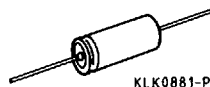


Surge-proof
High insulation resistance
High rate of voltage rise permitted
Low dissipation factor
Also suitable for general-purpose applications



Construction

- Self-healing
- Plastic dielectric
- Oil-impregnated tubular windings (no PCB)
- Metal-sprayed face ends ensure reliable contacting
- Cylindrical aluminum case with insulating sleeve

Terminations

- Central axial leads

Individual data sheets

Thermal details for individual capacitors of this series are additionally specified on pages 301 ... 306. Individual data sheets for each capacitor type are available upon request.

B 25 839

Coupling, Damping

Technical data

Dielectric dissipation factor	$\tan \delta_0$	$2 \cdot 10^{-4}$	
Peak value of rate of voltage rise	$\left(\frac{dv}{dt}\right)_s$	$2.5 \cdot \left(\frac{dv}{dt}\right)_{\max}$	
DIN climatic category (DIN 40 040)		H S C / K R H S F / M S	type B 25 839-J type B 25 839-B
Lower category temperature	$T_{\min}$	H	- 25 °C
Upper category temperature	$T_{\max}$	S	+ 70 °C
Humidity category		C	average relative humidity ≤ 95 %
		F	average relative humidity ≤ 75 %
Failure quota	α_{FQ}	K M	100 failures 1000 failures
			per 10 ⁹ component hours
Load duration	t_{LD}	R S	100 000 h 30 000 h
Storage temperature limits	T_{stg}		- 55/+ 85 °C (for humidity category C) - 55/+ 70 °C (for humidity category F)
IEC climatic category (IEC 68-1)			25/070/56
Test A, cold			- 25 °C
Test B, dry heat			+ 70 °C
Test Ca, damp heat, steady state			56 days/40 °C/93 % RH
Category values after test Ca:			
Capacitance change	$\Delta C/C$		≤ 1 %
		Humidity category	C
Insulation resistance	R_{is}		≥ 10 000 MΩ
Dissipation factor change	$\Delta \tan \delta$		≤ 1 · 10 ⁻⁴
			F
			≥ 3000 MΩ
			≤ 3 · 10 ⁻⁴

Test data

AC test voltage			
between terminals	V_{TT}	$2.15 \cdot V_R / \sqrt{2}, 2 \text{ s}$	
between terminals and case	V_{TC}	$2 \cdot V_{is} + 1000 \text{ V}, 60 \text{ s (min. 2500 V)}$ or $1.2 (2 \cdot V_{is} + 1000 \text{ V}), 2 \text{ s (min. 2500 V)}$	
		Humidity category	C
Insulation resistance	R_{is}		≥ 10 000 MΩ
Dissipation factor (50 Hz)	$\tan \delta$		≤ 3 · 10 ⁻⁴
			F
			≥ 3000 MΩ

