

Parameters	U.M.	Symbol/Value	Notes
Expected lifetime	[hrs]	8.000	@rated voltage, temperature and ripple current
Climatic category		40/105/56	-40°C / +105°C / 85% Relative Humidity
Voltage	[V]	V_R	200 - 450V
Capacitance	[μ F]	C	C_{10} rated value at t=0hrs
Capacitance tolerance	%	M = 20 %	Other capacitance on request as indicated in the data book
Series resistance	[m Ω]	ESR	ESR ₁₀ rated value at t=0hrs
Leakage Current	[mA]	$I_f=0,004 \cdot C \cdot V$	I_{f10} rated value at t=0hrs
I Ripple	[A]	I_R	Ripple current @ rated parameters
		$I_t=K_f \cdot K_t \cdot I_R$	I_t ripple current at a given T
		K_f	Frequency Correlation Factor See table below
		K_t	Temperature Correlation Factor See table below
End of Life values		$\Delta C/C_{10} \leq 30\%$	
		$ESR \leq 3 \cdot ESR_{10}$	
		$I_f \leq I_{f10}$	
Surge Voltage	[V]	$V_{surge}=1,1 \cdot V_R$	$\leq 450V$
		$V_{surge}=1,05 \cdot V_R$	

Ripple Current Coefficient

	Hz	50	100	300	400	500	>1000
Kf	V>160	0.88	1.00	1.20	1.25	1.35	1.40

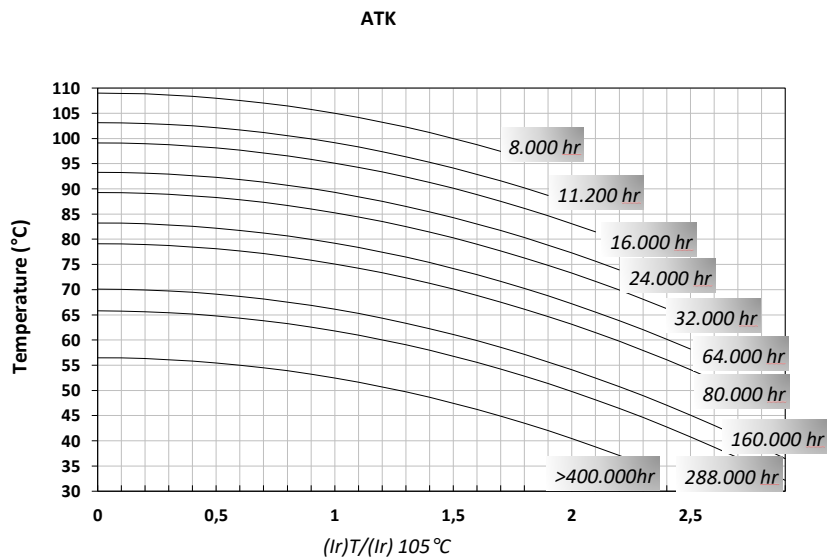
°C	50	65	75	85	95	105
Kt	2.40	2.20	2.10	1.80	1.30	1.00

Note: Superimposed alternating voltage summed to DC voltage must not exceed rated voltage, rated ripple current must not be exceeded and no reverse polarity is allowed

Ordering Code: Example – ATK681M450NB1

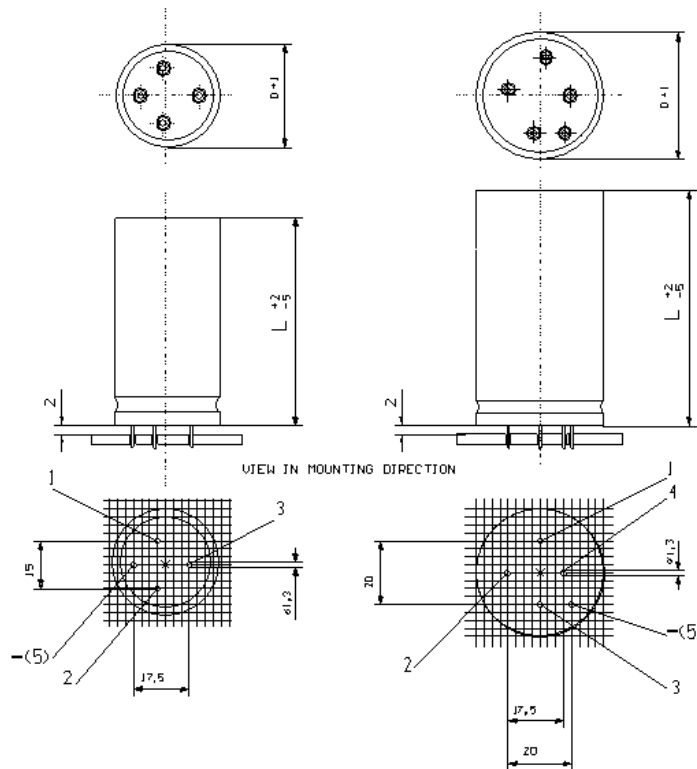
ATK	681	M	450	NB	1
Series	C with multiplying factor: 1=x10, 2=x100, 3=x1.000,	Tolerance	V_R	Size	1=sleeve 0=no sleeve

