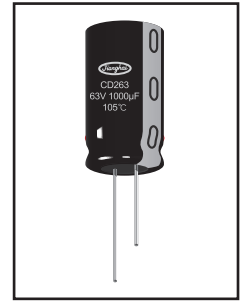
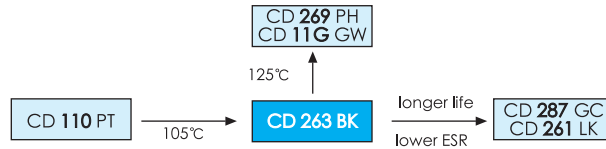


CD 263 BK SERIES



2000h at 105°C

- Standard 105°C

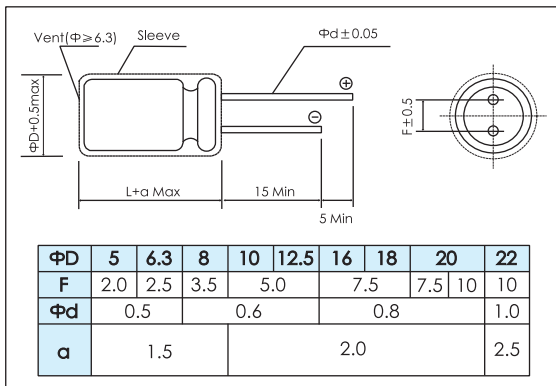


Items	Characteristics																																																																		
Operating Temperature Range (°C)	-40 ~ +105	-25 ~ +105																																																																	
Voltage Range (V)	6.3 ~ 250	315 ~ 500																																																																	
Capacitance Range (μF)	0.1 ~ 15000																																																																		
Capacitance Tolerance (20°C, 120Hz)	± 20%																																																																		
Leakage Current (μA)	6.3 ~ 100V After 2 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 3, whichever is greater.	160 ~ 500V After 1 minute at 20°C application of rated voltage, leakage current is not more than: CV ≤ 1000 : 0.1CV + 40 CV > 1000 : 0.04CV + 100																																																																	
	C: Nominal Capacitance (μF) V: Rated Voltage (V)																																																																		
Dissipation Factor (20°C, 120Hz)	<table border="1"> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>315</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> <th>500</th> </tr> <tr> <th>Tan δ (max)</th> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td colspan="3">0.15</td> <td colspan="5">0.20</td> </tr> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400	420	450	500	Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15			0.20					When nominal capacitance is over 1000μF tan δ shall be added 0.02 to the listed value with increase of every 1000μF																														
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400	420	450	500																																																	
Tan δ (max)	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15			0.20																																																							
Stability at Low Temperature (Impedance Ratio at 120Hz)	<table border="1"> <tr> <th>Rated Voltage (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160</th> <th>200</th> <th>250</th> <th>315</th> <th>350</th> <th>400</th> <th>420</th> <th>450</th> <th>500</th> </tr> <tr> <th>Z_{-25°C} / Z_{+20°C}</th> <td>4</td> <td>3</td> <td colspan="3">2</td> <td colspan="3">3</td> <td colspan="5">6</td> </tr> <tr> <th>Z_{-40°C} / Z_{+20°C}</th> <td>8</td> <td>6</td> <td>4</td> <td colspan="3">3</td> <td colspan="2">8</td> <td colspan="8">-</td> </tr> </table>	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400	420	450	500	Z _{-25°C} / Z _{+20°C}	4	3	2			3			6					Z _{-40°C} / Z _{+20°C}	8	6	4	3			8		-																								
	Rated Voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400	420	450	500																																																	
Z _{-25°C} / Z _{+20°C}	4	3	2			3			6																																																										
Z _{-40°C} / Z _{+20°C}	8	6	4	3			8		-																																																										

	Useful Life		Load Life	Endurance Test	Shelf Life
Lifetime	Φ ≤ 8 : 2000h Φ ≥ 10 : 3000h	>100000h	Φ ≤ 8 : 1000h Φ ≥ 10 : 2000h	2000h	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 150% 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 x I _R 40°C	U _R I _R 105°C	U _R I _R = 0 105°C	U _R = 0 I _R = 0 105°C After test: U _R to be applied for 30min >24h before measurement