Available ratings

V_R (V)	700	
V_{rms} (V)	500	
C_R (μF)		
0.10		
0.22		
0.33		
0.47		
0.68		
1		



Range contained in this data book

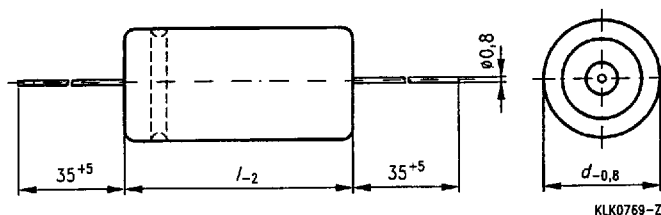
B 25 839

Coupling, Damping

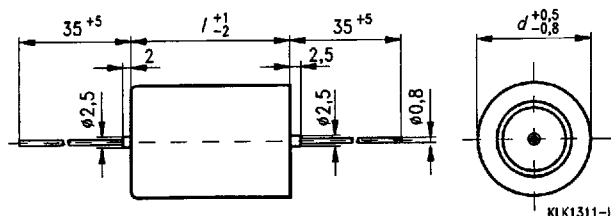
Selection chart

C_R 1)	I_R	i	i_s	$(dv/dt)_{\max}$	R_S 20 °C	L_{self}	Dimensions $d \times l$	Outline drawing	Approx. weight g	Ordering code	Page
μF	A	A	A	V/ μs	$\text{m}\Omega$	nH	mm				
$V_R = 700 \text{ V}$ $V_{\text{rms}} = 500 \text{ V}$ $\hat{v} = 880 \text{ V}$ $V_{\text{is}} = - \text{ V}$ $v_s = 1200 \text{ V}$											
0.10	6	55	140	550	30	30	16.8×32	1	10	B25839-	301
0.10	6	55	140	550	28	30	16.0×32	2	10	-B6104-M	302
0.22	6	65	170	300	38	40	16.8×44	1	20	-J6104-M	303
0.22	6	120	310	550	15	30	20.5×32	2	20	-B6224-M	
0.33	10	100	250	300	28	40	20.8×44	1	20	-J6224-M	
0.33	10	140	330	410	16	30	25.0×38	2	30	-B6334-M	
0.47	10	140	350	300	22	40	20.8×44	1	20	-J6334-M	304
0.47	10	190	470	410	13	40	25.0×38	2	30	-B6474-M	305
0.68	10	95	240	140	54	60	20.8×75	1	30	-J6474-M	
1.0	10	150	380	150	39	60	20.8×75	1	30	-B6684-M	306
										-B6105-K	

Outline drawing 1 (humidity category F)
B25839-B



Outline drawing 2 (humidity category C)
B25839-J



Dimensions in mm

1) Capacitance tolerances: For $C_R < 1.0 \mu\text{F}$ $\pm 20 \%$, for $C_R \geq 1.0 \mu\text{F}$ $\pm 10 \%$

0.1 μ F / 700 V

Ordering code: B25839-B6104-M

Characteristics

C_R , tol.	0.1 μ F $\pm$ 20 %
V_R	700 V
V_{rms}	500 V
V_{is}	—
I_R	6 A
L_{self}	30 nH
$\tan \delta_0$	$2 \cdot 10^{-4}$
R_S	30 m Ω

Maximum ratings

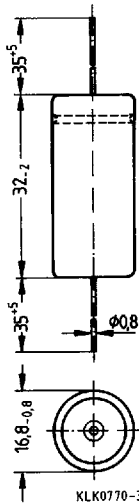
$\hat{v}$	880 V
v_s	1200 V
$\hat{i}$	55 A
i_s	140 A
$(dv/dt)_{max}$	550 V/ μ s
$(dv/dt)_s$	1400 V/ μ s

Test data

V_{TT}	AC 1400 V, 2 s
V_{TC}	—
R_{is}	≥ 3000 M Ω
$\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Climatic category (DIN 40 040)
 HSF/MS

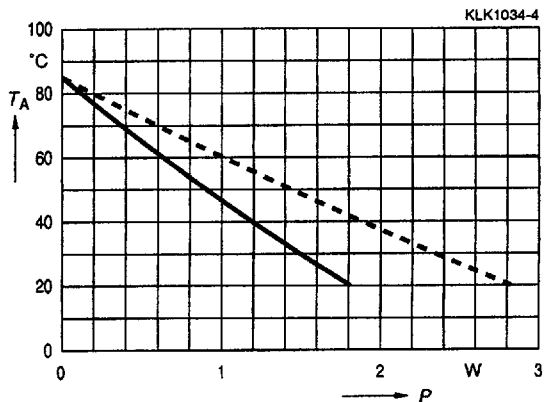
Climatic category (IEC 68-1)
 25/070/56



Dimensions in mm

Permissible ambient temperature T_A versus total power dissipation P
 (For calculation see 4.1 "General technical information")

Natural cooling —————
 Forced cooling 2 m/s - - - - -



B 25 839

Coupling, Damping

0.1 μF / 700 V

Ordering code: B25839-J6104-M

Characteristics

C_R , tol.	0.1 μF $\pm$ 20 %
V_R	700 V
V_{rms}	500 V
V_{is}	—
I_R	6 A
L_{self}	30 nH
$\tan \delta_0$	$2 \cdot 10^{-4}$
R_S	28 m Ω

Maximum ratings

$\hat{V}$	880 V
V_S	1200 V
$\hat{I}$	55 A
I_S	140 A
$(dv/df)_{max}$	550 V/ μs
$(dv/df)_s$	1400 V/ μs

Test data

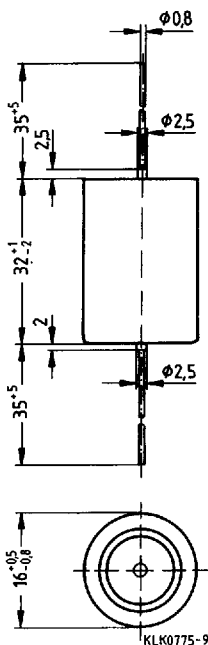
V_{TT}	AC 1400 V, 2 s
V_{TC}	—
R_{is}	$\geq 10\,000\text{ M}\Omega$
$\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Climatic category (DIN 40 040)

