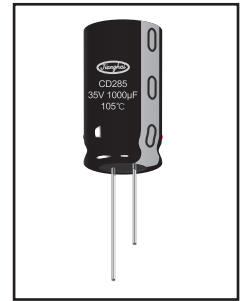
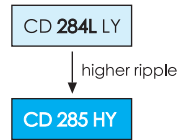


# CD 285 HY SERIES



6000 - 10000h at 105°C

- Higher ripple current capability and smaller sizes than CD284L series
- Lower Impedance at high frequency
- Load life of 6000 to 10000hrs

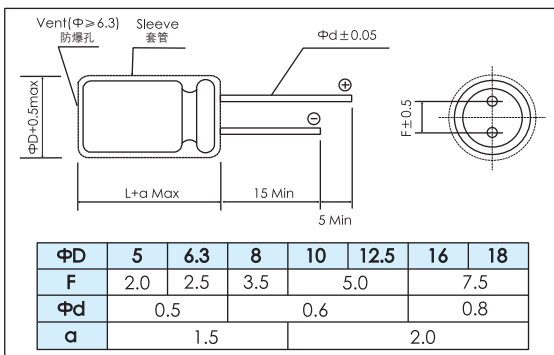


Items	Characteristics									
Operating Temperature Range (°C)	-40 ~ +105									
Rated Voltage Range (V)	6.3 ~ 100									
Capacitance Range (μF)	8.2 ~ 8200									
Capacitance Tolerance (20°C, 120Hz)	± 20%									
Leakage Current (μA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 3uA, whichever is greater. C: Nominal Capacitance (μF) V: Rated Voltage (V)									
Dissipation Factor (20°C, 120Hz)	WV (V)	6.3	10	16	25	35	50	63	80	100
	Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.08
For Capacitances >1000μF add 0.02 to every 1000μF										
Stability at Low Temperature (Impedance ratio at 120Hz)	Rated Voltage	6.3	10	16	25	35	50	63	80	100
	Z <sub>-25°C</sub> / Z <sub>+20°C</sub>	4	3	2	2	2	2	2	2	2
	Z <sub>-40°C</sub> / Z <sub>+20°C</sub>	12	10	8	6	4	3	3	3	3

	Useful Life		Load Life	Endurance Life	Shelf Life
Life Time	Φ ≤ 6.3 : 8000h Φ = 8 : 10000h Φ ≥ 10 : 12000h	Φ > 8 : 110000h	Φ ≤ 6.3 : 6000h Φ = 8 : 8000h Φ ≥ 10 : 10000h	Φ ≤ 6.3 : 7000h Φ = 8 : 10000h Φ ≥ 10 : 12000h	500h
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 (6.3V, 10V: ± 40%)		Within ± 25% of initial value (6.3V, 10V: ± 30%)	Within ± 25% of initial value (6.3V, 10V: ± 30%)	Within ± 20% of initial value
Dissipation Factor	Not more than 300% of specified value (6.3V, 10V: 400%)		Not more than 200% of specified value (6.3V, 10V: 300%)	Not more than 200% of specified value (6.3V, 10V: 300%)	Not more than 200% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U <sub>R</sub> I <sub>R</sub> 105°C	U <sub>R</sub> 1.4 x I <sub>R</sub> 60°C	U <sub>R</sub> I <sub>R</sub> 105°C	U <sub>R</sub> I <sub>R</sub> = 0 105°C	U <sub>R</sub> I <sub>R</sub> = 0 105°C After test: U <sub>R</sub> to be applied for 30min >24h before measurement

## Dimensions

mm



## Frequency Coefficient

Cap (μF)	Freq(Hz)			
	120	1k	10k	100k
8.2 ~ 33	0.42	0.70	0.90	1.00
47 ~ 270	0.50	0.73	0.92	1.00
330 ~ 680	0.55	0.77	0.94	1.00
820 ~ 1800	0.60	0.80	0.96	1.00
2200 ~ 8200	0.70	0.85	0.98	1.00

