

# Voltage Multiplier Assemblies

## Voltage Multiplier Assemblies

These series connected disc capacitors have been developed for use in low power voltage multipliers for high voltage DC generators. These devices find their major application in the manufacture of voltage multipliers for electrostatic paint spraying equipment and their compact form lends itself to their incorporation in hand held electrostatic spray guns.

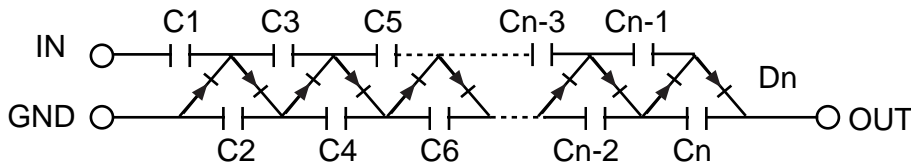
A number of capacitors are assembled together with intermediate fittings which allow the connection of diodes to be made. Output voltages in excess of 100kVDC can be produced depending on the number of stages.

Voltage ratings of individual discs range from 8 to 1 5kVDC assuming that the quality of encapsulation by the user is sufficient to prevent external breakdown.

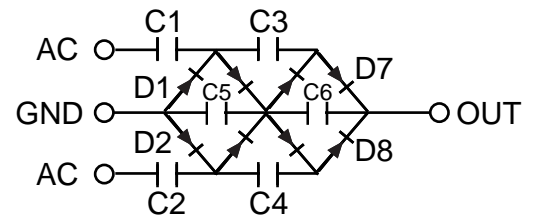
A variety of intermediate metal fittings are available and the number of individual capacitors in each stack can be varied to meet customers requirements up to a maximum of 12.

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### Schematics



Half-Wave Series Multiplier



Full-Wave Multiplier

### Material Characteristics

EIA Category

Dielectric Constant  $\epsilon_r$  @ 1kHz, 20°C LV

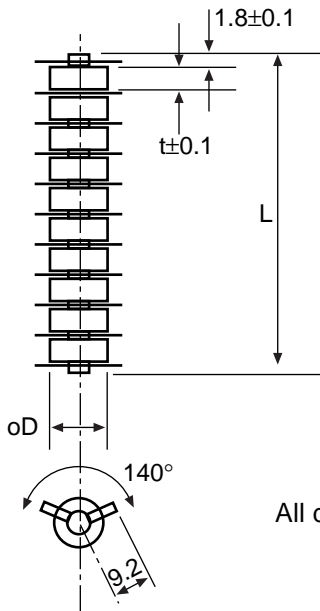
Typical Dissipation Factor @ 1kHz 20°C LV

Insulation Resistance @ 500V, 20°C

Aging Rate per decade hour

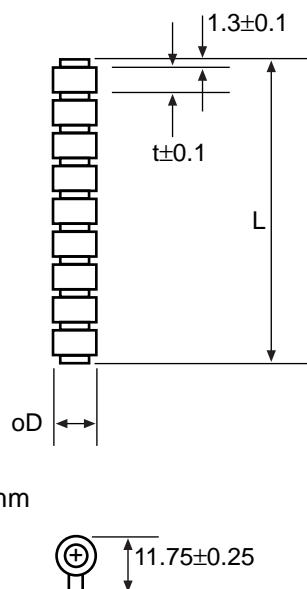
Units	K2100	K2500	Dielectric K2900	K3300	K3800
	X7R	Z5U	Y5U	Y5T	X7R
	~2100	~2500	~3200	~3300	~3800
%	≤2.0	≤0.5	≤1.0	≤1.5	≤1.5
$\Omega$	≥10 <sup>10</sup>	≥10 <sup>10</sup>	≥10 <sup>10</sup>	≥10 <sup>10</sup>	≥10 <sup>10</sup>
%	-2.5	-2	-3.5	-3	-3