HSC/KR

Climatic category (IEC 68-1)

25/070/56

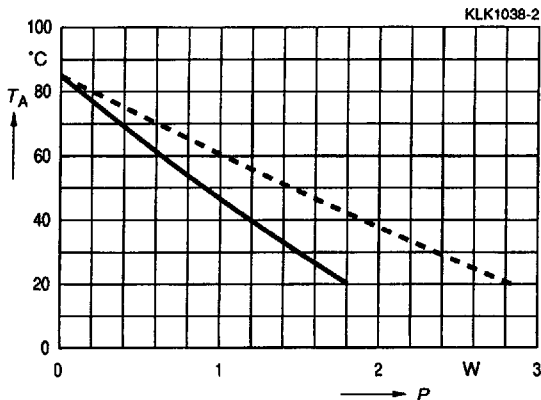


Dimensions in mm

Permissible ambient temperature T_A versus total power dissipation P

(For calculation see 4.1 "General technical information")

Natural cooling ———
Forced cooling 2 m/s - - - - -



0.22 μ F / 700 V

Ordering code: B25839-B6224-M

Characteristics

C_R , tol.	0.22 μ F $\pm$ 20 %
V_R	700 V
V_{rms}	500 V
V_{is}	—
I_R	6 A
L_{self}	40 nH
$\tan \delta_0$	$2 \cdot 10^{-4}$
R_S	38 m Ω

Maximum ratings

$\hat{V}$	880 V
V_s	1200 V
$\hat{i}$	65 A
i_s	170 A
$(dv/dt)_{max}$	300 V/ μ s
$(dv/dt)_s$	750 V/ μ s

Test data

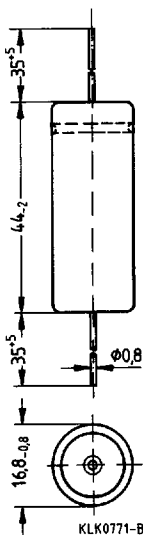
V_{TT}	AC 1400 V, 2 s
V_{TC}	—
R_{is}	≥ 3000 M Ω
$\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Climatic category (DIN 40 040)

HSF/MS

Climatic category (IEC 68-1)

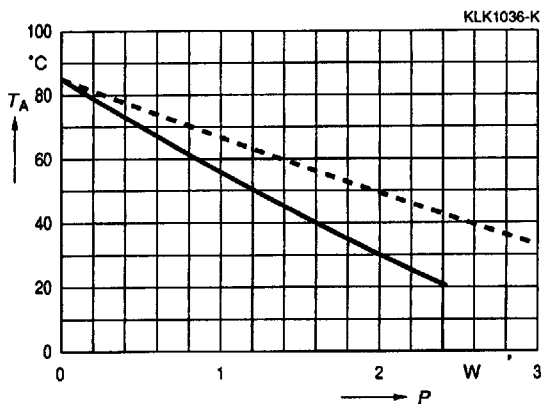
25/070/56



Dimensions in mm

Permissible ambient temperature T_A versus total power dissipation P
(For calculation see 4.1 "General technical information")

Natural cooling —————
Forced cooling 2 m/s - - - - -



B 25 839

Coupling, Damping

0.47 μF / 700 V

Ordering code: B25839-B6474-M

Characteristics

C_R , tol.	0.47 $\mu\text{F} \pm 20\%$
V_R	700 V
V_{rms}	500 V
V_{is}	—
I_R	10 A
L_{self}	40 nH
$\tan \delta_0$	$2 \cdot 10^{-4}$
R_S	22 m Ω

Maximum ratings

$\hat{V}$	880 V
V_S	1200 V
$\hat{i}$	140 A
i_S	350 A
$(dv/dt)_{max}$	300 V/ μs
$(dv/dt)_S$	750 V/ μs

Test data

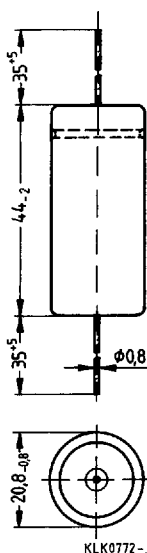
V_{TT}	AC 1400 V, 2 s
V_{TC}	—
R_{is}	$\geq 3000\text{ M}\Omega$
$\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Climatic category (DIN 40 040)

HSF/MS

Climatic category (IEC 68-1)

