

ALUMINUM ELECTROLYTIC CAPACITORS



PK Series

- Long life and high temperature, down size and high ripple current
- Load life 3,000 hours at 105°C



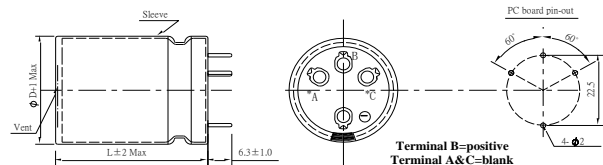
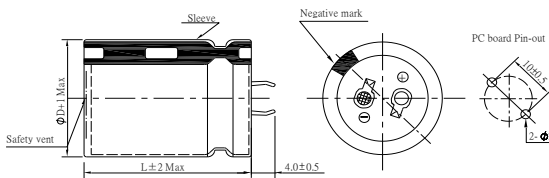
◆ SPECIFICATIONS

Item	Performance Characteristics																											
Category Temperature Range	-25 ~ +105°C																											
Working Voltage Range	200 ~ 500Vdc																											
Capacitance Range	56 ~ 2,200μF																											
Capacitance Tolerance	±20% (at 25°C and 120Hz)																											
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table><tr><td>Rated Voltage (V)</td><td>200</td><td>220</td><td>250</td><td>350</td><td>400</td><td>420</td><td>450</td><td>500</td></tr><tr><td>tanδ(Max)</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.20</td></tr></table>										Rated Voltage (V)	200	220	250	350	400	420	450	500	tanδ(Max)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.20
	Rated Voltage (V)	200	220	250	350	400	420	450	500																			
	tanδ(Max)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.20																			
When nominal capacitance exceeds 1,000uF, add 0.02 to the value above for each 1,000uF increase.																												
Leakage Current	I=0.02CV or 3000μA, whichever is smaller I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for 5 minutes																											
Low Temperature Characteristics Impedance Ratio(MAX)	<table><tr><td>Rated voltage (V)</td><td>200~250</td><td>350</td><td>400</td><td>420~450</td><td>500</td></tr><tr><td>Z(-25°C)/Z(+20°C)</td><td>4</td><td>4</td><td>4</td><td>8</td><td>8</td></tr></table>										Rated voltage (V)	200~250	350	400	420~450	500	Z(-25°C)/Z(+20°C)	4	4	4	8	8						
	Rated voltage (V)	200~250	350	400	420~450	500																						
Z(-25°C)/Z(+20°C)	4	4	4	8	8																							
(at 120Hz)																												
Endurance	The following specifications shall be satisfied when the capacitors are restored to 25°C after subjected to DC voltage with the rated ripple current is applied for 3,000 hours at 105°C.																											
	Capacitance change		≦ ±20% of the initial value																									
	Dissipation factor(tanδ)		≦ 200% of the specified value																									
	Leakage current		≦ specified value																									
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 1,000 hours at 105°C without voltage applied.																											
	Capacitance change		≦ ±20% of the initial value																									
	Dissipation factor(tanδ)		≦ 200% of the specified value																									
	Leakage current		≦ 200% of the specified value																									
Others	Conforms to JIS-C-5101-4 (1998)																											

◆ DIMENSIONS (mm)

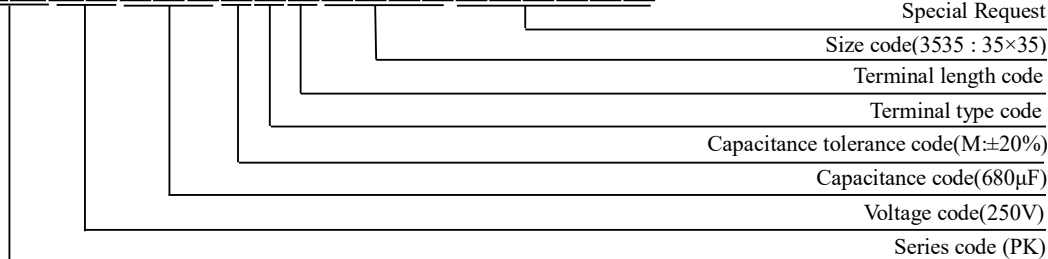
Terminal Code : ND : Standard

Terminal Code :K6 (Φ35)



◆ PART NUMBER SYSTEM (Example : 250V 680µF)

