						



## ORDERING INFORMATION

CAPACITANCE (pF)	TOLERANCE (%)	BODY DIAMETER D <sub>max.</sub> (mm)	BODY THICKNESS S <sub>max.</sub> (mm)	LEAD SPACING <sup>(1)</sup> F (mm) ± 1 mm	LEAD DIAMETER <sup>(1)</sup> d (mm) ± 0.05 mm	WIDTH <sup>(1)</sup> V (mm) ± 0.5 mm	ORDERING CODE MISSING DIGITS SEE ORDERING CODE BELOW				
Y5U (2E3)											
470	- 20 / + 50 <sup>(2)</sup>	6.0	4.0	5.0	0.6	1.1	HSE471#AQ####KR				
680						1.2	HSE681#AQ####KR				
1000						1.4	HSE102#AQ####KR				
1500		7.0		7.5		1.2	HSE152#AQ####KR				
2200							HSE222#AQ####KR				
3300		11.0				1.1	HSE332#AQ####KR				
4700							HSE472#AQ####KR				
6800		13.0					HSE682#AQ####KR				
8200		15.0				1.4	HSE822#AQ####KR				
10 000						1.2	HSE103#AQ####KR				

## Notes

<sup>(1)</sup> Standard lead configuration, other lead spacing and diameter available on request<sup>(2)</sup> ± 20 % available on request

## ORDERING CODE

#	7 <sup>th</sup> digit	Capacitance tolerance	± 10 % = K, ± 20 % = M, - 20 % / + 50 % = S				
###	10 <sup>th</sup> to 12 <sup>th</sup> digit	Lead configuration	see "General Information"				
Example	HSE	103	S	AQ	CRY	K	R
	Series	Capacitance value	Tolerance code	Voltage code	Lead configuration	Internal code	RoHS compliant

## MARKING

HSE 470 pF to 4.7 nF	HSE 6.8 nF to 10 nF	HSZ 10 pF to 3.9 nF	HSZ 4.7 nF

## RELATED DOCUMENTS

General Information	<a href="http://www.vishay.com/doc?22001">www.vishay.com/doc?22001</a>
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