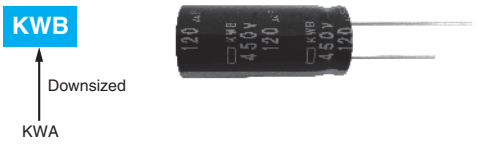
KWB Series

- Ideal for low profile power supply applications
- Downsized form KWA series
- Rated voltage range : 400 to 450Vdc, Capacitance range : 18 to 270µF
- Endurance with ripple current : 5,000 hours at 105℃
- Non solvent resistant type
- RoHS2 Compliant

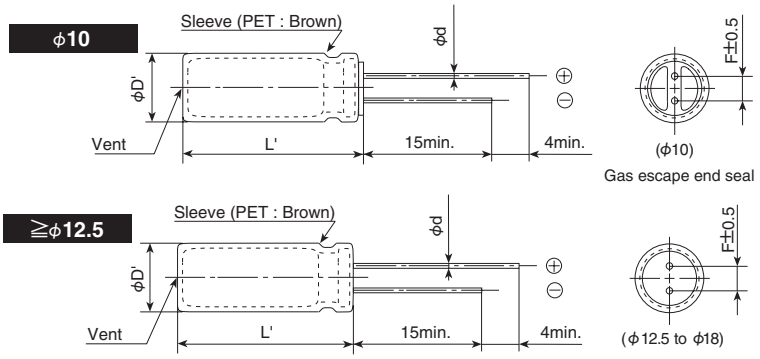


◆SPECIFICATIONS

Items	Characteristics		
Category Temperature Range	-40 to +105℃		
Rated Voltage Range	400 to 450Vdc		
Capacitance Tolerance	±20% (M)		(at 20℃, 120Hz)
Leakage Current	I=0.04CV+100 (after 1 minute) I=0.02CV+25 (after 5 minutes) Where, I : Max. leakage current(µA), C : Nominal capacitance (µF), V : Rated voltage (V)		(at 20℃)
Dissipation Factor (tan δ)	Rated voltage (Vdc)	400 to 450V	
	tan δ (Max.)	0.20	(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	400 to 450V	
	Z(-25℃)/Z(+20℃)	6	
	Z(-40℃)/Z(+20℃)	10	(at 120Hz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 105℃.		
	Capacitance change	≦±20% of the initial value	
	D.F. (tan δ)	≦200% of the initial specified value	
	Leakage current	≦The initial specified value	
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 105℃ without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.		
	Capacitance change	≦±20% of the initial value	
	D.F. (tan δ)	≦200% of the initial specified value	
	Leakage current	≦500% of the initial specified value	

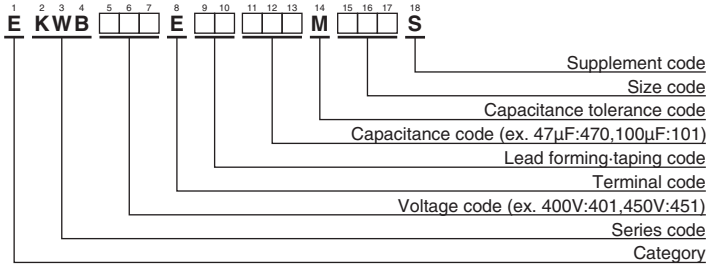
◆DIMENSIONS [mm]

●Terminal Code : E



φD	10	12.5	14.5	16	18
φd	0.6	0.6	0.8	0.8	0.8
F	5.0	5.0	7.5	7.5	7.5
φD'	φD+0.5 max.				
L'	L+2.0 max.				