### Style 'A'

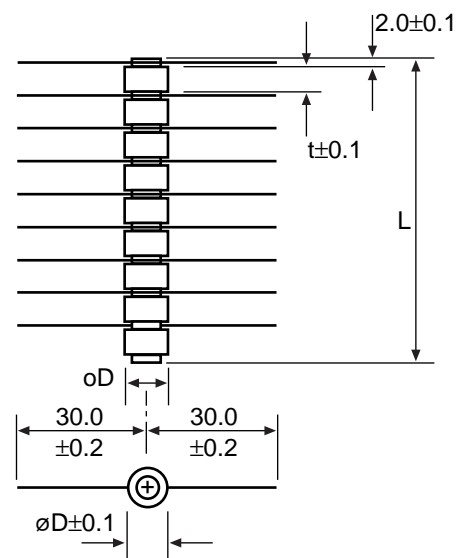


All dimensions in mm

### Style 'B'



### Style 'C'



**Style 'A' Characteristics**

Type	Cap Value pF	Cap Tol %	Dielectric	Voltage rating kV dc	N° Discs	øD mm	L mm	Tol on L mm	t mm
07562	500	-20	K2100	12	12	12	77.5	-2.0	4.5
07594	500	-20	K2100	12	10	12	65	-1.5	4.5
07575	500	-20	K2100	12	8	12	52.5	-1.5	4.5
07852	1000	-10	K3800	10	12	12	72.0	-1.0	4.0
07806	480	-20	K3800	12	8	9.3	52.5	-1.5	4.5
07805	480	-20	K3800	12	10	9.3	70	-1.5	4.5
07551	250	-20	K2900	12	12	8	83.5	-2.0	5.0
07566	250	-20	K2900	12	10	8	70	-1.5	5.0
07563	250	-20	K2900	12	6	8	42.5	-2.0	5.0
07881	250	+30, -0	K3300	10	12	8	73	-2.0	4.0
07883	250	+40, -0	K3300	10	12	8	70	-1.0	4.0
07895	250	+40, -0	K3300	10	11	8	64	-1.5	4.0
07865	250	+30, -10	K3300	10	12	7.3	80	-2.0	3.9
07854	250	+30, -0	K3300	10	6	8	37	-2.0	4.0
07866	125	+40, -0	K2100	10	10	7.3	60	-2.0	4.0

**Style 'B' Characteristics**

Type	Cap Value pF	Cap Tol %	Dielectric	Voltage rating kV dc	N° Discs	øD mm	L mm	Tol on L mm	t mm
07571	250	-20	K2900	12	12	8	77	-2.0	5.0
07581	250	-20	K2900	12	7	8	45.5	-1.5	5.0
07592	250	+40, -0	K3300	10	12	8	65	-2.0	4.0
07817	250	+40, -0	K3300	10	7	8	38.4	-1.5	4.0
07595	250	+40, -0	K3300	10	10	8	54.5	-1.5	4.0
07845	250	+40, -0	K3300	10	9	8	49.5	-1.0	4.0
07816	250	-20	K2900	12	10	8	64.3	-1.5	5.0

**Style 'C' Characteristics**

Type	Cap Value pF	Cap Tol %	Dielectric	Voltage rating kV dc	N° Discs	øD mm	L mm	Tol on L mm	t mm
07807	250	-10	K3300	10	12	7.3	72	Max	4.0
07742	250	-20	K2900	12	12	8	86	-1.0	5.0
07885	250	+40, -0	K3300	10	12	8	74.0	-1.0	4.0
07903	250	+40, -0	K3300	10	12	8	72.0	Max	4.0
07899	250	-20	K3300	10	12	8	69.0	-1.0	4.0
07749	250	+40, -0	K3300	10	10	8	62.0	-2.0	4.0
07750	270	+40, -0	K3300	10	6	8	39.5	-1.0	4.2
07822	250	+40, -0	K3300	10	6	8	38.0	-1.0	4.0
07884	250	+40, -0	K3300	10	5	8	32.0	-1.0	4.0
07748	250	+40, -0	K3300	10	4	8	26.0	-1.0	4.0

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***Vist the HV Capacitor  
Web-Site!  
www.hvcaps.com***

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