

5000h at 105°C

■ Features

- Long Useful Life at 105°C
- Higher current and High Reliability
- RoHS Compliant

■ Applications

- Highest Professional Power
- Application



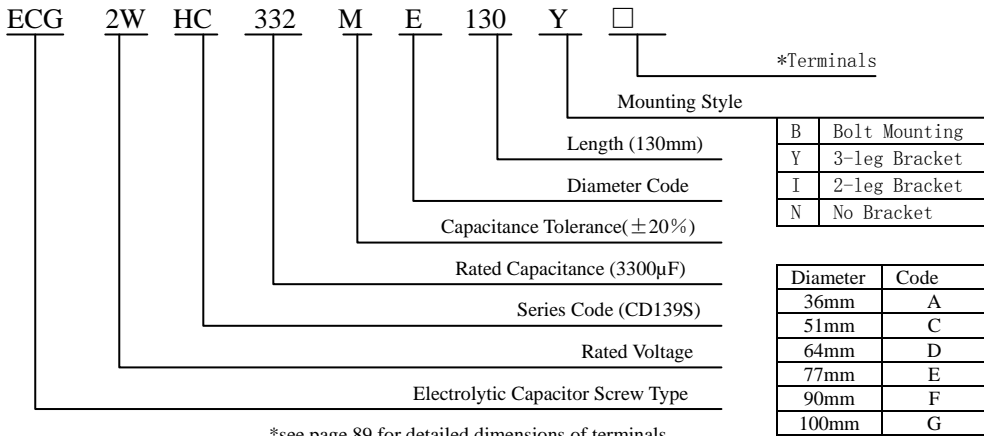
Items	Characteristics
Operating Temperature Range(°C)	-40 ~ +105
Voltage Range (V)	350~450
Capacitance Range(µF)	1000~15000
Capacitance Tolerance (20°C,120Hz)	±20%
Leakage Current (µA)	After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 5mA, whichever is smaller . C: Nominal Capacitance(µF) V: Rated Voltage(V)
Dissipation Factor (20°C, 120Hz)	Less than 0.15
Stability at Low Temperature(120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.7$

Life Time	Useful Life		Load Life	Endurance Test	Shelf Life
	>9000h	>200000h	5000h	5000h	1000h
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_R I_R 105°C	U_R $1.2 \times I_R$ 40°C	U_R I_R 105°C	U_R $I_R = 0$ 105°C	<div style="border: 1px solid black; padding: 5px;"> After test: U_R to be applied for 60min>24h before measurement </div>

CD 139S HC SERIES



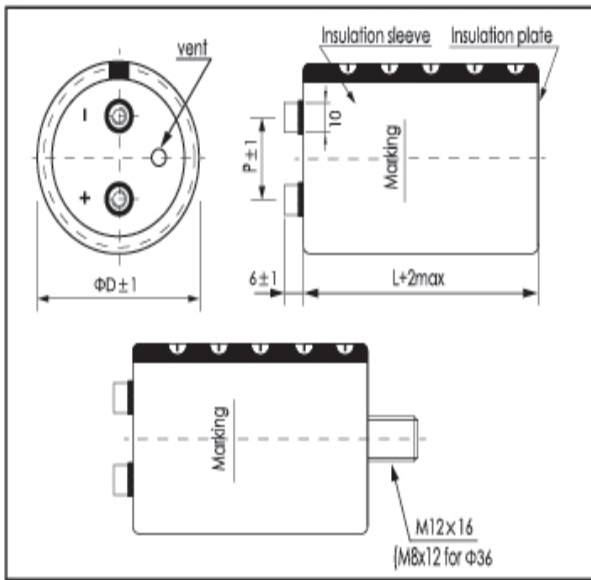
Part Number System (Ex:450v3300μF)



*see page 89 for detailed dimensions of terminals.

Dimensions

mm



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

*Hex head screw M5×10 and M6×12 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 88,89)for shape and dimensions.

Ripple Current Coefficient

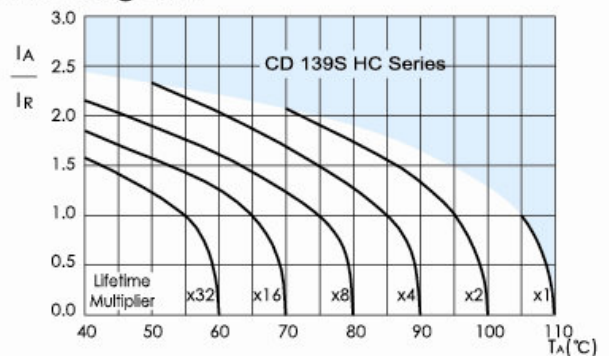
Frequency(Hz)	50/60	120	300	1k	>10k
Coefficient	0.80	1.00	1.10	1.30	1.40

Ambient Temp (°C)	40	60	85	105
Coefficient	2.44	2.16	2.00	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.

Lifetime Diagram



I_R = actual ripple current at 120Hz, I_R = rated ripple current at 120Hz, 105°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load

Ratings for CD 139S HC Series

U_R (Surge Voltage) Code	Rated Capacitance	Max. ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120kHz	Size Φ D×L	P/N
(v)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
350 (400) 2V	3300	55	23	14.4	64x115	ECG2VHC332MD115□□
	3900	46	19	16.6	64x130	ECG2VHC392MD130□□
	4700	39	17	19.8	64x155	ECG2VHC472MD155□□
	4700	39	17	19.1	77x115	ECG2VHC472ME115□□
	5600	32	14	21.9	77x130	ECG2VHC562ME130□□
	6800	27	12	26.2	77x155	ECG2VHC682ME155□□
	8200	22	11	29.3	90x157	ECG2VHC822MF157□□

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	10000	18	10	32.3	90x157	ECG2VHC103MF157□□
	12000	15	8	39.0	90x196	ECG2VHC123MF196□□
400 (450) 2G	2700	56	28	13.1	64x115	ECG2GHC272MD115□□
	3300	46	23	15.2	64x130	ECG2GHC332MD130□□
	3900	39	21	17.9	64x155	ECG2GHC392MD155□□
	3900	39	21	18.2	77x115	ECG2GHC392ME115□□
	4700	32	17	20.1	77x130	ECG2GHC472ME130□□
	5600	27	15	23.8	77x155	ECG2GHC562ME155□□
	6800	22	13	26.7	90x157	ECG2GHC682MF157□□
	8200	18	11	29.3	90x157	ECG2GHC822MF157□□
	10000	15	9	35.6	90x196	ECG2GHC103MF196□□
	450 (500) 2W	2200	69	38	11.8	64x115
2700		56	31	13.7	64x130	ECG2GHC272MD130□□
2700		56	31	14.5	77x115	ECG2GHC272ME115□□
3300		46	23	16.5	64x155	ECG2WHC332MD155□□
3300		46	25	16.9	77x130	ECG2WHC332ME130□□
4700		32	18	21.7	77x155	ECG2WHC472ME155□□
5600		27	16	26.4	77x195	ECG2WHC562ME195□□
5600		27	16	24.2	90x157	ECG2WHC562MF157□□
6800		22	14	29.5	90x196	ECG2WHC682MF196□□
8200		19	12	32.4	90x196	ECG2WHC822MF196□□

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.