



MKV AC, MKV DC capacitors

LSI Snubbing and Clamping

Ordering code: B25856
Date: September 2005

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Features

- High dielectric strength
- High peak-current capability
- Extremely low inductance

Construction

- Self-healing
- Plastic dielectric
- Oil-impregnated tubular windings (no PCB)
- Metal-sprayed end faces ensure reliable contacting
- Fully insulated case
- Axial version

Terminals

- Internal thread M6 × 8 and M8 × 10
- Axial

Mounting

- On the terminals

Individual data sheets

Individual data sheets contain detailed specification incl. thermal data.
Upon request, these data sheets are available for each capacitor type.



Technical data

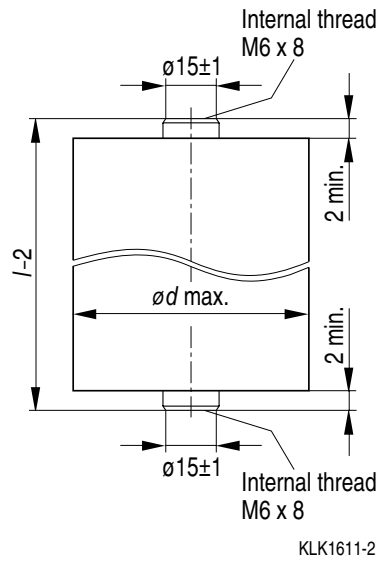
Standards		IEC 1071-1/2 EN 61071-1/2 VDE 0560 part 120 and 121
Dielectric dissipation factor	$\tan \delta_0$	2×10^{-4}
Capacitance tolerance		$\pm 10\%$
Max. repetitive rate of voltage rise	$(dv/dt)_{\max}$	$\frac{\hat{i}}{C}$
Max. non-repetitive rate of voltage rise	$(dv/dt)_s$	$\frac{I_s}{C}$
Climatic data:		
Min. operating temperature	T_{\min}	$-25\text{ }^\circ\text{C}$
Max. operating temperature	T_{\max}	$+85\text{ }^\circ\text{C}$
Average relative humidity		$\leq 95\%$
Failure quota	$\alpha_{FQ(\text{co})}$	300 failures per 10^9 component hours
Load duration	$t_{LD(\text{co})}$	100 000 h
Storage temperature limit	T_{stg}	$\leq 98\text{ mm diameter: } -55/+85\text{ }^\circ\text{C}$ $\geq 103\text{ mm diameter: } -30/+85\text{ }^\circ\text{C}$
IEC climatic category (IEC 68-1 and 2)		25/085/56
Test A, cold		$-25\text{ }^\circ\text{C}$
Test B, dry heat		$+85\text{ }^\circ\text{C}$
Test Ca, damp heat, steady state		56 days/ $40\text{ }^\circ\text{C}/93\text{ } \%$ rel. humidity
Values after test Ca:		
Capacitance change	$\Delta C/C$	$\leq 1\%$
Insulation resistance	R_{ins}	$C_R \leq 1\text{ }\mu\text{F: } \geq 10000\text{ M}\Omega$
Self-discharge time constant $\tau =$	$R_{\text{ins}} \times C$	$C_R > 1\text{ }\mu\text{F: } \geq 10000\text{ s}$
Dissipation factor change	$\Delta \tan \delta$	$\leq 1 \times 10^{-4}$
Test data:		
Voltage test between terminals		
DC test voltage	V_{TT}	$1.5 \times V_R, 10\text{ s}$ ($V_R = \text{DC}$) $1.75 \times V_R, 10\text{ s}$ ($V_R = \text{AC}$)
AC test voltage (rms value)	V_{TT}	$1.25 \times V_R, 50\text{ Hz}, 10\text{ s}$ ($V_R = \text{AC}$)
Insulation resistance	R_{ins}	$C_R \leq 1\text{ }\mu\text{F: } \geq 10000\text{ M}\Omega$
Self-discharge time constant	$\tau = R_{\text{ins}} \times C$	$C_R > 1\text{ }\mu\text{F: } \geq 10000\text{ s}$
Dissipation factor (50 Hz)	$\tan \delta$	$\leq 3 \times 10^{-4}$