## Temperature Coefficient

Temperature(°C)	≤ 65	+85	+105
Coefficient	2.0	1.7	1.0

## Ratings for CD 285 HY Series

U <sub>r</sub> (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Max Imp 20°C, 100kHz	Max Imp -10°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(Ω)	(Ω)	(mAmps)	(mm)	-
6.3 (7.2) 0J	220	1.327	0.40	1.2	345	5×11.5	ECR0JHY221M□□050011
	470	0.621	0.17	0.51	540	6.3×11.5	ECR0JHY471M□□063011
	820	0.356	0.075	0.23	945	8×11.5	ECR0JHY821M□□080011
	1000	0.292	0.059	0.18	1250	8×16	ECR0JHY102M□□080016
	1200	0.243	0.053	0.16	1330	10×12.5	ECR0JHY122M□□100012
	1500	0.195	0.041	0.13	1500	8×20	ECR0JHY152M□□080020
	1800	0.162	0.038	0.12	1760	10×16	ECR0JHY182M□□100016
	2700	0.118	0.028	0.084	1960	10×20	ECR0JHY272M□□100020
	3300	0.105	0.024	0.072	2250	10×25	ECR0JHY332M□□100025
	3900	0.088	0.025	0.075	2480	12.5×20	ECR0JHY392M□□125020
	4700	0.079	0.019	0.057	2900	12.5×25	ECR0JHY472M□□125025
	5600	0.071	0.018	0.054	3450	12.5×30	ECR0JHY562M□□125030
	6800	0.062	0.021	0.063	3250	16×20	ECR0JHY682M□□160020
		0.062	0.016	0.048	3570	12.5×35	ECR0JHY682M□□125035
8200	0.058	0.017	0.051	3630	16×25	ECR0JHY822M□□160025	
10 (13) 1A	150	1.681	0.40	1.2	450	5×11.5	ECR1AHY151M□□050011
	330	0.764	0.17	0.51	700	6.3×11.5	ECR1AHY331M□□063011
	560	0.450	0.075	0.23	1200	8×11.5	ECR1AHY561M□□080011
	680	0.371	0.059	0.18	1600	8×16	ECR1AHY681M□□080016
	820	0.307	0.053	0.16	1700	10×12.5	ECR1AHY821M□□100012
	1000	0.252	0.041	0.13	1960	8×20	ECR1AHY102M□□080020
	1200	0.210	0.038	0.12	2000	10×16	ECR1AHY122M□□100016
	1800	0.140	0.028	0.084	2500	10×20	ECR1AHY182M□□100020
	2200	0.127	0.024	0.072	2900	10×25	ECR1AHY222M□□100025
	2700	0.103	0.025	0.075	2600	12.5×20	ECR1AHY272M□□125020
	3300	0.092	0.019	0.057	3200	12.5×25	ECR1AHY332M□□125025
	4700	0.071	0.018	0.054	3660	12.5×30	ECR1AHY472M□□125030