Dimensions

mm



Frequency Coefficient

Rated Voltage (V)	Frequency							
	Cap (μF)	50/60Hz	120Hz	1kHz	10kHz	50kHz	100kHz	
6.3 ~ 100	0.1 ~ 4.7	0.32	0.4	0.7	0.8	0.92	1.0	
	10 ~ 47	0.40	0.5	0.8	0.9	0.96	1.0	
	100 ~ 220	0.56	0.7	0.9	0.9	0.96	1.0	
	330 ~ 1000	0.64	0.8	0.9	1.0	1.0	1.0	
	2200 ~ 15000	0.72	0.9	1.0	1.0	1.0	1.0	
160 ~ 500	0.47 ~ 10	0.80	1.0	1.75	2.0	2.4	2.5	
	22 ~ 56	0.80	1.0	1.6	1.8	1.9	2.0	
	68 ~ 220	0.80	1.0	1.3	1.4	1.6	1.65	

Temperature Coefficient

Rated Voltage (V)	Temperature (°C)		
	+70	+85	+105
6.3 ~ 100	2.0	1.7	1.0
160 ~ 500	1.8	1.4	1.0

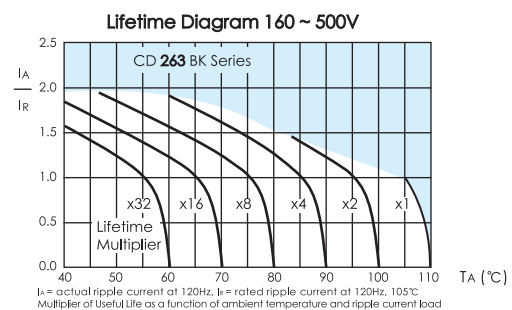
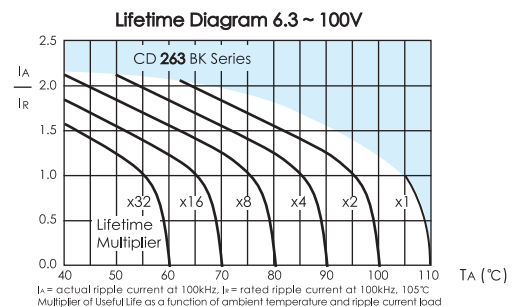
Ratings for CD 263 BK Series