Characteristics and ordering codes

$C_R^{1)}$	I_{max}	\hat{i}	I_s	R_S 20 °C	L_{self}	Dimensions $d \times l$	Fig.	Appr. weight	Ordering code
μF	A	A	A	m Ω	nH	mm		g	
$V_{RDC} = AC\ 3000\ V$ $\hat{v} = 3600\ V$ $V_{TT} = AC\ 3200\ V, 10\ s$ $V_R = AC\ 2500\ V$ $v_s = 5200\ V$									
0.5	70	2200	5500	1.9	<20	68 × 79	2	550	B25856K7504K013
1	80	3000	7500	1.1	<20	83 × 79	2	700	B25856K7105K003
1.5	80	4800	12000	0.7	<20	93 × 79	2	800	B25856K7155K013
2	80	3600	9000	1.3	<20	88 × 100	2	900	B25856K7205K003
2.5	80	4500	11000	1.0	<20	98 × 100	2	1100	B25856K7255K003
3	80	3600	9000	1.9	<10	88 × 142	2	1100	B25856J7305J003
3.5	80	4200	10500	1.7	<20	93 × 142	2	1400	B25856K7355K003
4	80	4800	12000	1.5	<20	98 × 142	2	1500	B25856K7405K003
5	80	6000	15000	1.2	<20	108 × 142	2	1800	B25856K7505K003
$V_{RDC} = AC\ 3300\ V$ $\hat{v} = 4000\ V$ $V_{TT} = AC\ 3500\ V, 10\ s$ $V_R = AC\ 2800\ V$ $v_s = 5800\ V$									
0.1	20	350	900	8.0	<20	40 × 70	1	160	B25856K3104K003
0.5	70	1800	4500	1.7	<20	73 × 79	2	600	B25856K3504K003
2.5	80	3500	8800	2.0	<20	88 × 142	2	1300	B25856K3255K003
$V_{RDC} = AC\ 4000\ V$ $\hat{v} = 4800\ V$ $V_{TT} = AC\ 4300\ V, 10\ s$ $V_R = AC\ 3400\ V$ $v_s = 7000\ V$									
0.2	50	1200	3000	2.6	<20	53 × 70	1	250	B25856K2204K003
0.5	80	3000	7500	1.1	<20	83 × 79	2	700	B25856K2504K003
1	80	3500	8800	1.3	<20	88 × 105	2	1000	B25856K2105K003
2	80	5000	12500	1.3	<20	98 × 126	2	1350	B25856K2205K003
2.5	80	3800	9400	2.3	<20	88 × 168	2	1500	B25856K2255K003
3	80	4500	11000	2.0	<20	98 × 168	2	1700	B25856K2305K003
4	80	6000	15000	1.5	<20	108 × 168	2	2100	B25856K2405K003

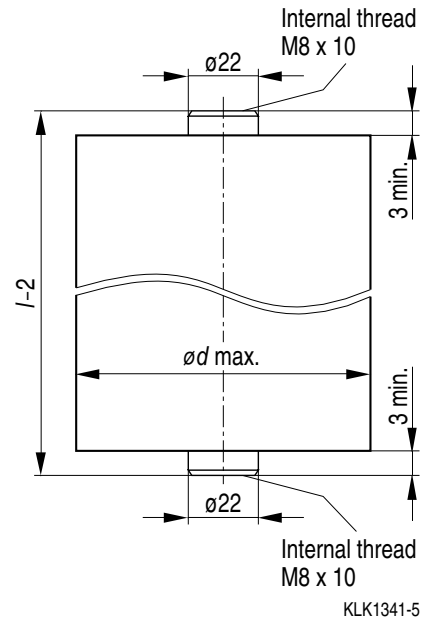
1) Other capacitance values upon request

Dimensional drawing 1



$\varnothing d_{\max} = 40 \dots 68 \text{ mm}$:
 Internal thread = M6 × 8
 Max. torque = 7 Nm

Dimensional drawing 2



$\varnothing d_{\max} = 68 \dots 108 \text{ mm}$:
 Internal thread = M8 × 10
 Max. torque = 7 Nm