		0.071	0.021	0.063	3330	16×20	ECR1AHY472M□□160020
	5600	0.064	0.016	0.048	4120	12.5×35	ECR1AHY562M□□125035
0.064		0.017	0.051	3810	16×25	ECR1AHY562M□□160025	
16 (20) 1C	120	1.769	0.40	1.2	450	5×11.5	ECR1CHY121M□□050011
	270	0.786	0.17	0.51	700	6.3×11.5	ECR1CHY271M□□063011
	470	0.452	0.075	0.23	1200	8×11.5	ECR1CHY471M□□080011
	560	0.379	0.059	0.18	1600	8×16	ECR1CHY561M□□080016
	680	0.312	0.053	0.16	1700	10×12.5	ECR1CHY681M□□100012
	820	0.259	0.041	0.13	1960	8×20	ECR1CHY821M□□080020
	1000	0.212	0.038	0.12	2000	10×16	ECR1CHY102M□□100016
	1500	0.142	0.028	0.084	2500	10×20	ECR1CHY152M□□100020
	1800	0.118	0.024	0.072	2900	10×25	ECR1CHY182M□□100025
	2200	0.109	0.025	0.075	2600	12.5×20	ECR1CHY222M□□125020
	2700	0.088	0.019	0.057	3200	12.5×25	ECR1CHY272M□□125025
	3300	0.080	0.018	0.054	3660	12.5×30	ECR1CHY332M□□125030
		0.080	0.021	0.063	3330	16×20	ECR1CHY332M□□160020
	3900	0.068	0.016	0.048	4120	12.5×35	ECR1CHY392M□□125035
4700	0.062	0.017	0.051	3810	16×25	ECR1CHY472M□□160025	
25 (32) 1E	68	2.732	0.40	1.2	450	5×11.5	ECR1EHY680M□□050011
	150	1.238	0.17	0.51	700	6.3×11.5	ECR1EHY151M□□063011
	330	0.563	0.075	0.23	1200	8×11.5	ECR1EHY331M□□080011
	390	0.476	0.059	0.18	1600	8×16	ECR1EHY391M□□080016
	470	0.395	0.053	0.16	1700	10×12.5	ECR1EHY471M□□100012
	560	0.332	0.041	0.13	1960	8×20	ECR1EHY561M□□080020
	680	0.273	0.038	0.12	2000	10×16	ECR1EHY681M□□100016
	1000	0.186	0.028	0.084	2500	10×20	ECR1EHY102M□□100020
	1200	0.155	0.024	0.072	2900	10×25	ECR1EHY122M□□100025
	1500	0.124	0.025	0.075	2600	12.5×20	ECR1EHY152M□□125020
	1800	0.103	0.019	0.057	3200	12.5×25	ECR1EHY182M□□125025
	2200	0.097	0.018	0.054	3660	12.5×30	ECR1EHY222M□□125030
		0.097	0.021	0.063	3330	16×20	ECR1EHY222M□□160020
	2700	0.079	0.016	0.048	4120	12.5×35	ECR1EHY272M□□125035
3300	0.072	0.017	0.051	3810	16×25	ECR1EHY332M□□160025	