U_R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Max Imp 20°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size $\Phi D \times L$	P/N	
(V)	(μF)	(Ω)	(Ω)	(mA rms)	(mm)	-	
6.3 (7.2) 0J	33	8.8	2.5	105	5×11.5	ECR0JBK330M□□050011	
	47	6.2	1.5	120	5×11.5	ECR0JBK470M□□050011	
	100	2.9	1.2	130	5×11.5	ECR0JBK101M□□050011	
	220	1.3	0.87	180	6.3×11.5	ECR0JBK221M□□063011	
	330	0.9	0.58	220	6.3×11.5	ECR0JBK331M□□063011	
	470	0.6	0.39	315	8×11.5	ECR0JBK471M□□080011	
	1000	0.29	0.23	500	10×12.5	ECR0JBK102M□□100012	
	2200	0.14	0.095	765	10×20	ECR0JBK222M□□100020	
	3300	0.105	0.09	1050	12.5×20	ECR0JBK332M□□125020	
	4700	0.079	0.061	1670	16×25	ECR0JBK472M□□160025	
	6800	0.062	0.056	1740	16×25	ECR0JBK682M□□160025	
	10000	0.053	0.045	2110	16×31.5	ECR0JBK103M□□160031	
	15000	0.044	0.036	2580	18×35.5	ECR0JBK153M□□180035	
	22	11.5	2.5	92	5×11.5	ECR1ABK220M□□050011	
	10 (13) 1A	33	7.6	1.9	105	5×11.5	ECR1ABK330M□□050011
47		5.4	1.5	120	5×11.5	ECR1ABK470M□□050011	
100		2.5	1.2	130	5×11.5	ECR1ABK101M□□050011	
220		1.1	0.58	220	6.3×11.5	ECR1ABK221M□□063011	
330		0.76	0.47	265	8×11.5	ECR1ABK331M□□080011	
470		0.54	0.39	315	8×11.5	ECR1ABK471M□□080011	
1000		0.25	0.18	615	10×16	ECR1ABK102M□□100016	
2200		0.13	0.09	1050	12.5×20	ECR1ABK222M□□125020	
3300		0.09	0.068	1300	12.5×25	ECR1ABK332M□□125025	
4700		0.07	0.056	1740	16×25	ECR1ABK472M□□160025	
6800		0.06	0.045	2110	16×31.5	ECR1ABK682M□□160031	
10000		0.05	0.036	2580	18×35.5	ECR1ABK103M□□180035	
16 (20) 1C		10	21.2	2.5	92	5×11.5	ECR1CBK100M□□050011
		22	9.7	1.9	105	5×11.5	ECR1CBK220M□□050011
		33	6.4	1.5	120	5×11.5	ECR1CBK330M□□050011
	47	4.5	1.2	130	5×11.5	ECR1CBK470M□□050011	
	100	2.1	0.58	220	6.3×11.5	ECR1CBK101M□□063011	
	220	0.97	0.47	290	8×11.5	ECR1CBK221M□□080011	
	330	0.64	0.39	315	8×11.5	ECR1CBK331M□□080011	
	470	0.45	0.23	500	10×12.5	ECR1CBK471M□□100012	
	1000	0.21	0.12	825	10×20	ECR1CBK102M□□100020	
	2200	0.11	0.068	1300	12.5×25	ECR1CBK222M□□125025	
	3300	0.08	0.056	1740	16×25	ECR1CBK332M□□160025	
	4700	0.06	0.045	2110	16×31.5	ECR1CBK472M□□160031	
	6800	0.05	0.036	2580	18×35.5	ECR1CBK682M□□180035	
	4.7	39.5	3	85	5×11.5	ECR1EBK4R7M□□050011	
	25 (32) 1E	10	18.6	2.5	92	5×11.5	ECR1EBK100M□□050011
22		8.4	1.9	105	5×11.5	ECR1EBK220M□□050011	
33		5.6	1.5	120	5×11.5	ECR1EBK330M□□050011	
47		4.0	1.2	130	5×11.5	ECR1EBK470M□□050011	
100		1.9	0.58	220	6.3×11.5	ECR1EBK101M□□063011	
220		0.84	0.39	315	8×11.5	ECR1EBK221M□□080011	
330		0.56	0.23	500	10×12.5	ECR1EBK331M□□100012	
470		0.40	0.18	615	10×16	ECR1EBK471M□□100016	
1000		0.19	0.09	1050	12.5×20	ECR1EBK102M□□125020	
2200		0.10	0.056	1740	16×25	ECR1EBK222M□□160025	
3300		0.07	0.045	2110	16×31.5	ECR1EBK332M□□160031	
4700		0.06	0.036	2580	18×35.5	ECR1EBK472M□□180035	
35 (44) 1V		4.7	33.9	2.5	92	5×11.5	ECR1VBK4R7M□□050011
		10	15.9	1.8	105	5×11.5	ECR1VBK100M□□050011
		22	7.2	1.5	120	5×11.5	ECR1VBK220M□□050011
	33	4.8	1.5	130	5×11.5	ECR1VBK330M□□050011	
	47	3.4	0.58	220	6.3×11.5	ECR1VBK470M□□063011	
	100	1.6	0.39	315	8×11.5	ECR1VBK101M□□080011	
	220	0.72	0.23	500	10×12.5	ECR1VBK221M□□100012	
	330	0.48	0.18	615	10×16	ECR1VBK331M□□100016	
	470	0.34	0.12	825	10×20	ECR1VBK471M□□100020	
	1000	0.16	0.068	1300	12.5×25	ECR1VBK102M□□125025	
	2200	0.08	0.045	2110	16×31.5	ECR1VBK222M□□160031	
	3300	0.06	0.036	2580	18×35.5	ECR1VBK332M□□180035	

