

K25 TYPE -40°C +105°C 8000H

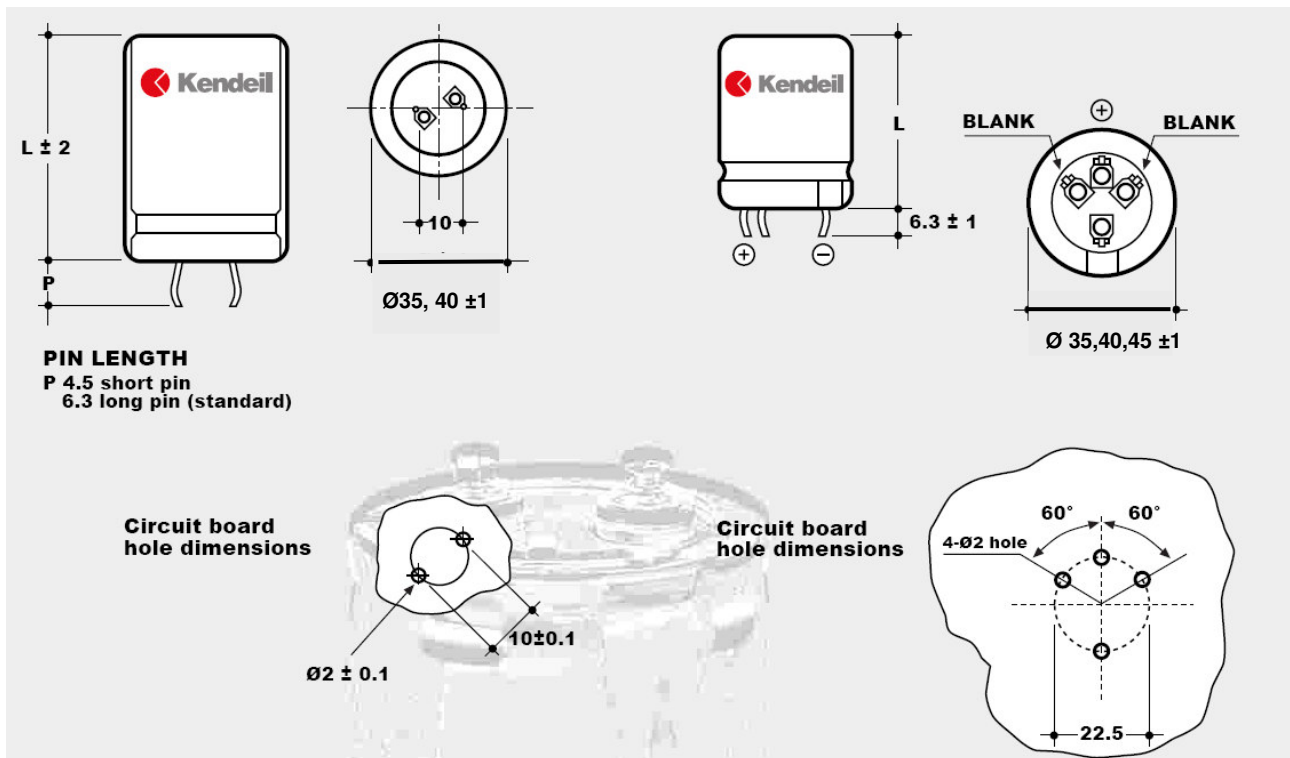
Preliminary Version

RoHS Compliant
Directive 2002/95/EC

- Surge-proof capacitor in aluminium can with insulation sleeve.
- Snap in terminals for PCB mounting.
- Design optimized for high ripple current applications

APPLICATIONS

Designed for professional application. Ultra compact UPS, Solar inverters, High ripple current converters, Motor drives.