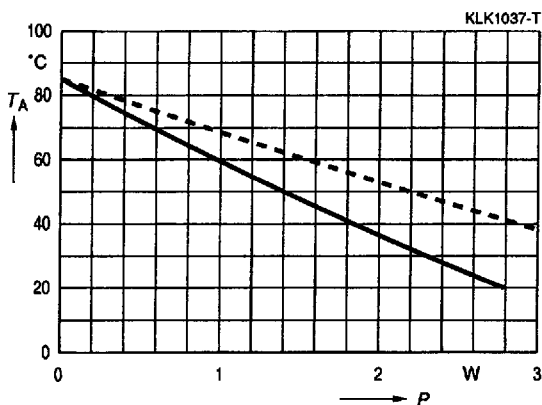
25/070/56



Dimensions in mm

Permissible ambient temperature T_A versus total power dissipation P
(For calculation see 4.1 "General technical information")

Natural cooling ———
Forced cooling 2 m/s - - - - -



0.47 μ F / 700 V

Ordering code: B25839-J6474-M

Characteristics

C_R , tol.	0.47 μ F $\pm$ 20 %
V_R	700 V
V_{rms}	500 V
V_{is}	—
I_R	10 A
L_{self}	40 nH
$\tan \delta_0$	$2 \cdot 10^{-4}$
R_S	13 m Ω

Maximum ratings

$\hat{V}$	880 V
v_s	1200 V
$\hat{i}$	190 A
i_s	470 A
$(dv/dt)_{max}$	410 V/ μ s
$(dv/dt)_s$	1000 V/ μ s

Test data

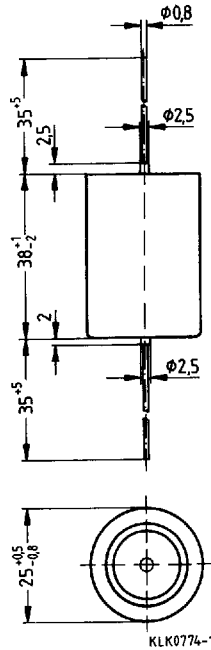
V_{TT}	AC 1400 V, 2 s
V_{TC}	—
R_{is}	$\geq 10\,000\,M\Omega$
$\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Climatic category (DIN 40 040)

HSC/KR

Climatic category (IEC 68-1)

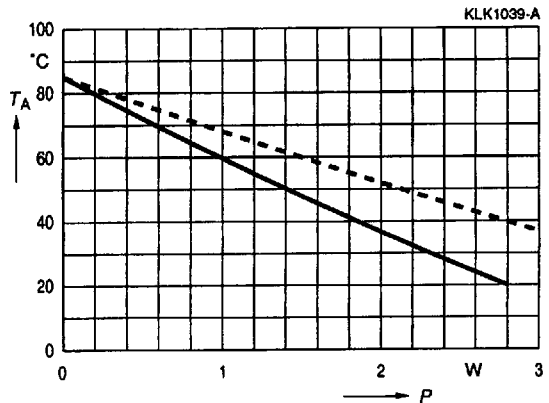
25/070/56



Dimensions in mm

Permissible ambient temperature T_A versus total power dissipation P
(For calculation see 4.1 "General technical information")

Natural cooling —————
Forced cooling 2 m/s - - - - -



B 25 839

Coupling, Damping

1 μF / 700 V

Ordering code: B25839-B6105-K

Characteristics

C_R , tol.	1 $\mu\text{F} \pm 10\%$
V_R	700 V
V_{rms}	500 V
V_{is}	—
I_R	10 A
L_{self}	60 nH
$\tan \delta_0$	$2 \cdot 10^{-4}$
R_S	39 m Ω

Maximum ratings

$\hat{V}$	880 V
V_S	1200 V
$\hat{I}$	150 A
i_S	380 A
$(dv/dt)_{\text{max}}$	150 V/ μs
$(dv/dt)_S$	380 V/ μs

Test data

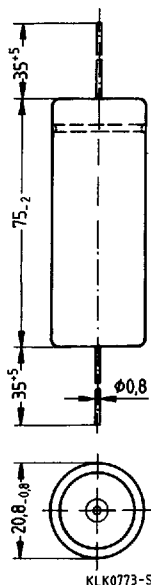
V_{TT}	AC 1400 V, 2 s
V_{TC}	—
$R_{\text{is}} \cdot C$	≥ 3000 s
$\tan \delta$ (50 Hz)	$\leq 3 \cdot 10^{-4}$

Climatic category (DIN 40 040)

HSF/MS

Climatic category (IEC 68-1)

25/070/56



Dimensions in mm

Permissible ambient temperature T_A versus total power dissipation P
(For calculation see 4.1 "General technical information")

Natural cooling —————
Forced cooling 2 m/s - - - - -

