

Ceramic Disc Capacitors [High Voltage Disc Capacitors]

HDC Series – 1KVdc to 6KVdc



HDC Series (ceramic disc capacitors) are ideal for use in general electronic products with voltage ratings from 1KV to 6KV.

◆ Features

- Wide operating temperature range
- Low Loss at wide range of frequency
- High reliability
- RoHS compliant
- Halogen Free available

◆ Applications

- Suitable for LAN/WLAN interface
- Ballast circuit of back-lighting inverter
- DC-DC converters
- Snubber circuit of switching power supplies
- Modems and communication

◆ Summary of Specifications

Operation Temperature	NP0/X7R : -55 °C ~ +125 °C
	Y5P/Y5S/SL : -25 °C ~ +85 °C
	Y5U/Y5V : -25 °C ~ +85 °C
Capacitance Range	2pF to 100nF
Rated Voltage	1KVdc to 6KVdc
Temperature Coefficient	NP0 : $\leq \pm 30\text{ppm}/^\circ\text{C}$, -55 °C ~ +125 °C (EIA Class I)
	SL : +350 ~ -1000ppm/ °C , -25 °C ~ +85 °C (EIA Class I)
	Y5S : $\leq \pm 22\%$, -25 °C ~ +85 °C
	X7R : $\leq \pm 15\%$, -55 °C ~ +125 °C (EIA Class II)
	Y5P : $\leq \pm 10\%$, Y5U : +22%/-56% , Y5V : +22%/-82% , -25 °C ~ +85°C (EIA Class II)
Dissipation Factor	Class I , NP0/SL : $Q \geq 300$ at 1MHz/1Vrms
	Class II , Y5P : $DF \leq 2.5\%$, Y5U/Y5V : $DF \leq 5.0\%$ at 1KHz/1Vrms
Insulation Resistance	10GΩ or 500/CΩ whichever is smaller (C in Farads)
Aging	NP0 : 0% , SL : 1.5% per decade of time
	X7R, Y5P, Y5S : 3.5 % per decade of time
	Y5U : 5.0 % , Y5V : 7.5% per decade of time
Dielectric Strength	$V \leq 2KV$: 200% Rated Voltage
	3KV : 175% Rated Voltage
	6KV : 150% Rated Voltage

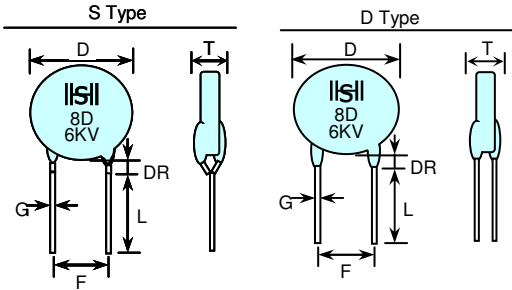
◆ How To Order

HDC	S	3R0	C	602	7	A	A	N
Product Code HDC: Ceramic Disc Capacitor	Dielectric Ex.: N : NP0 S : SL L : Y5S X : X7R P : Y5P Y : Y5V E : Y5U	Capacitance Unit : pF Ex.: 2R0 : 2pF 100 : 10x10 ⁰ 151 : 15x10 ¹	Tolerance Ex.: C : $\pm 0.25\text{pF}$ D : $\pm 0.5\text{pF}$ H : $\pm 3\%$ J : $\pm 5\%$ K : $\pm 10\%$ M : $\pm 20\%$	Rated Voltage Ex.: 102:1000Vdc 202:2000Vdc 302:3000Vdc 602:6000Vdc	Lead Space Ex.: 5 : 5.00mm 6 : 6.35mm 7 : 7.50mm A : 10.0mm B : 12.5mm	Lead Length & Packaging Ex.: H: 3.1mm C: 3.5mm S: 5.0mm M: 10.0mm L: 25mm min. T: T & R A: Ammo Box	Lead Shape Style Ex.: S Type 1: $\phi = 0.50\text{mm}$ 2: $\phi = 0.60\text{mm}$ 3: $\phi = 0.65\text{mm}$ 4: $\phi = 0.80\text{mm}$ D Type 9: $\phi = 0.50\text{mm}$ A: $\phi = 0.60\text{mm}$ B: $\phi = 0.65\text{mm}$ C: $\phi = 0.80\text{mm}$	Optional Suffix Ex.: N :Halogen Free

HDC Series - High Voltage Ceramic Disc Capacitor

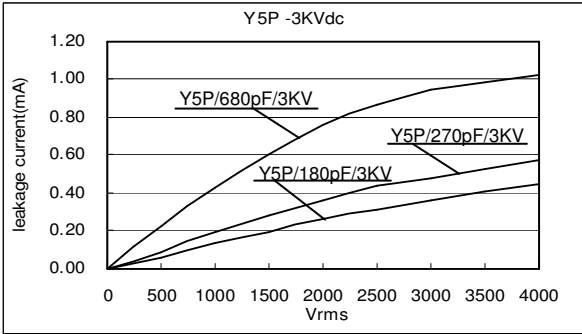
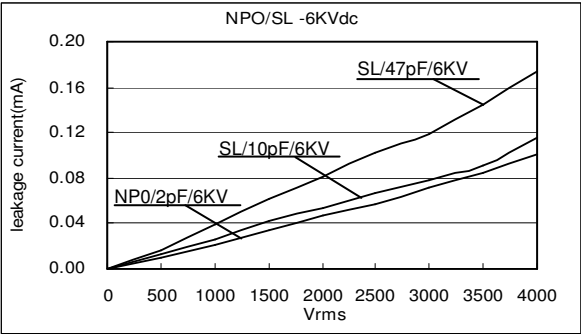


◆ Dimensions



Code	Dimension			
D	Φ20.5mm max.			
F	5.0±1.0 mm	7.50±1.5 mm	10.0±2.0 mm	12.5±2.0 mm
G	0.5±0.1mm / 0.6±0.1mm / 0.8±0.1mm			
T	8.0mm max.			
DR	4.0mm max.			

◆ Leakage Current Characteristics (Typical Reference)



◆ Capacitance Range

Dielectric Characteristic	Voltage	Capacitance Range																			
		2R0	3R0	5R0	6R0	7R0	8R0	9R0	100	120	150	180	220	270	330	390	470	560	680	820	
NPO	3KV																				
	6KV																				
SL	1KV																				
	2KV																				
	3KV																				
	6KV																				
Y5S	3KV																				

Dielectric Characteristic	Voltage	Capacitance Range																			
		101	121	151	181	221	271	331	391	471	561	681	821	102	122	152	182	222	272	332	
X7R	2KV																				
	3KV																				
Y5P	1KV																				
	2KV																				
Y5U	1KV																				
	2KV																				
	3KV																				
Y5V	1KV																				
	2KV																				

■ Other capacitance and voltage rating are available. Please contact Holy Stone.