U_R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Max Imp 20°C, 100kHz	Rated Ripple Current 105°C, 100kHz	Size $\Phi D \times L$	P/N	
(V)	(μF)	(Ω)	(Ω)	(mA rms)	(mm)	-	
50 (63) 1H	0.1	1327	18	10	5×11.5	ECR1HBK0R1M□□050011	
	0.22	603	13	15	5×11.5	ECR1HBK22M□□050011	
	0.33	402	10	18	5×11.5	ECR1HBK33M□□050011	
	0.47	282	7	23	5×11.5	ECR1HBK47M□□050011	
	1	133	4.9	35	5×11.5	ECR1HBK010M□□050011	
	2.2	60	4.2	53	5×11.5	ECR1HBK2R2M□□050011	
	3.3	40	3.9	65	5×11.5	ECR1HBK3R3M□□050011	
	4.7	28	3.6	82	5×11.5	ECR1HBK4R7M□□050011	
	10	13	2.7	100	5×11.5	ECR1HBK100M□□050011	
	22	6	1.9	125	5×11.5	ECR1HBK220M□□050011	
	33	4	1.1	195	6.3×11.5	ECR1HBK330M□□063011	
	47	2.8	0.9	245	6.3×11.5	ECR1HBK470M□□063011	
	100	1.3	0.5	385	8×11.5	ECR1HBK101M□□080011	
	220	0.60	0.27	505	10×16	ECR1HBK221M□□100016	
	330	0.40	0.18	675	10×20	ECR1HBK331M□□100020	
	470	0.28	0.12	895	12.5×20	ECR1HBK471M□□125020	
	1000	0.13	0.076	1495	16×25	ECR1HBK102M□□160025	
	2200	0.07	0.05	2190	18×35.5	ECR1HBK222M□□180035	
	63 (79) 1J	4.7	25	5.8	74	5×11.5	ECR1JBK4R7M□□050011
		10	12	3.6	95	5×11.5	ECR1JBK100M□□050011
22		5	2.1	130	6.3×11.5	ECR1JBK220M□□063011	
33		4	1.7	160	6.3×11.5	ECR1JBK330M□□063011	
47		2.5	1.2	305	8×11.5	ECR1JBK470M□□080011	
100		1.2	0.65	395	10×12.5	ECR1JBK101M□□100012	
220		0.54	0.32	505	10×20	ECR1JBK221M□□100020	
330		0.36	0.22	660	12.5×20	ECR1JBK331M□□125020	
470		0.25	0.16	850	12.5×25	ECR1JBK471M□□125025	
1000		0.12	0.098	1430	16×31.5	ECR1JBK102M□□160031	
100 (125) 2A		0.47	226	13	30	5×11.5	ECR2ABK4R7M□□050011
		1	106	11	45	5×11.5	ECR2ABK010M□□050011
		2.2	48	9.2	60	5×11.5	ECR2ABK2R2M□□050011
		3.3	32	7.2	67	5×11.5	ECR2ABK3R3M□□050011
		4.7	23	6.3	75	5×11.5	ECR2ABK4R7M□□050011
	10	11	3.3	110	6.3×11.5	ECR2ABK100M□□063011	
	22	5	1.4	165	8×11.5	ECR2ABK220M□□080011	
	33	3.2	0.94	305	10×12.5	ECR2ABK330M□□100012	
	47	2.3	0.68	320	10×16	ECR2ABK470M□□100016	
	100	1.1	0.28	585	12.5×20	ECR2ABK101M□□125020	
	220	0.48	0.16	1120	16×25	ECR2ABK221M□□160025	
	330	0.32	0.13	1290	16×25	ECR2ABK331M□□160025	
	470	0.23	0.11	1350	16×31.5	ECR2ABK471M□□160031	