P K 2 E 6 8 1 M N D 3 5 3 5 Y



ALUMINUM ELECTROLYTIC CAPACITORS



PK Series

STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA rms/ 105°C, 120Hz)	Part Number
200 (2D)	270	22×25	1100	PK2D271MND2225Y
	330	22×30	1250	PK2D331MND2230Y
	390	22×35	1340	PK2D391MND2235Y
	390	25.4×25	1350	PK2D391MND2525YJY
	470	22×40	1540	PK2D471MND2240Y
	470	25.4×30	1500	PK2D471MND2530YJY
	560	22×45	1670	PK2D561MND2245Y
	560	25.4×35	1670	PK2D561MND2535YJY
	560	30×25	1670	PK2D561MND3025Y
	680	22×50	1780	PK2D681MND2250Y
	680	25.4×40	1780	PK2D681MND2540YJY
	680	30×30	1750	PK2D681MND3030Y
	820	25.4×45	2040	PK2D821MND2545YJY
	820	30×35	2040	PK2D821MND3035Y
	820	35×25	2040	PK2D821MND3525Y
	1000	25.4×50	2450	PK2D102MND2550YJY
	1000	30×40	2300	PK2D102MND3040Y
	1000	35×30	2300	PK2D102MND3530Y
	1200	30×45	2650	PK2D122MND3045Y
	1200	35×35	2650	PK2D122MND3535Y
220 (2P)	1500	30×50	2800	PK2D152MND3050Y
	1500	35×40	3080	PK2D152MND3540Y
	1800	35×45	3480	PK2D182MND3545Y
	2200	35×50	3520	PK2D222MND3550Y
	220	22×25	1000	PK2P221MND2225Y
	270	22×30	1150	PK2P271MND2230Y
	330	22×35	1250	PK2P331MND2235Y
	330	25.4×25	1250	PK2P331MND2525YJY
	390	22×40	1400	PK2P391MND2240Y
	390	25.4×30	1400	PK2P391MND2530YJY
	470	22×45	1520	PK2P471MND2245Y
	470	25.4×35	1450	PK2P471MND2535YJY
	470	30×25	1450	PK2P471MND3025Y
	560	22×50	1700	PK2P561MND2250Y
	560	25.4×40	1700	PK2P561MND2540YJY
	560	30×30	1700	PK2P561MND3030Y
	680	25.4×45	1780	PK2P681MND2545YJY
	680	30×35	1780	PK2P681MND3035Y
	680	35×25	1780	PK2P681MND3525Y
	820	25.4×50	2100	PK2P821MND2550YJY
	820	30×40	2100	PK2P821MND3040Y
250 (2E)	820	35×30	2100	PK2P821MND3530Y
	1000	30×45	2400	PK2P102MND3045Y
	1000	35×35	2400	PK2P102MND3535Y
	1200	30×50	2600	PK2P122MND3050Y
	1200	35×40	2600	PK2P122MND3540Y
	1500	35×45	3000	PK2P152MND3545Y
	1800	35×50	3130	PK2P182MND3550Y
	220	22×25	1000	PK2E221MND2225Y
	270	22×30	1110	PK2E271MND2230Y
	270	25.4×25	1180	PK2E271MND2525YJY
	330	22×35	1250	PK2E331MND2235Y
	330	25.4×30	1300	PK2E331MND2530YJY
	390	22×40	1420	PK2E391MND2240Y
	390	25.4×35	1400	PK2E391MND2535YJY
	390	30×25	1450	PK2E391MND3025Y
	470	22×45	1610	PK2E471MND2245Y
	470	25.4×40	1650	PK2E471MND2540YJY

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA rms/ 105°C, 120Hz)	Part Number
250 (2E)	470	30×30	1650	PK2E471MND3030Y
	470	35×25	1610	PK2E471MND3525Y
	560	22×50	1790	PK2E561MND2250Y
	560	25.4×45	1790	PK2E561MND2545YJY
	560	30×35	1800	PK2E561MND3035Y
	560	35×30	1800	PK2E561MND3530Y
	680	25.4×50	2000	PK2E681MND2550YJY
	680	30×40	2000	PK2E681MND3040Y
	680	35×35	2000	PK2E681MND3535Y
	820	30×45	2140	PK2E821MND3045Y
	820	35×40	2160	PK2E821MND3540Y
	1000	30×50	2470	PK2E102MND3050Y
	1000	35×45	2470	PK2E102MND3545Y
	1200	35×50	2760	PK2E122MND3550Y
	82	22×25	580	PK2G820MND2225Y
	100	22×30	700	PK2G101MND2230Y
	120	22×35	770	PK2G121MND2235Y
	120	25.4×25	770	PK2G121MND2525YJY
	150	22×40	900	PK2G151MND2240Y
	150	25.4×30	880	PK2G151MND2530YJY
400 (2G)	180	22×45	1020	PK2G181MND2245Y
	180	25.4×35	1020	PK2G181MND2535YJY
	180	30×25	1020	PK2G181MND3025Y
	220	22×50	1150	PK2G221MND2250Y
	220	25.4×40	1100	PK2G221MND2540YJY
	220	30×30	1100	PK2G221MND3030Y
	270	25.4×45	1220	PK2G271MND2545YJY
	270	30×35	1290	PK2G271MND3035Y
	270	35×25	1220	PK2G271MND3525Y
	330	25.4×50	1470	PK2G331MND2550YJY
	330	30×40	1470	PK2G331MND3040Y
	330	35×30	1440	PK2G331MND3530Y
	390	30×45	1660	PK2G391MND3045Y
	390	35×35	1600	PK2G391MND3535Y
	470	30×50	1900	PK2G471MND3050Y
	470	35×40	1900	PK2G471MND3540Y
	560	35×45	2070	PK2G561MND3545Y
	680	35×50	2270	PK2G681MND3550Y
	82	22×25	640	PK2S820MND2225Y
	100	22×30	700	PK2S101MND2230Y
420 (2S)	120	22×35	810	PK2S121MND2235Y
	120	25.4×25	810	PK2S121MND2525YJY
	150	22×40	930	PK2S151MND2240Y
	150	25.4×30	950	PK2S151MND2530YJY
	180	22×45	1040	PK2S181MND2245Y
	180	25.4×35	1020	PK2S181MND2535YJY
	180	30×25	1060	PK2S181MND3025Y
	220	22×50	1200	PK2S221MND2250Y
	220	25.4×40	1180	PK2S221MND2540YJY
	220	30×30	1180	PK2S221MND3030Y
	220	35×25	1180	PK2S221MND3525Y
	270	25.4×45	1360	PK2S271MND2545YJY
	270	30×35	1360	PK2S271MND3035Y
	270	35×30	1300	PK2S271MND3530Y
	330	25.4×50	1500	PK2S331MND2550YJY
	330	30×40	1480	PK2S331MND3040Y
	330	35×35	1550	PK2S331MND3535Y
	390	30×45	1700	PK2S391MND3045Y