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

KWB Series

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/105℃, 120Hz)	Part No.
400	22	10×20	0.20	235	EKWB401E□□220MJ20S
	27	10×25	0.20	285	EKWB401E□□270MJ25S
	39	10×30	0.20	365	EKWB401E□□390MJ30S
	39	12.5×20	0.20	345	EKWB401E□□390MK20S
	47	10×35	0.20	425	EKWB401E□□470MJ35S
	56	10×40	0.20	485	EKWB401E□□560MJ40S
	56	12.5×25	0.20	450	EKWB401E□□560MK25S
	68	10×45	0.20	555	EKWB401E□□680MJ45S
	68	10×50	0.20	575	EKWB401E□□680MJ50S
	68	12.5×30	0.20	530	EKWB401E□□680MK30S
	68	16×20	0.20	510	EKWB401E□□680ML20S
	82	12.5×35	0.20	610	EKWB401E□□820MK35S
	82	18×20	0.20	585	EKWB401E□□820MM20S
	100	12.5×40	0.20	705	EKWB401E□□101MK40S
	100	14.5×31.5	0.20	680	EKWB401E□□101MUN3S
	100	16×25	0.20	670	EKWB401E□□101ML25S
	120	12.5×45	0.20	800	EKWB401E□□121MK45S
	120	12.5×50	0.20	820	EKWB401E□□121MK50S
	120	14.5×35	0.20	765	EKWB401E□□121MU35S
	120	16×31.5	0.20	790	EKWB401E□□121MLN3S
	120	18×25	0.20	755	EKWB401E□□121MM25S
	150	16×35	0.20	905	EKWB401E□□151ML35S
	150	18×31.5	0.20	915	EKWB401E□□151MMN3S
	180	16×40	0.20	1,020	EKWB401E□□181ML40S
	180	16×45	0.20	1,040	EKWB401E□□181ML45S
	180	18×31.5	0.20	1,000	EKWB401E□□181MMN3S
	180	18×35	0.20	1,020	EKWB401E□□181MM35S
	220	16×50	0.20	1,170	EKWB401E□□221ML50S
	220	18×40	0.20	1,160	EKWB401E□□221MM40S
	270	18×45	0.20	1,310	EKWB401E□□271MM45S
	270	18×50	0.20	1,310	EKWB401E□□271MM50S
420	22	10×20	0.20	235	EKWB421E□□220MJ20S
	27	10×25	0.20	285	EKWB421E□□270MJ25S
	33	12.5×20	0.20	320	EKWB421E□□330MK20S
	39	10×30	0.20	365	EKWB421E□□390MJ30S
	47	10×35	0.20	425	EKWB421E□□470MJ35S
	47	12.5×25	0.20	415	EKWB421E□□470MK25S
	56	10×40	0.20	485	EKWB421E□□560MJ40S
	56	10×45	0.20	505	EKWB421E□□560MJ45S
	56	10×50	0.20	520	EKWB421E□□560MJ50S
	68	12.5×30	0.20	530	EKWB421E□□680MK30S
	68	16×20	0.20	510	EKWB421E□□680ML20S
	82	12.5×35	0.20	610	EKWB421E□□820MK35S
	82	12.5×40	0.20	640	EKWB421E□□820MK40S
	82	14.5×31.5	0.20	615	EKWB421E□□820MUN3S
	82	16×25	0.20	605	EKWB421E□□820ML25S
	82	18×20	0.20	585	EKWB421E□□820MM20S
	100	12.5×45	0.20	730	EKWB421E□□101MK45S
	100	14.5×35	0.20	700	EKWB421E□□101MU35S
	120	12.5×50	0.20	820	EKWB421E□□121MK50S
	120	16×31.5	0.20	790	EKWB421E□□121MLN3S
	120	18×25	0.20	755	EKWB421E□□121MM25S
	150	16×35	0.20	905	EKWB421E□□151ML35S
	150	16×40	0.20	935	EKWB421E□□151ML40S
	150	18×31.5	0.20	915	EKWB421E□□151MMN3S
	180	16×45	0.20	1,040	EKWB421E□□181ML45S
	180	16×50	0.20	1,060	EKWB421E□□181ML50S
	180	18×35	0.20	1,020	EKWB421E□□181MM35S
	180	18×40	0.20	1,050	EKWB421E□□181MM40S
	220	18×45	0.20	1,190	EKWB421E□□221MM45S
	270	18×50	0.20	1,310	EKWB421E□□271MM50S

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Rated ripple current (mArms/105℃, 120Hz)	Part No.
450	18	10×20	0.20	210	EKWB451E□□180MJ20S
	27	10×25	0.20	285	EKWB451E□□270MJ25S
	33	10×30	0.20	335	EKWB451E□□330MJ30S
	33	12.5×20	0.20	320	EKWB451E□□330MK20S
	39	10×35	0.20	385	EKWB451E□□390MJ35S
	47	10×40	0.20	445	EKWB451E□□470MJ40S
	47	12.5×25	0.20	415	EKWB451E□□470MK25S
	56	10×45	0.20	505	EKWB451E□□560MJ45S
	56	10×50	0.20	520	EKWB451E□□560MJ50S
	56	12.5×30	0.20	480	EKWB451E□□560MK30S
	56	16×20	0.20	460	EKWB451E□□560ML20S
	68	12.5×35	0.20	560	EKWB451E□□680MK35S
	82	12.5×40	0.20	640	EKWB451E□□820MK40S
	82	12.5×45	0.20	660	EKWB451E□□820MK45S
	82	14.5×31.5	0.20	615	EKWB451E□□820MUN3S
	82	16×25	0.20	605	EKWB451E□□820ML25S
	82	18×20	0.20	585	EKWB451E□□820MM20S
	100	12.5×50	0.20	750	EKWB451E□□101MK50S
	100	14.5×35	0.20	700	EKWB451E□□101MU35S
	100	16×31.5	0.20	720	EKWB451E□□101MLN3S
	100	18×25	0.20	690	EKWB451E□□101MM25S
	120	16×35	0.20	810	EKWB451E□□121ML35S
	120	18×31.5	0.20	815	EKWB451E□□121MMN3S
	150	16×40	0.20	935	EKWB451E□□151ML40S
	150	16×45	0.20	950	EKWB451E□□151ML45S
	150	18×31.5	0.20	915	EKWB451E□□151MMN3S
	150	18×35	0.20	935	EKWB451E□□151MM35S
	180	16×50	0.20	1,060	EKWB451E□□181ML50S
	180	18×40	0.20	1,050	EKWB451E□□181MM40S
	220	18×45	0.20	1,190	EKWB451E□□221MM45S
	220	18×50	0.20	1,190	EKWB451E□□221MM50S

□□ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
18 to 82	1.00	1.50	1.75	1.80
100 to 270	1.00	1.30	1.40	1.50

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.

■ Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.

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