MINIATURE

Lifetime Diagram



CD 263 BK SERIES



Ratings for CD 263 BK Series

U _r (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(mAmps)	(mm)	-
160 (200) 2C	0.47	423.5	12	6.3×11.5	ECR2CBKR47M□□063011
	1	199.0	18	6.3×11.5	ECR2CBK010M□□063011
	2.2	90.5	26	6.3×11.5	ECR2CBK2R2M□□063011
	3.3	60.3	37	8×11.5	ECR2CBK3R3M□□080011
	4.7	42.3	44	8×11.5	ECR2CBK4R7M□□080011
	10	19.9	75	10×12.5	ECR2CBK100M□□100012
	22	9.0	135	10×16	ECR2CBK220M□□100016
	33	6.0	175	10×20	ECR2CBK330M□□100020
	47	4.2	230	12.5×20	ECR2CBK470M□□125020
	100	2.0	330	16×25.5	ECR2CBK101M□□160025
	220	0.9	500	16×35.5	ECR2CBK221M□□160035
200 (250) 2D	0.47	423.5	12	6.3×11.5	ECR2DBKR47M□□063011
	1	199.0	18	6.3×11.5	ECR2DBK010M□□063011
	2.2	90.5	26	6.3×11.5	ECR2DBK2R2M□□063011
	3.3	60.3	37	8×11.5	ECR2DBK3R3M□□080011
	4.7	42.3	50	10×12.5	ECR2DBK4R7M□□100012
	10	19.9	80	10×16	ECR2DBK100M□□100016
	22	9.0	135	10×20	ECR2DBK220M□□100020
	33	6.0	190	12.5×20	ECR2DBK330M□□125020
	47	4.0	230	12.5×25	ECR2DBK470M□□125025
	100	2.0	360	16×25.5	ECR2DBK101M□□160025
	220	0.9	525	18×31.5	ECR2DBK221M□□180031
250 (300) 2E	0.47	423.5	12	6.3×11.5	ECR2EBKR47M□□063011
	1	199.0	18	6.3×11.5	ECR2EBK010M□□063011
	2.2	90.5	30	8×11.5	ECR2EBK2R2M□□080011
	3.3	60.3	43	8×11.5	ECR2EBK3R3M□□080011
	4.7	42.3	50	10×12.5	ECR2EBK4R7M□□100012
	10	19.9	90	10×16	ECR2EBK100M□□100016
	22	9.0	155	12.5×20	ECR2EBK220M□□125020
	33	6.0	190	12.5×25	ECR2EBK330M□□125025
	47	4.2	225	16×25.5	ECR2EBK470M□□160025
	100	2.0	340	16×31.5	ECR2EBK101M□□160031
	150	1.3	405	18×25.5	ECR2EBK151M□□180025
220	0.9	570	18×36	ECR2EBK221M□□180036	
315 (350) 2F	0.47	564.6	11	6.3×11.5	ECR2FBKR47M□□063011
	1	265.4	18	8×11.5	ECR2FBK010M□□080011
	2.2	120.6	30	10×12.5	ECR2FBK2R2M□□100012
	3.3	80.4	36	10×12.5	ECR2FBK3R3M□□100012
	4.7	56.5	47	10×16	ECR2FBK4R7M□□100016
	10	26.5	95	10×20	ECR2FBK100M□□100020
	22	12.1	130	12.5×20	ECR2FBK220M□□125020
	33	8.0	180	12.5×25	ECR2FBK330M□□125025
	47	5.6	330	16×25.5	ECR2FBK470M□□160025
	100	2.7	620	18×31.5	ECR2FBK101M□□180031
	350 (400) 2V	0.47	564.6	11	6.3×11.5
1		265.4	18	8×11.5	ECR2VBK010M□□080011
2.2		120.6	30	10×12.5	ECR2VBK2R2M□□100012
3.3		80.4	36	10×12.5	ECR2VBK3R3M□□100012
4.7		56.5	47	10×16	ECR2VBK4R7M□□100016
10		26.5	95	10×20	ECR2VBK100M□□100020
22		12.1	130	12.5×20	ECR2VBK220M□□125020
33		8.0	180	12.5×25	ECR2VBK330M□□125025
47		5.6	330	16×25.5	ECR2VBK470M□□160025
100		2.7	620	18×31.5	ECR2VBK101M□□180031
400 (450) 2G		1	265.4	18	8×11.5
	2.2	120.6	25	8×11.5	ECR2GBK2R2M□□080011
	3.3	80.4	35	10×12.5	ECR2GBK3R3M□□100012
	4.7	56.5	47	10×16	ECR2GBK4R7M□□100016
	10	26.5	95	10×20	ECR2GBK100M□□100016
	22	12.1	150	12.5×20	ECR2GBK220M□□125020
	33	8.0	180	12.5×25	ECR2GBK330M□□125025
	47	5.6	360	16×25.5	ECR2GBK470M□□160025
	68	3.9	470	18×25.5	ECR2GBK680M□□180025
	82	3.2	575	18×31.5	ECR2GBK820M□□180031
	100	2.7	675	18×36	ECR2GBK101M□□180036
420 (470) 2X	1	265.4	16	8×11.5	ECR2XBK010M□□080011
	2.2	120.6	24	8×11.5	ECR2XBK2R2M□□080011
	3.3	80.4	34	10×12.5	ECR2XBK3R3M□□100012
	4.7	56.5	46	10×16	ECR2XBK4R7M□□100016
	10	26.5	92	10×20	ECR2XBK100M□□100020
	22	12.1	136	12.5×20	ECR2XBK220M□□125020
	33	8.0	184	12.5×25	ECR2XBK330M□□125025
	47	5.6	368	16×25.5	ECR2XBK470M□□160025
	68	3.9	496	18×25.5	ECR2XBK680M□□180025
	82	3.2	595	18×31.5	ECR2XBK820M□□180031
	100	2.7	695	18×36	ECR2XBK101M□□180036

