

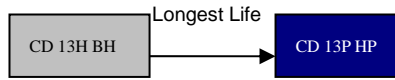
## 5000h at 85°C

### Features

- 600V with 5000h at 85°C
- RoHS Compliant

### Applications

- High Professional Inverters and Power Supplies



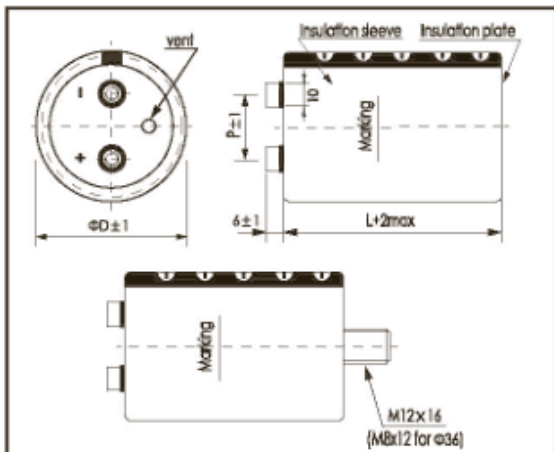
Items	Characteristics
Operating Temperature Range(°C)	-25~+85
Voltage Range (V)	600
Capacitance Range(µF)	1000~5600
Capacitance Tolerance (20°C, 120Hz)	±20%
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 5mA, whichever is smaller . C: Nominal Capacitance(µF) V: Rated Voltage(V)
Dissipation Factor (20°C, 120Hz)	Less than 0.25

	Useful Life		Load Life	Endurance Test	Shelf Life
	Lifetime	>10000h	>100000h	5000h	5000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within ±30% of initial value		Within ±20% of initial value	Within ±10% of initial value	Within ±20% of initial value
Dissipation Factor	Not more than 300% of specified value		Not more than 200% of specified value	Not more than 130% of specified value	Not more than 200% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U <sub>R</sub> I <sub>R</sub> 85°C	U <sub>R</sub> 1.2×I <sub>R</sub> 40°C	U <sub>R</sub> I <sub>R</sub> 85°C	U <sub>R</sub> I <sub>R</sub> =0 85°C	U <sub>R</sub> =0 I <sub>R</sub> =0 85°C

After test:  
 U<sub>R</sub> to be applied for  
 60min>24h before  
 measurement

### Dimensions

mm



∅D/mm	51	64	77	90	101
P/mm	22.0	28.2	31.4	31.4	41.5

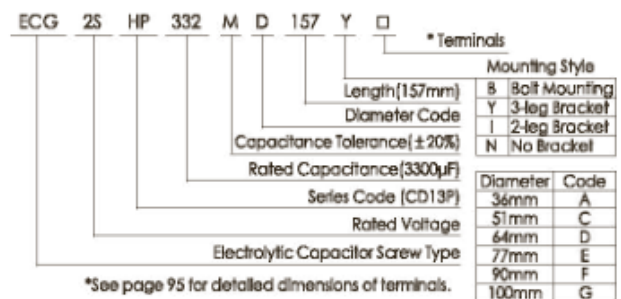
\*Hex head screw M5 x 10 and M6 x 12 are standard screws.

Longer screws are available on request.

\*Max tightening torque for screw terminal M5: 3Nm, M6: 6Nm. Max torque for bolt mounting M12: 12.5Nm.

\*Screws, Bracket and cap nut will be delivered separately. See "Accessories" (page 94.95) for shape and dimensions.

### Part Number System (Ex: 600v3300µF)



### Ripple Current Coefficient

Frequency [Hz]	50/60	120	300	1k	>10k
Coefficient	0.80	1.00	1.10	1.30	1.40

Ambient Temp (°C)	40	60	85
Coefficient	1.89	1.67	1.00

The useful life can be prolonged by operating capacitor at loads below the rated values (e.g. lower operating voltage, Rms ripple current or ambient temperature) and by appropriate cooling measures.

It is advisable not to apply a ripple current exceeding the rated ripple current without any cooling measures as this will shorten capacitor's life.

## Ratings for CD 13P HP Series

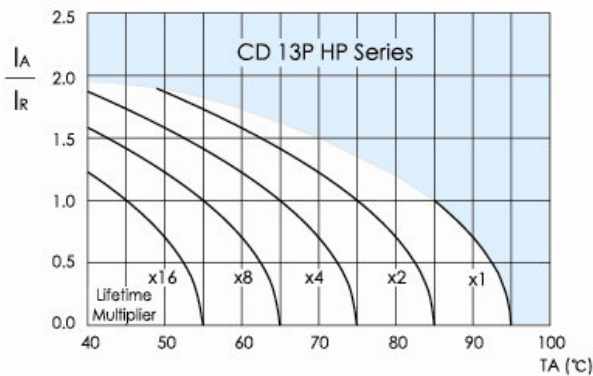
U <sub>r</sub> (Surge Voltage) Code	Rated Capacitance	Dissipation Factor 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦDxL	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
600 (650) 2S	1000	210	105	5.4	64x130	ECG2SHP102MD130 □□
	1200	188	94	6.1	77X115	ECG2SHP122ME115 □□
	1500	150	75	7.3	77X130	ECG2SHP152ME130 □□
	1800	124	62	8.9	77X155	ECG2SHP182ME155 □□
	2200	102	51	9.7	90x131	ECG2SHP232MF131 □□
	2700	90	45	11.6	90x157	ECG2SHP272MF157 □□
	3300	76	38	13.4	90x171	ECG2SHP332MF171 □□
	3900	66	33	16.2	90x196	ECG2SHP392MF196 □□
	4700	56	28	19.5	90x196	ECG2SHP472MF196 □□
	5600	50	25	22.5	101x220	ECG2SHP562MG220 □□

Mounting code(" B" for bolt mounting, "Y/I/N" for bracket mounting)

Terminal options(A,B,C see "Dimensions" for details.)

Customer products are available on request.

## Lifetime Diagram



$I_A$  = actual ripple current at 120Hz,  $I_R$  = rated ripple current at 120Hz, 85°C.  
Multiplier of Useful Life as a function of ambient temperature and ripple current load