U <sub>r</sub> (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Max Imp 20°C, 100kHz	Max Imp -10°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(Ω)	(Ω)	(mAmps)	(mm)	-
35 (44) 1V	47	3.388	0.40	1.2	450	5×11.5	ECR1VHY470M□□050011
	100	1.592	0.17	0.51	700	6.3×11.5	ECR1VHY101M□□063011
	180	0.885	0.075	0.23	1200	8×11.5	ECR1VHY181M□□080011
	220	0.724	0.059	0.18	1600	8×16	ECR1VHY221M□□080016
	270	0.590	0.053	0.16	1700	10×12.5	ECR1VHY271M□□100012
	330	0.483	0.041	0.13	1960	8×20	ECR1VHY331M□□080020
	390	0.408	0.041	0.13	1960	8×20	ECR1VHY391M□□080020
		0.408	0.038	0.12	2000	10×16	ECR1VHY391M□□100016
	470	0.339	0.038	0.12	2000	10×16	ECR1VHY471M□□100016
	560	0.284	0.028	0.084	2500	10×20	ECR1VHY561M□□100020
	680	0.234	0.024	0.072	2900	10×25	ECR1VHY681M□□100025
	820	0.194	0.025	0.075	2600	12.5×20	ECR1VHY821M□□125020
	1000	0.159	0.025	0.075	2600	12.5×20	ECR1VHY102M□□125020
	1200	0.133	0.019	0.057	3200	12.5×25	ECR1VHY122M□□125025
1500	0.106	0.018	0.054	3660	12.5×30	ECR1VHY152M□□125030	
	0.106	0.021	0.063	3330	16×20	ECR1VHY152M□□160020	
1800	0.088	0.016	0.048	4120	12.5×35	ECR1VHY182M□□125035	
	0.088	0.017	0.051	3810	16×25	ECR1VHY182M□□160025	
50 (63) 1H	27	4.915	0.48	1.5	310	5×11.5	ECR1HHY270M□□050011
	56	2.370	0.22	0.66	500	6.3×11.5	ECR1HHY560M□□063011
	100	1.327	0.12	0.36	950	8×11.5	ECR1HHY101M□□080011
	120	1.106	0.11	0.33	950	8×11.5	ECR1HHY121M□□080011
		1.106	0.082	0.25	1230	8×16	ECR1HHY121M□□080016
	150	0.885	0.073	0.22	1280	10×12.5	ECR1HHY151M□□100012
	180	0.737	0.081	0.24	1700	8×16	ECR1HHY181M□□080016
		0.737	0.058	0.18	1580	8×20	ECR1HHY181M□□080020
	220	0.603	0.071	0.21	1700	10×12.5	ECR1HHY221M□□100012
		0.603	0.053	0.16	1650	10×16	ECR1HHY221M□□100016
	270	0.493	0.058	0.17	2100	8×20	ECR1HHY271M□□080020
	330	0.402	0.052	0.16	2100	10×16	ECR1HHY331M□□100016
		0.402	0.038	0.12	2060	10×20	ECR1HHY331M□□100020
	390	0.340	0.032	0.10	2420	10×25	ECR1HHY391M□□100025
470	0.282	0.037	0.11	1500	10×20	ECR1HHY471M□□100020	
	0.282	0.04	0.12	2200	12.5×16	ECR1HHY471M□□125016	
560	0.282	0.032	0.10	2300	12.5×20	ECR1HHY471M□□125020	
	0.238	0.031	0.093	2900	10×25	ECR1HHY561M□□100025	
680	0.195	0.029	0.087	2700	12.5×20	ECR1HHY681M□□125020	
	0.195	0.025	0.080	2800	12.5×25	ECR1HHY681M□□125025	
820	0.162	0.023	0.074	3370	12.5×30	ECR1HHY821M□□125030	
	0.162	0.026	0.084	3070	16×20	ECR1HHY821M□□160020	
1000	0.133	0.022	0.066	3000	12.5×25	ECR1HHY102M□□125025	
	0.133	0.02	0.06	3500	12.5×30	ECR1HHY102M□□125030	
1200	0.133	0.021	0.067	3810	12.5×35	ECR1HHY102M□□125035	
	0.133	0.022	0.070	3510	16×25	ECR1HHY102M□□160025	
1500	0.111	0.017	0.051	4000	12.5×35	ECR1HHY122M□□125035	
	0.111	0.023	0.069	3100	16×20	ECR1HHY122M□□160020	
1800	0.089	0.019	0.057	4500	12.5×40	ECR1HHY152M□□125040	
	0.089	0.018	0.054	3600	16×25	ECR1HHY152M□□160025	
2200	0.089	0.029	0.087	3200	18×20	ECR1HHY152M□□180020	
	0.060	0.018	0.054	4100	16×31.5	ECR1HHY222M□□160031	
2700	0.060	0.022	0.066	3700	18×25	ECR1HHY222M□□180025	
	0.049	0.016	0.048	4400	16×35.5	ECR1HHY272M□□160035	
3300	0.049	0.014	0.042	4800	16×40	ECR1HHY272M□□160040	
	0.049	0.019	0.057	4200	18×31.5	ECR1HHY272M□□180031	
3900	0.040	0.016	0.048	4600	18×35.5	ECR1HHY332M□□180035	
4700	0.040	0.014	0.042	5000	18×40	ECR1HHY392M□□180040	