U _r (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Rated Ripple Current 105°C, 120Hz	Size ΦD x L	P/N
(V)	(μF)	(Ω)	(mAmps)	(mm)	-
420 (470) 2X	10	26.5	100	10×20	ECR2XBK100M□□100020
	22	12.1	162	12.5×20	ECR2XBK100M□□125020
	33	8.0	204	12.5×25	ECR2XBK220M□□125025
	47	5.6	228	16×20	ECR2XBK330M□□160020
	56	4.7	242	16×25.5	ECR2XBK330M□□160025
	68	3.9	268	16×31.5	ECR2XBK470M□□160031
	82	3.2	300	16×31.5	ECR2XBK560M□□160031
	100	2.7	324	18×25.5	ECR2XBK560M□□180025
	120	2.2	360	18×31.5	ECR2XBK680M□□180031
	150	1.8	405	16×36	ECR2XBK101M□□180036
	450 (500) 2W	1	265.4	16	8×11.5
2.2		120.6	26	10×12.5	ECR2WBK2R2M□□100012
3.3		80.4	29	10×16	ECR2WBK2R2M□□100016
4.7		56.5	38	10×16	ECR2WBK3R3M□□100016
10		26.5	76	10×20	ECR2WBK3R3M□□100020
22		12.1	114	10×20	ECR2WBK4R7M□□100016
33		8.0	152	12.5×20	ECR2WBK4R7M□□125020
47		5.6	204	12.5×25	ECR2WBK220M□□125025
56		4.7	228	16×25.5	ECR2WBK330M□□160025
68		3.9	252	16×31.5	ECR2WBK330M□□160031
82		3.2	280	16×31.5	ECR2WBK560M□□180025
500 (550) 2H	1	265.4	21	10×12.5	ECR2WBK680M□□180031
	2.2	120.6	35	10×16	ECR2WBK680M□□180036
	3.3	80.4	48	10×20	ECR2WBK820M□□180036
	4.7	56.5	63	12.5×20	ECR2WBK820M□□180040
	10	26.5	126	12.5×25	ECR2WBK101M□□180036
	22	12.1	180	16×45	ECR2WBK101M□□160045
	33	8.0	240	18×40	ECR2WBK121M□□180040
	47	5.6	320	18×46	ECR2WBK121M□□160050
	56	4.7	360	18×46	ECR2WBK151M□□180046
	68	3.9	405	16×60	ECR2WBK151M□□200041
	82	3.2	450	16×60	ECR2WBK151M□□160060

Customer products are available on request.

MINIATURE