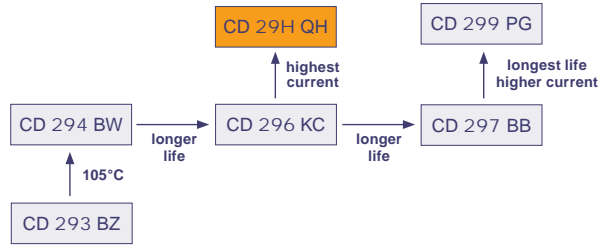


5000h at 105°C

- Long Useful Life
- Highest Ripple Current
- Miniaturized
- Industrial Power Supplies and Inverters



Item	Characteristics						
Operating Temperature Range (°C)	-40 ~ +105						
Voltage Range (V)	160 ~ 450						
Capacitance Range (µF)	47 ~ 2200						
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 1,5mA, whichever is smaller C: Nominal Capacitance (µF) V: Rated Voltage (V)						
Dissipation Factor (20°C, 120Hz)	Rated Voltage (V)	160	200	250	350	400	450
	Tan δ (max)	0,15				0,12	
Stability at Low Temperature (Impedance Ratio at 120Hz)	Rated Voltage (V)	160 ~ 450					
	Z _{-40°C} / Z _{+20°C}	4					

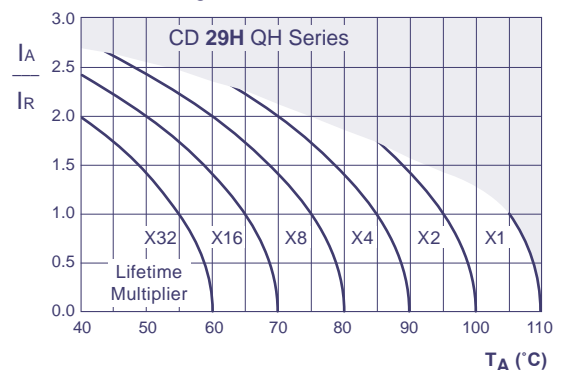
	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	5000h	>100000h	3000h	3000h	1000h
Leakage Current	Not more than specified value		Not more than specified value	Not more than specified value	Not more than specified value
Capacity Change	Within ± 30% of initial value		Within ± 20% of initial value	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 130% of specified value	Not more than 200% of specified value
Condition:	U _R		U _R	U _R	U _R = 0
Applied Voltage	U _R		U _R	U _R	U _R = 0
Applied Current	I _R		I _R	I _R = 0	I _R = 0
Applied Temperature	105°C		105°C	105°C	105°C
Failure Rate Level	≤ 1% Failure Rate		guaranteed		After test: U _R to be applied for 30min >24h before measurement

Multiplier for Ripple Current

Frequency Coefficient

Frequency	50Hz	120Hz	1kHz	10kHz	100kHz
Coefficient	0,87	1,00	1,15	1,35	1,40

Lifetime Diagram



I_A = 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 29H QH Series

V _{DC} (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Max Ripple Current 105°C, 120Hz	Size Ø D x L
(V)	(µF)	(mΩ)	(mΩ)	(Arms)	(mm)
160 (200) 2C	330	603	355	1,50	22 x 25
	390	511	306	1,60	25 x 25
	470	424	245	1,80	22 x 35
	560	356	210	2,10	22 x 35
		356	210	2,20	25 x 30
	680	356	210	2,10	30 x 25
		293	175	2,60	22 x 40
	820	293	175	2,50	25 x 35
		243	145	2,80	22 x 50
	1000	243	145	2,70	25 x 40
		243	145	2,90	30 x 30
		243	145	2,80	35 x 25
	1200	199	119	3,30	25 x 45
		199	119	3,40	30 x 35
		199	119	3,30	35 x 30
	1500	166	99	3,70	25 x 50
		166	99	3,80	30 x 40
		166	99	3,60	35 x 35
	1800	133	79	4,40	30 x 45
		133	79	4,30	35 x 40
2200	111	73	4,40	35 x 45	
2200	91	58	5,90	35 x 50	
200 (250) 2D	220	905	550	1,10	22 x 25
	270	737	460	1,17	22 x 25
	330	603	370	1,40	22 x 30
		603	370	1,40	25 x 25
	390	511	310	1,45	22 x 30
		424	260	1,55	22 x 35
	470	424	260	1,55	25 x 30
		424	260	1,60	30 x 25
	560	356	220	1,65	22 x 45
		356	220	1,65	25 x 35
	680	293	180	1,68	22 x 50
		293	180	1,92	25 x 40
		293	180	1,92	30 x 30
	820	293	180	2,20	35 x 25
		243	150	2,20	25 x 45
		243	150	2,20	30 x 35
	1000	243	150	2,40	35 x 30
		199	120	2,40	30 x 40
		199	120	2,40	35 x 35
	1200	166	100	2,75	30 x 45
166		100	2,75	35 x 40	
1500	133	80	3,45	35 x 40	
1800	111	68	4,00	35 x 45	
2200	91	56	4,50	35 x 50	
250 (300) 2E	180	1106	620	1,00	22 x 25
	220	905	570	1,20	22 x 30
		905	570	1,20	25 x 25
	270	737	470	1,25	22 x 35
		603	380	1,30	22 x 40
	330	603	380	1,35	25 x 30
		603	380	1,35	30 x 25
	390	511	325	1,40	22 x 45
		511	325	1,45	25 x 35
	470	424	268	1,65	22 x 50
		424	268	1,65	30 x 30
		424	268	1,65	35 x 25
	560	356	225	1,85	25 x 45
		356	225	1,85	30 x 35
	680	356	225	1,85	35 x 30
		293	185	2,20	25 x 50
	820	293	185	2,20	30 x 40
		243	153	2,50	30 x 45
	1000	243	153	2,50	30 x 50
		199	125	2,90	30 x 50
1200	199	125	2,90	35 x 40	
	166	105	3,30	35 x 45	
1500	133	85	3,80	35 x 50	