NOTE: Dimensions in mm

SPECIFICATIONS

GENERAL CHARACTERISTICS																																	
Temperature Range	Operating: -40°C +105°C [Environmental classification 40/105/56 IEC] Storage : Preferably below +25°C, not exceeding +40°C																																
Rated Voltage Range (V_r)	from 400V to 450V DC																																
Surge Voltage (V_p)	$V_p = 1.10 V_r$																																
Rated Capacitance Range	from 820 μ F to 2200 μ F																																
Capacitance Tolerance	$\pm 20\%$ at 100 Hz, 20°C [M class IEC-62]																																
Leakage Current (I_L) (5 min, 20°C)	$\max I_L = 0.003 C_r V_r + 4 \mu A$																																
Ripple current (I_r)	Refer to table at 105°C and 100Hz : <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">FREQUENCY</td> <td>50Hz</td> <td>100Hz</td> <td>500 Hz</td> <td>1000Hz</td> <td>>10kHz</td> </tr> <tr> <td style="text-align: left;">MULTIPLIER</td> <td>0.88</td> <td>1.0</td> <td>1.45</td> <td>1.5</td> <td>1.55</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: left;">AMBIENT TEMP</td> <td>35°C</td> <td>45°C</td> <td>55°C</td> <td>65°C</td> <td>75°C</td> <td>85°C</td> <td>95°C</td> <td>105°C</td> <td>110°C</td> </tr> <tr> <td style="text-align: left;">MULTIPLIER</td> <td>3.0</td> <td>2.8</td> <td>2.6</td> <td>2.4</td> <td>2.2</td> <td>1.8</td> <td>1.5</td> <td>1.0</td> <td>0.5</td> </tr> </table> Maximum internal temperature 108°C	FREQUENCY	50Hz	100Hz	500 Hz	1000Hz	>10kHz	MULTIPLIER	0.88	1.0	1.45	1.5	1.55	AMBIENT TEMP	35°C	45°C	55°C	65°C	75°C	85°C	95°C	105°C	110°C	MULTIPLIER	3.0	2.8	2.6	2.4	2.2	1.8	1.5	1.0	0.5
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Insulation Resistance	At 100V DC for 1 min is >100 M Ω across insulating sleeve and terminals.																																
Vibration Resistance	Frequency range: 10 Hz to 55 Hz, amplitude 0.75 mm max acceleration 10g for 3x2 h																																
Life test	After 2,000 hours application of rated voltage at 105°C capacitors meet characteristics aside <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Cap change</td> <td>$\leq \pm 20\%$</td> </tr> <tr> <td style="text-align: right;">tan δ</td> <td>$\leq 200\%$</td> </tr> <tr> <td style="text-align: right;">Leakage current (I_L)</td> <td>< initial limit</td> </tr> <tr> <td style="text-align: right;">Impedance (Z)</td> <td>$\leq 200\%$</td> </tr> </table>	Cap change	$\leq \pm 20\%$	tan δ	$\leq 200\%$	Leakage current (I_L)	< initial limit	Impedance (Z)	$\leq 200\%$																								
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Shelf life	After leaving capacitors under no load for 500 hours at 105°C, when restored at 20°C meet specifications aside <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: right;">Cap change</td> <td>$\leq \pm 15\%$</td> </tr> <tr> <td style="text-align: right;">tan δ</td> <td>$\leq 150\%$</td> </tr> <tr> <td style="text-align: right;">Leakage current (I_L)</td> <td>< initial limit</td> </tr> </table>	Cap change	$\leq \pm 15\%$	tan δ	$\leq 150\%$	Leakage current (I_L)	< initial limit																										
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Useful life	$\geq 250,000$ h at 40°C $\geq 5,000$ h at 105°C (> 8.000H 105°C under testing)																																
Failure percentage Failure rate	$\leq 1\%$ (during useful life) ≤ 40 fit ($40 \cdot 10^{-9}$ /h)																																
Self inductance	Approx. 20 nH																																
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																																

K25 TYPE STANDARD RATINGS

RATED VOLTAGE VDC	Capacitance	Ø x L	Tan δ	ESR	Z	Ir a.c.	PART NUMBER
	μF	mm	MAX 100 Hz 20°C	TYP mΩ 100 Hz 20°C	TYP mΩ 10KHz 20°C	A max 100 Hz 105°C	Termination digit excluded
400V	1200	40x77	0.10	89	64	3.6	K25400122_PM0F077
	1200	45x60	0.10	89	64	3.6	K25400122_PM0N060
	1500	40x97	0.10	75	55	4.8	K25400152_PM0F097
	1500	45x77	0.10	75	55	4.7	K25400152_PM0N077
	1800	45x97	0.10	69	60	5.6	K25400182_PM0N097
	2200	45x105	0.10	47	40	6.1	K25400222_PM0N105

RATED VOLTAGE VDC	Capacitance	Ø x L	Tan δ	ESR	Z	Ir a.c.	PART NUMBER
	μF	mm	MAX 100 Hz 20°C	TYP mΩ 100 Hz 20°C	TYP mΩ 10KHz 20°C	A max 100 Hz 105°C	Termination digit excluded
420V	820	35x77	0.10	104	85	3.0	K25420821_PM0E077
	1000	40x60	0.10	99	74	3.6	K25420102_PM0F060
	1200	40x77	0.10	94	64	3.7	K25420122_PM0F077
	1200	45x60	0.10	94	64	3.6	K25420122_PM0N060
	1500	40x97	0.10	75	55	4.6	K25420152_PM0F097
	1500	45x77	0.11	75	55	4.5	K25420152_PM0N077
	1800	45x97	0.11	69	51	5.6	K25420182_PM0N097
	2200	45x105	0.12	47	40	6.1	K25420222_PM0N105

RATED VOLTAGE VDC	Capacitance	Ø x L	Tan δ	ESR	Z	Ir a.c.	PART NUMBER
	μF	mm	MAX 100 Hz 20°C	TYP mΩ 100 Hz 20°C	TYP mΩ 10KHz 20°C	A max 100 Hz 105°C	Termination digit excluded
450V	820	40x60	0.10	104	85	3.3	K25450821_PM0F060
	1000	40x77	0.10	99	74	3.8	K25450102_PM0F077
	1000	45x60	0.10	99	74	3.6	K25450102_PM0N060
	1200	40x97	0.10	94	64	4.6	K25450122_PM0F097
	1200	45x77	0.10	94	64	4.3	K25450122_PM0N077
	1500	45x97	0.11	75	55	5.1	K25450152_PM0N097
	1800	45x105	0.11	69	51	5.1	K25450182_PM0N105

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