# CD 285 HY SERIES

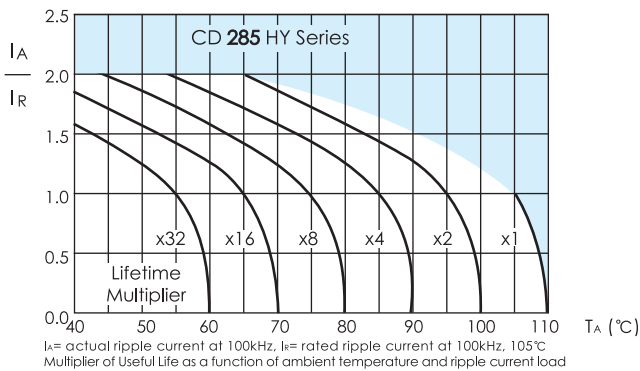


## Ratings for CD 285 HY Series

U <sub>r</sub> (Surge Voltage Code)	Rated Capa- citan- ce	Max ESR 20°C, 120Hz	Max Imp 20°C, 100kHz	Max Imp -10°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(Ω)	(Ω)	(mA <sub>rms</sub> )	(mm)	-
63 (79) 1J	18	6.635	0.71	3.2	240	5×11.5	ECR1JHY180M□□050011
	47	2.541	0.28	1.3	420	6.3×11.5	ECR1JHY470M□□063011
	82	1.456	0.18	0.79	720	8×11.5	ECR1JHY820M□□080011
	100	1.194	0.13	0.39	1000	8×11.5	ECR1JHY101M□□080011
		1.194	0.13	0.58	990	8×16	ECR1JHY101M□□080016
	120	0.995	0.095	0.29	1300	8×16	ECR1JHY121M□□080016
		0.995	0.11	0.44	990	10×12.5	ECR1JHY121M□□100012
	150	0.796	0.096	0.43	1200	8×20	ECR1JHY151M□□080020
		0.796	0.08	0.24	1300	10×12.5	ECR1JHY151M□□100012
	180	0.663	0.069	0.21	1600	8×20	ECR1JHY181M□□080020
		0.663	0.076	0.31	1200	10×16	ECR1JHY181M□□100016
	220	0.543	0.058	0.17	1700	10×16	ECR1JHY221M□□100016
	270	0.442	0.056	0.23	1570	10×20	ECR1JHY271M□□100020
		0.442	0.072	0.27	1570	12.5×16	ECR1JHY271M□□125016
	330	0.362	0.042	0.13	2000	10×20	ECR1JHY331M□□100020
		0.362	0.046	0.19	1990	10×25	ECR1JHY331M□□100025
		0.362	0.045	0.14	1900	12.5×16	ECR1JHY331M□□125016
	390	0.306	0.035	-0.11	2400	10×25	ECR1JHY391M□□100025
		0.306	0.041	0.13	1990	12.5×20	ECR1JHY391M□□125020
	470	0.254	0.033	0.099	2400	12.5×20	ECR1JHY471M□□125020
		0.254	0.031	0.093	2460	12.5×25	ECR1JHY471M□□125025
	560	0.213	0.028	0.084	2760	12.5×30	ECR1JHY561M□□125030
		0.213	0.032	0.096	2380	16×20	ECR1JHY561M□□160020
	680	0.176	0.025	0.075	2800	12.5×25	ECR1JHY681M□□125025
		0.176	0.024	0.072	3040	12.5×35	ECR1JHY681M□□125035
	820	0.146	0.022	0.066	3200	12.5×30	ECR1JHY821M□□125030
		0.146	0.025	0.075	2900	16×20	ECR1JHY821M□□160020
		0.146	0.025	0.075	2890	16×25	ECR1JHY821M□□160025
	1000	0.120	0.018	0.054	3500	12.5×35	ECR1JHY102M□□125035
		0.120	0.02	0.06	3200	16×25	ECR1JHY102M□□160025
	1200	0.100	0.021	0.063	3800	12.5×40	ECR1JHY122M□□125040
		0.100	0.032	0.096	3000	18×20	ECR1JHY122M□□180020
1500	0.080	0.02	0.06	3500	16×31.5	ECR1JHY152M□□160031	
	0.080	0.024	0.072	3200	18×25	ECR1JHY152M□□180025	
1800	0.067	0.017	0.051	3800	16×35.5	ECR1JHY182M□□160035	
	0.067	0.02	0.06	3700	18×31.5	ECR1JHY182M□□180031	
2200	0.055	0.015	0.045	4100	16×40	ECR1JHY222M□□160040	
	0.055	0.017	0.051	3900	18×35.5	ECR1JHY222M□□180035	
2700	0.044	0.015	0.045	4300	18×40	ECR1JHY272M□□180040	