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PK Series

◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA rms/ 105°C, 120Hz)	Part Number
420 (2S)	390	35×40	1710	PK2S391MND3540Y
	470	30×50	1900	PK2S471MND3050Y
	470	35×45	1950	PK2S471MND3545Y
	560	35×50	2170	PK2S561MND3550Y
	680	35×55	2200	PK2S681MND3555Y
450 (2W)	82	22×25	640	PK2W820MND2225Y
	100	22×30	690	PK2W101MND2230Y
	100	25.4×25	690	PK2W101MND2525Y
	120	22×35	810	PK2W121MND2235Y
	120	25.4×30	810	PK2W121MND2530Y
	150	22×40	940	PK2W151MND2240Y
	150	25.4×35	930	PK2W151MND2535Y
	150	30×25	930	PK2W151MND3025Y
	180	22×45	1060	PK2W181MND2245Y
	180	25.4×40	1060	PK2W181MND2540Y
	180	30×30	1060	PK2W181MND3030Y
	220	22×50	1200	PK2W221MND2250Y
	220	25.4×45	1200	PK2W221MND2545Y
	220	30×35	1180	PK2W221MND3035Y
	220	35×25	1240	PK2W221MND3525Y
	270	25.4×50	1320	PK2W271MND2550Y
	270	30×40	1340	PK2W271MND3040Y
	270	35×30	1400	PK2W271MND3530Y
	330	30×45	1520	PK2W331MND3045Y
	330	35×35	1500	PK2W331MND3535Y
	390	30×50	1730	PK2W391MND3050Y
	390	35×40	1710	PK2W391MND3540Y

WV (Vdc)	Cap (μF)	Case Size (mm) ΦD×L	Rated Ripple current (mA rms/ 105°C, 120Hz)	Part Number
450 (2W)	470	35×45	1950	PK2W471MND3545Y
	560	35×50	2010	PK2W561MND3550Y
	56	22×25	510	PK2H560MND2225Y
	68	22×30	580	PK2H680MND2230Y
	82	22×35	720	PK2H820MND2235Y
500 (2H)	82	25.4×25	740	PK2H820MND2525Y
	100	22×40	830	PK2H101MND2240Y
	100	25.4×30	820	PK2H101MND2530Y
	120	22×45	930	PK2H121MND2245Y
	120	25.4×35	930	PK2H121MND2535Y
	120	30×25	910	PK2H121MND3025Y
	150	22×50	1020	PK2H151MND2250Y
	150	25.4×40	1020	PK2H151MND2540Y
	150	30×30	1040	PK2H151MND3030Y
	180	25.4×45	1200	PK2H181MND2545Y
	180	30×35	1170	PK2H181MND3035Y
	180	35×25	1100	PK2H181MND3525Y
	220	25.4×50	1300	PK2H221MND2550Y
	220	30×40	1310	PK2H221MND3040Y
	220	35×30	1320	PK2H221MND3530Y
	270	30×45	1410	PK2H271MND3045Y
	270	35×35	1420	PK2H271MND3535Y
	330	30×50	1510	PK2H331MND3050Y
	330	35×40	1560	PK2H331MND3540Y
	390	35×45	1700	PK2H391MND3545Y
	470	35×50	1900	PK2H471MND3550Y

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Frequency (Hz)				
	50	120	1K	10K	≥50K
200 ~ 250	0.81	1.00	1.32	1.45	1.50
350 ~ 500	0.77	1.00	1.30	1.41	1.43