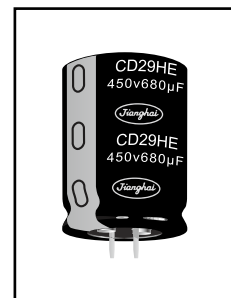
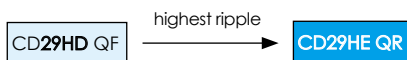


3000h at 105°C

- Long Life at High Temperature
- Outstanding Ripple current
- Servo drivers, Frequency converters
Solar inverters etc.



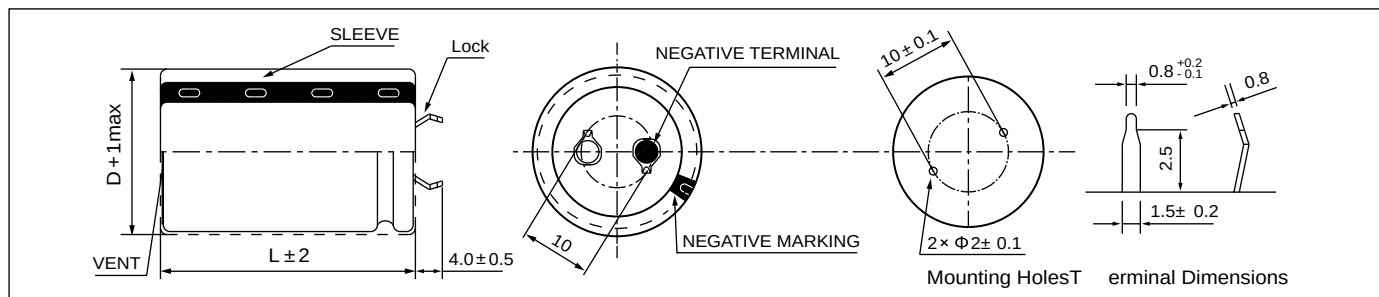
Items	Characteristics		
Operating Temperature Range (°C)	-40 ~ +105		
Voltage range (V)	400 ~ 450		
Capacitance Range (μF)	220 ~ 820		
Capacitance Tolerance (20°C, 120Hz)	± 20%		
Leakage Current (μA)	$I_L = 0.01 C_R U_R (\mu A)$ or 1.5mA, whichever is smaller. (C_R : Nominal Capacitance, in μF)		
Dissipation Factor (20°C, 120Hz)	≤ 0.15		
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	400	450
	$Z_{-25^\circ C} / Z_{+20^\circ C}$	3	7
	$Z_{-40^\circ C} / Z_{+20^\circ C}$	8	12

	Useful Life		Load Life	Endurance Test	Shelf Life
Life Time	5000h	≥ 15000h	3000h	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 ± 20% 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 200% 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 $1.4 \times I_R$ 40°C	U_R I_R 105°C	U_R 105°C	105°C

*Shelf Life test: U_R to be applied for 60min, > 24h before measurement

Dimensions

mm



Ripple Current Coefficient

Frequency (Hz)	50	120	300	1k	10k	50k
Voltage (V)						
400 ~ 450	0.76	1.00	1.25	1.40	1.45	1.50

Ambient Temp(°C)	40	60	70	85	105
Coefficient	2.24	1.94	1.77	1.50	1.00

Ratings for CD29HE QR Series

U_r (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)	-
400 (450) 2G	270	558	279	2.13	30X35	ECS2GQR271M □□ 300035
		558	279	2.20	35X25	ECS2GQR271M □□ 350025
	330	476	238	2.49	30X40	ECS2GQR331M □□ 300040
		476	238	2.56	35X30	ECS2GQR331M □□ 350030
	390	410	205	2.72	30X45	ECS2GQR391M □□ 300045
		410	205	2.84	35X35	ECS2GQR391M □□ 350035
	470	340	170	3.10	30X50	ECS2GQR471M □□ 300050
		340	170	3.26	35X40	ECS2GQR471M □□ 350040
	560	290	145	3.62	30X55	ECS2GQR561M □□ 300055
		290	145	3.69	35X45	ECS2GQR561M □□ 350045
	680	244	122	4.16	35X50	ECS2GQR681M □□ 350050
		206	103	4.74	35X60	ECS2GQR821M □□ 350060
450 (500) 2W	220	658	329	1.88	30X35	ECS2WQR221M □□ 300035
		658	329	1.90	35X25	ECS2WQR221M □□ 350025
	270	548	274	2.21	30X40	ECS2WQR271M □□ 300040
		548	274	2.27	35X30	ECS2WQR271M □□ 350030
	330	456	228	2.52	30X45	ECS2WQR331M □□ 300045
		456	228	2.60	35X35	ECS2WQR331M □□ 350035
	390	404	202	2.82	30X50	ECS2WQR391M □□ 300050
		404	202	2.87	35X40	ECS2WQR391M □□ 350040
	470	334	167	3.21	30X55	ECS2WQR471M □□ 300055
		334	167	3.39	35X45	ECS2WQR471M □□ 350045
	560	286	143	3.73	35X50	ECS2WQR561M □□ 350050
		240	120	4.24	35X60	ECS2WQR681M □□ 350060

Customer products are available on request.

Life Time Diagram

