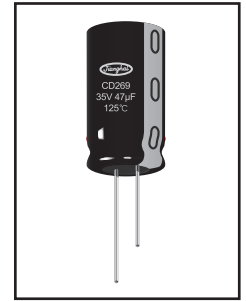
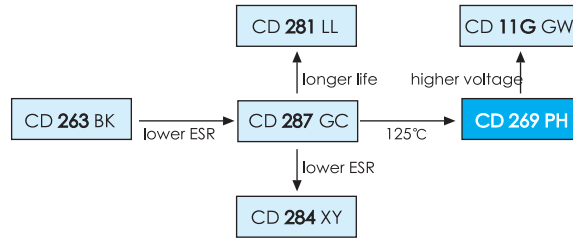


2000h at 125°C

- High Reliability at High Temperature
- Automotive
- Professional Long-Life Applications

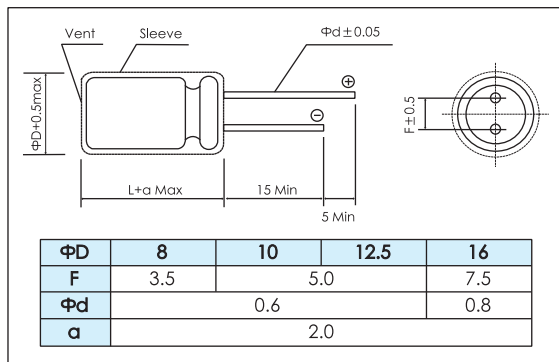


Items	Characteristics														
Operating Temperature Range (°C)	-40 ~ +125														
Voltage Range (V)	10 ~ 63														
Capacitance Range (μF)	47 ~ 3300														
Capacitance Tolerance (20°C, 120Hz)	± 20%														
Leakage Current (μA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than 0.04CV. C: Nominal Capacitance (μF) V: Rated Voltage (V)														
Dissipation Factor (20°C, 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> </tr> </thead> <tbody> <tr> <td>Tan δ (max)</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> </tr> </tbody> </table>	Rated Voltage (V)	10	16	25	35	50	63	Tan δ (max)	0.20	0.16	0.14	0.12	0.10	0.09
	Rated Voltage (V)	10	16	25	35	50	63								
Tan δ (max)	0.20	0.16	0.14	0.12	0.10	0.09									
For Capacitances >1000μF add 0.02 to every 1000μF															

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	4000h	>180000h	2000h	3000h	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 ± 50% of initial value		Within ± 30% of initial value	Within ± 30% of initial value	Within ± 30% of initial value
Dissipation Factor	Not more than 500% of specified value		Not more than 300% of specified value	Not more than 300% of specified value	Not more than 300% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U_R I_R 125°C	U_R $1.4 \times I_R$ 60°C	U_R I_R 125°C	U_R $I_R = 0$ 125°C	$U_R = 0$ $I_R = 0$ 125°C After test: U_R to be applied for 30min >24h before measurement

Dimensions

mm



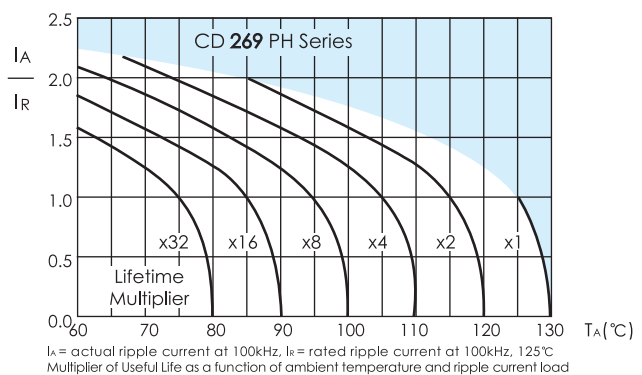
Frequency Coefficient

Frequency Cap (μF)	Frequency			
	120Hz	1kHz	10kHz	100kHz
47 ~ 100	0.40	0.75	0.90	1.00
220 ~ 330	0.50	0.85	0.95	1.00
470 ~ 1000	0.60	0.88	0.96	1.00
2200 ~ 3300	0.75	0.90	0.98	1.00

Temperature Coefficient

Temperature(°C)	+65	+85	+105	+125
Coefficient	2.2	2.0	1.7	1.0

Lifetime Diagram



Ratings for CD 269 PH Series

U_R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Max Imp 20°C, 100kHz	Max Imp -10°C, 100kHz	Rated Ripple Current 125°C, 100kHz	Size $\Phi D \times L$	P/N
(V)	(μF)	(Ω)	(Ω)	(Ω)	(mA _{rms})	(mm)	-
10 (13) 1A	330	0.8	0.33	0.66	340	8×11.5	ECR1APH331M□□080011
	470	0.57	0.24	0.48	500	10×12.5	ECR1APH471M□□100012
	1000	0.27	0.12	0.24	770	10×20	ECR1APH102M□□100020
	2200	0.14	0.061	0.13	1250	12.5×25	ECR1APH222M□□125025
	3300	0.1	0.05	0.1	1380	16×25	ECR1APH332M□□160025
16 (20) 1C	220	0.97	0.33	0.66	340	8×11.5	ECR1CPH221M□□080011
	330	0.65	0.24	0.48	500	10×12.5	ECR1CPH331M□□100012
	470	0.46	0.2	0.4	630	10×16	ECR1CPH471M□□100016
	1000	0.22	0.077	0.16	920	12.5×20	ECR1CPH102M□□125020
	2200	0.11	0.05	0.1	1380	16×25	ECR1CPH222M□□160025
25 (32) 1E	220	0.85	0.23	0.46	480	8×16	ECR1EPH221M□□080016
	330	0.57	0.2	0.4	630	10×16	ECR1EPH331M□□100016
	470	0.4	0.12	0.24	770	10×20	ECR1EPH471M□□100020
	1000	0.19	0.061	0.13	1250	12.5×25	ECR1EPH102M□□125025
35 (44) 1V	100	1.6	0.33	0.66	340	8×11.5	ECR1VPH101M□□080011
	220	0.73	0.2	0.4	630	10×16	ECR1VPH221M□□100016
	330	0.49	0.12	0.24	770	10×20	ECR1VPH331M□□100020
	470	0.34	0.077	0.16	920	12.5×20	ECR1VPH471M□□125020
	1000	0.16	0.05	0.1	1380	16×25	ECR1VPH102M□□160025
50 (63) 1H	100	1.33	0.36	0.72	420	10×12.5	ECR1HPH101M□□100012
	220	0.61	0.2	0.4	655	10×20	ECR1HPH221M□□100020
	330	0.41	0.12	0.24	780	12.5×20	ECR1HPH331M□□125020
	470	0.29	0.1	0.2	1060	12.5×25	ECR1HPH471M□□125025
63 (79) 1J	47	2.55	0.68	2.1	245	8×11.5	ECR1JPH470M□□080011
	100	1.2	0.38	1.2	425	10×16	ECR1JPH101M□□100016
	220	0.55	0.18	0.54	665	12.5×20	ECR1JPH221M□□125020
	330	0.37	0.14	0.42	900	12.5×25	ECR1JPH331M□□125025

Customer products are available on request.

Typical Curves

