



MKV AC, MKV DC capacitors

LSI Snubbing and Clamping

Ordering code: **B25856**
Date: September 2005

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	$(dv/dt)_{\max}$	$\frac{\hat{I}}{\bar{C}}$
Max. non-repetitive rate of voltage rise	$(dv/dt)_s$	$\frac{I_s}{\bar{C}}$
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	$\alpha_{\text{FQ}(\text{co})}$	300 failures per 10^9 component hours
Load duration	$t_{\text{LD}(\text{co})}$	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}	$C_R \leq 1\text{ }\mu\text{F: } \geq 10\,000\text{ M}\Omega$
Self-discharge time constant $\tau =$	$R_{\text{ins}} \times C$	$C_R > 1\text{ }\mu\text{F: } \geq 10\,000\text{ s}$
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}	$C_R \leq 1\text{ }\mu\text{F: } \geq 10\,000\text{ M}\Omega$
Self-discharge time constant	$\tau = R_{\text{ins}} \times C$	$C_R > 1\text{ }\mu\text{F: } \geq 10\,000\text{ s}$
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	
$V_{\text{RDC}} = \text{AC } 1700 \text{ V}$ $\hat{V} = 2000 \text{ V}$ $V_{\text{TT}} = \text{AC } 1800 \text{ V, } 10 \text{ s}$ $V_R = \text{AC } 1400 \text{ V}$ $v_s = 2900 \text{ V}$									
0.2	30	200	500	3.1	<20	40 × 49	1	130	B25856K0204K003
0.47	80	470	1200	1.0	<20	68 × 49	1	300	B25856J0474K003
1	60	1400	3500	1.6	<20	53 × 59	1	200	B25856K0105K003
1.5	80	1400	3500	1.1	<20	68 × 68	2	500	B25856K0155K003
2	70	2000	5000	1.5	<20	68 × 79	2	550	B25856K0205K003
4	70	2400	6000	1.8	<20	73 × 100	2	700	B25856K0405K003
7.5	80	3000	7500	1.0	<20	93 × 100	2	1000	B25856K0755K003
15	80	3000	7500	2.0	<20	93 × 168	2	1600	B25856K0156K003
$V_{\text{RDC}} = \text{AC } 2000 \text{ V}$ $\hat{V} = 2400 \text{ V}$ $V_{\text{TT}} = \text{AC } 2200 \text{ V, } 10 \text{ s}$ $V_R = \text{AC } 1700 \text{ V}$ $v_s = 3500 \text{ V}$									
0.2	30	350	900	6.0	<20	40 × 59	1	150	B25856K4204K003
0.5	50	600	1500	1.1	<20	68 × 49	1	300	B25856K4504K013
1	50	1200	3000	2.4	<20	53 × 70	1	250	B25856K4105K003
2.5	80	3000	7500	1.0	<20	83 × 79	2	700	B25856K4255K003
7.5	80	4200	10500	1.4	<20	93 × 126	2	1250	B25856K4755K003
$V_{\text{RDC}} = \text{AC } 2500 \text{ V}$ $\hat{V} = 3000 \text{ V}$ $V_{\text{TT}} = \text{AC } 2700 \text{ V, } 10 \text{ s}$ $V_R = \text{AC } 2100 \text{ V}$ $v_s = 4300 \text{ V}$									
0.2	30	500	1200	6.1	<20	40 × 70	1	160	B25856K1204K003
1.5	80	3600	9000	0.9	<20	83 × 79	2	700	B25856K1155K003
2.5	80	3500	8800	1.3	<20	83 × 100	2	850	B25856K1255K003
5	80	5000	12500	1.5	<20	93 × 142	2	1400	B25856K1505K003
7.5	80	5000	13000	1.8	<20	98 × 173	2	1800	B25856K1755K003
10	80	6800	17000	1.4	<20	108 × 173	2	2200	B25856K1106K003

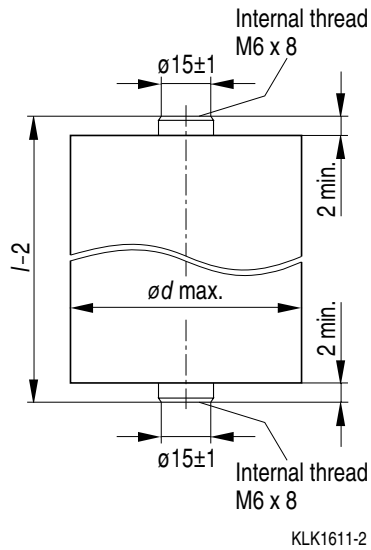
1) Other capacitance values upon request

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	
$V_{\text{RDC}} = \text{AC } 3000 \text{ V}$ $\hat{V} = 3600 \text{ V}$ $V_{\text{TT}} = \text{AC } 3200 \text{ V, } 10 \text{ s}$ $V_R = \text{AC } 2500 \text{ V}$ $v_s = 5200 \text{ V}$									
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
$V_{\text{RDC}} = \text{AC } 3300 \text{ V}$ $\hat{V} = 4000 \text{ V}$ $V_{\text{TT}} = \text{AC } 3500 \text{ V, } 10 \text{ s}$ $V_R = \text{AC } 2800 \text{ V}$ $v_s = 5800 \text{ V}$									
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
$V_{\text{RDC}} = \text{AC } 4000 \text{ V}$ $\hat{V} = 4800 \text{ V}$ $V_{\text{TT}} = \text{AC } 4300 \text{ V, } 10 \text{ s}$ $V_R = \text{AC } 3400 \text{ V}$ $v_s = 7000 \text{ V}$									
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

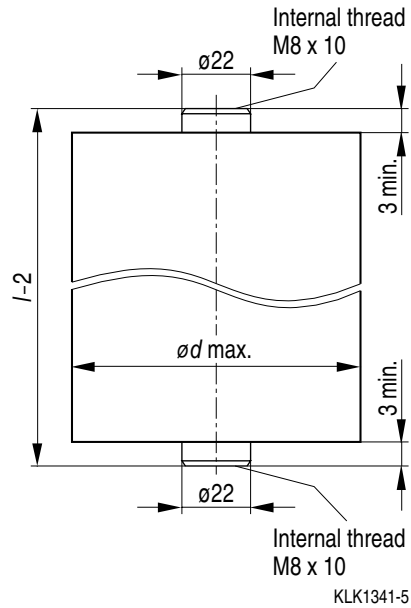
Dimensional drawing 1


 $\varnothing d_{\max} = 40 \dots 68 \text{ mm:}$

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