U <sub>r</sub> (Surge Voltage Code)	Rated Capa- citan- ce	Max ESR 20°C, 120Hz	Max Imp 20°C, 100kHz	Max Imp -10°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size ΦD x L	P/N	
(V)	(μF)	(Ω)	(Ω)	(Ω)	(mA <sub>rms</sub> )	(mm)	-	
80 (100) 1K	12	8.846	1.2	5.4	220	5×11.5	ECR1KHY120M□□050011	
	27	3.932	0.46	2.1	370	6.3×11.5	ECR1KHY270M□□063011	
	47	2.259	0.29	1.3	620	8×11.5	ECR1KHY470M□□080011	
	56	1.896	0.20	0.9	780	8×16	ECR1KHY560M□□080016	
	68	1.561	0.17	0.66	780	10×12.5	ECR1KHY680M□□100012	
	82	1.295	0.16	0.66	1040	8×20	ECR1KHY820M□□080020	
	100	1.062	0.11	0.47	1040	10×16	ECR1KHY101M□□100016	
	150	0.708	0.084	0.34	1430	10×20	ECR1KHY151M□□100020	
		0.708	0.11	0.34	1430	12.5×16	ECR1KHY151M□□125016	
	180	0.590	0.069	0.28	1620	10×25	ECR1KHY181M□□100025	
	220	0.483	0.062	0.18	1750	12.5×20	ECR1KHY221M□□125020	
	270	0.393	0.047	0.14	2210	12.5×25	ECR1KHY271M□□125025	
	330	0.322	0.042	0.13	2400	12.5×30	ECR1KHY331M□□125030	
		0.322	0.048	0.15	1950	16×20	ECR1KHY331M□□160020	
	390	0.272	0.036	0.11	2600	12.5×35	ECR1KHY391M□□125035	
	470	0.226	0.032	0.095	2860	12.5×40	ECR1KHY471M□□125040	
		0.226	0.038	0.12	2430	16×25	ECR1KHY471M□□160025	
		0.226	0.045	0.14	2270	18×20	ECR1KHY471M□□180020	
	560	0.190	0.032	0.095	2640	16×31.5	ECR1KHY561M□□160031	
	680	0.156	0.029	0.086	2860	16×35.5	ECR1KHY681M□□160035	
		0.156	0.036	0.11	2500	18×25	ECR1KHY681M□□180025	
	820	0.129	0.027	0.081	3510	16×40	ECR1KHY821M□□160040	
		0.129	0.030	0.090	2860	18×31.5	ECR1KHY821M□□180031	
	1000	0.106	0.027	0.081	3510	18×35.5	ECR1KHY102M□□180035	
	1200	0.088	0.026	0.076	3860	18×40	ECR1KHY122M□□180040	
	100 (125) 2A	8.2	12.946	1.2	5.4	220	5×11.5	ECR2AHY8R2M□□050011
		18	5.898	0.46	2.1	370	6.3×11.5	ECR2AHY180M□□063011
		33	3.217	0.29	1.3	620	8×11.5	ECR2AHY330M□□080011
		47	2.259	0.20	0.90	780	8×16	ECR2AHY470M□□080016
		56	1.896	0.17	0.66	780	10×12.5	ECR2AHY560M□□100012
		68	1.561	0.16	0.66	1040	8×20	ECR2AHY680M□□080020
		82	1.295	0.11	0.47	1040	10×16	ECR2AHY820M□□100016
100		1.062	0.084	0.34	1430	10×20	ECR2AHY101M□□100020	
		1.062	0.11	0.34	1430	12.5×16	ECR2AHY101M□□125016	
120		0.885	0.069	0.28	1620	10×25	ECR2AHY121M□□100025	
150		0.708	0.062	0.18	1750	12.5×20	ECR2AHY151M□□125020	
220		0.483	0.047	0.14	2210	12.5×25	ECR2AHY221M□□125025	
270		0.393	0.042	0.13	2400	12.5×30	ECR2AHY271M□□125030	
		0.393	0.048	0.15	1950	16×20	ECR2AHY271M□□160020	
330		0.322	0.036	0.11	2600	12.5×35	ECR2AHY331M□□125035	
390		0.272	0.032	0.095	2860	12.5×40	ECR2AHY391M□□125040	
		0.272	0.038	0.12	2430	16×25	ECR2AHY391M□□160025	
		0.272	0.045	0.14	2270	18×20	ECR2AHY391M□□180020	
470		0.226	0.032	0.095	2640	16×31.5	ECR2AHY471M□□160031	
		0.226	0.036	0.11	2500	18×25	ECR2AHY471M□□180025	
560		0.190	0.029	0.086	2860	16×35.5	ECR2AHY561M□□160035	
		0.190	0.030	0.090	2860	18×31.5	ECR2AHY561M□□180031	
680		0.156	0.027	0.081	3510	16×40	ECR2AHY681M□□160040	
		0.156	0.027	0.081	3510	18×35.5	ECR2AHY681M□□180035	
820		0.129	0.026	0.076	3860	18×40	ECR2AHY821M□□180040	

## Lifetime Diagram



Customer products are available on request.