Expected Lifetime Vs Temperature and Ripple Current



	Capacitance	Case	Diam	Height	Tanδ	ESRmax typ		Zmax	Iripple @100Hz		Ordering Code
	[μF]@100Hz		[mm]	[mm]	[%]@100Hz	[mΩ]@100Hz	[mΩ]@10KHz	[A]@85°C	[A]@105°C	ATK	
200	220	NB	35	40	0,08	463	371	347	2,2	1,2	ATK221M200NB1
	330	NB	35	40	0,08	309	247	232	3,0	1,7	ATK331M200NB1
	470	NC	35	50	0,08	217	173	163	3,9	2,2	ATK471M200NC1
	680	PC	40	50	0,08	150	120	112	5,1	2,8	ATK681M200PC1
	1000	PE	40	75	0,08	102	82	76	7,3	4,1	ATK102M200PE1
	1500	PG	40	100	0,08	68	54	51	10,2	5,7	ATK152M200PG1
250	220	NB	30	40	0,08	463	371	347	2,2	1,2	ATK221M250NB1
	330	NC	35	50	0,08	309	247	232	3,3	1,8	ATK331M250NC1
	680	PC	40	50	0,08	150	120	112	5,1	2,8	ATK681M250PC1
	1800	PE	40	75	0,08	57	45	42	9,8	5,4	ATK182M250PE1
	2200	PG	40	100	0,08	46	37	35	12,3	6,9	ATK222M250PG1
400	100	NB	35	40	0,08	1019	815	764	1,5	0,8	ATK101M400NB1
	150	NB	35	40	0,08	679	544	510	2,0	1,1	ATK151M400NB1
	220	NC	35	50	0,08	463	371	347	2,7	1,5	ATK221M400NC1
	330	NC	35	50	0,08	309	247	232	3,3	1,8	ATK331M400NC1
		PC	40	50	0,08	309	247	232	3,5	2,0	ATK331M400PC1
	470	PC	40	50	0,08	217	173	163	4,2	2,3	ATK471M400PC1
	680	NN	35	60	0,08	150	120	112	5,1	2,8	ATK681M400NN1
		NE	35	75	0,08	150	120	112	5,6	3,1	ATK681M400NE1
		PN	40	60	0,08	150	120	112	5,5	3,0	ATK681M400PN1
		PE	40	75	0,08	150	120	112	6,0	3,3	ATK681M400PE1
	1000	NE	35	75	0,08	102	82	76	6,8	3,8	ATK102M400NE1
		PE	40	75	0,08	102	82	76	7,3	4,1	ATK102M400PE1
		PG	40	100	0,08	102	82	76	8,3	4,6	ATK102M400PG1
450	220	NB	35	40	0,09	521	417	391	2,1	1,2	ATK221M450NB1
	330	NC	35	50	0,09	347	278	261	2,8	1,6	ATK331M450NC1
		NB	35	40	0,09	347	278	261	2,8	1,6	ATK331M450NB1
	470	NC	35	50	0,09	244	195	183	3,7	2,0	ATK471M450NC1
		PB	40	40	0,09	244	195	183	3,6	2,0	ATK471M450PB1
	560	PC	40	50	0,09	205	164	154	4,3	2,4	ATK561M450PC1
	680	NE	35	75	0,09	169	135	126	5,3	2,9	ATK681M450NE1
		PE	40	75	0,09	169	135	126	5,7	3,2	ATK681M450PE1
	820	PE	40	75	0,09	140	112	105	6,2	3,5	ATK821M450PE1
	1000	PG	40	100	0,09	115	92	86	7,8	4,4	ATK102M450PG1
1200	PG	40	100	0,09	96	76	72	8,6	4,8	ATK122M450PG1	



Technical Drawing

Dimension, Quantity and Weight for Box

Case		Connections			Packaging	
Code	DxL (mm)	PINS		Code	DxL (mm)	
		ATK	Lenght			
NB	35x40	4	6.3	100	6-8	
NC	35x50	4	6.3	100	6-8	
NN	35x60	4	6.3	100	5-7	
NE	35x75	4	6.3	50	6-8	
PB	40x40	5	6.3	126	9-10	
PC	40x50	5	6.3	126	9-10	
PN	40x60	5	6.3	63	9-10	
PE	40x75	5	6.3	63	7-9	
PG	40x100	5	6.3	63	9-10	

All dimensions in mm, torque in Nm, weight in kg