V _{DC} (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Typ ESR 20°C, 120Hz	Max Ripple Current 105°C, 120Hz	Size Ø D x L
(V)	(µF)	(mΩ)	(mΩ)	(Arms)	(mm)
350 (400) 2V	68	2926	1280	0,70	22 x 25
	100	1990	1060	0,87	22 x 30
		1990	1060	0,87	25 x 25
	120	1658	880	0,90	22 x 35
		1327	700	0,98	22 x 40
	150	1327	700	1,02	25 x 30
		1327	700	1,02	30 x 25
	180	1106	580	1,11	22 x 45
		1106	580	1,11	25 x 35
		1106	580	1,12	30 x 30
	220	905	480	1,16	22 x 50
		905	480	1,20	25 x 40
		905	480	1,20	35 x 25
	270	737	390	1,26	25 x 50
		737	390	1,31	30 x 35
	330	737	390	1,26	35 x 30
		603	320	1,45	30 x 45
		603	320	1,45	35 x 35
	390	511	270	1,58	30 x 50
		511	270	1,58	35 x 40
470	424	225	1,69	35 x 45	
560	356	190	1,89	35 x 50	
400 (450) 2G	47	3387	1835	0,40	22 x 25
	68	2341	1260	0,48	22 x 25
	82	1941	1050	0,57	22 x 30
		1941	1050	0,56	25 x 25
	100	1592	860	0,65	22 x 35
		1592	860	0,65	25 x 25
	120	1327	718	0,71	22 x 35
		1327	718	0,71	25 x 30
	150	1327	718	0,71	30 x 25
		1062	575	0,85	22 x 40
		1062	575	0,85	25 x 35
	180	1062	575	0,85	30 x 25
		885	479	1,00	22 x 50
		885	479	1,00	25 x 40
	220	885	479	1,00	30 x 30
		885	479	1,00	35 x 25
		724	292	1,20	25 x 45
	270	724	292	1,20	30 x 35
		724	292	1,20	35 x 30
	330	590	319	1,35	25 x 50
590		319	1,35	30 x 40	
590		319	1,35	35 x 30	
390	483	260	1,60	30 x 45	
	483	260	1,60	35 x 35	
470	409	220	1,80	30 x 50	
	409	220	1,80	35 x 40	
560	339	183	2,10	35 x 45	
560	285	154	2,30	35 x 50	
450 (500) 2W	56	2843	1360	0,50	22 x 25
	68	2341	1170	0,60	22 x 30
	82	1941	970	0,65	22 x 35
	100	1592	790	0,72	22 x 35
		1592	790	0,72	25 x 30
	120	1592	790	0,72	30 x 25
		1327	660	0,80	22 x 45
	150	1327	660	0,80	25 x 35
		1062	530	0,95	22 x 50
		1062	530	0,95	25 x 40
	180	1062	530	0,95	30 x 30
		1062	530	0,95	35 x 25
		885	440	1,05	25 x 45
	220	885	440	1,05	30 x 35
		724	360	1,30	25 x 50
	270	724	360	1,30	30 x 40
		724	360	1,30	35 x 30
	330	590	295	1,50	30 x 45
		590	295	1,50	35 x 35
	390	483	240	1,90	30 x 50
483		240	1,90	35 x 40	
470	409	205	1,90	35 x 45	
470	339	170	2,20	35 x 50	

Snap-In

Custom products are available on request.