

Parameters	U.M.	Symbol/Value	Notes
Expected lifetime	[hrs]	5.000	@rated voltage, temperature and ripple current
Climatic category		40/105/56	-40°C / +105°C./ 85% Relative Humidity
Voltage	[V]	V <sub>R</sub>	200-450
Capacitance	[μF]	C	C <sub>10</sub> rated value at t=0hrs
Capacitance tolerance	%	M = 20 %	Other capacitance on request as indicated in the data book
Series resistance	[mΩ]	ESR	ESR <sub>10</sub> rated value at t=0hrs
Leakage Current	[mA]	I <sub>f</sub> =0,004*C*V	I <sub>f10</sub> rated value at t=0hrs
I Ripple	[A]	I <sub>R</sub>	Ripple current @ rated parameters
		I <sub>t</sub> =K <sub>f</sub> *K <sub>t</sub> *I <sub>R</sub>	I <sub>t</sub> ripple current at a given T
		K <sub>f</sub>	Frequency Correlation Factor See table below
		K <sub>t</sub>	Temperature Correlation Factor See table below
End of Life values		ΔC/C <sub>10</sub> ≤ 30%	
		ESR ≤ 3*ESR <sub>10</sub>	
		I <sub>f</sub> ≤ I <sub>f10</sub>	
Surge Voltage	[V]	V <sub>surge</sub> =1,1*V <sub>R</sub>	≤450V
		V <sub>surge</sub> =1,05*V <sub>R</sub>	

**Ripple Current Coefficient**

	Hz	50	100	300	400	500	>1000
K <sub>f</sub>	V>160	0.88	1.00	1.20	1.25	1.35	1.40

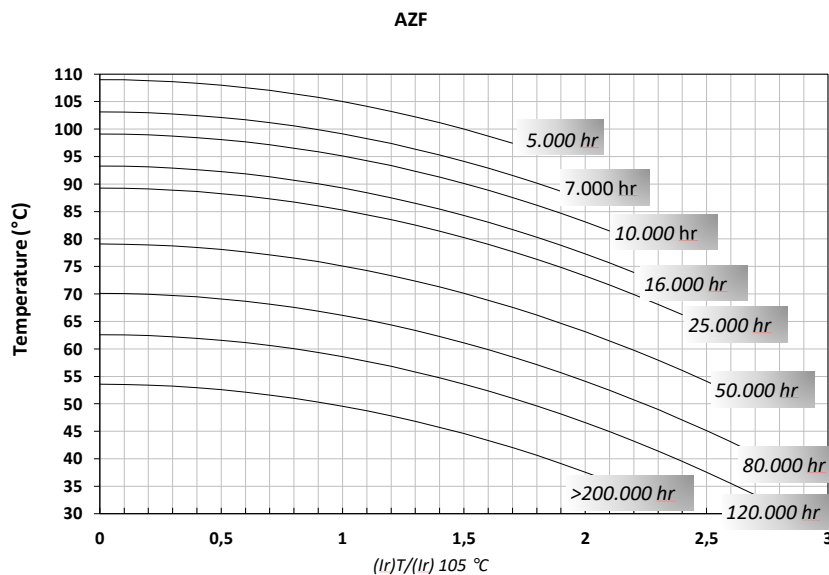
°C	50	65	75	85	95	105
K <sub>t</sub>	2.40	2.20	2.10	1.80	1.30	1.00

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 – AZF471M450NC1**

AZF	471	M	450	NC	1
Series	C with multiplying factor: 1=x10, 2=x100, 3=x1.000,	Tolerance	V <sub>R</sub>	Size	1=sleeve 0=no sleeve

**Expected Lifetime Vs Temperature and Ripple Current**

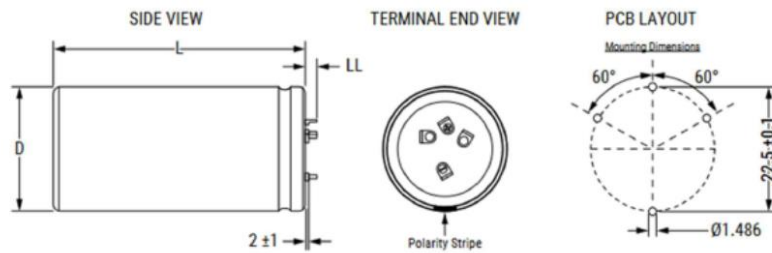


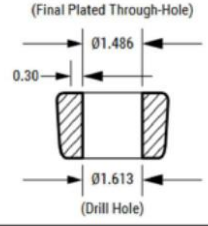
	Capacitance	Case	Diam	Height	Tanδ	ESRmax   typ		Zmax	Iripple @100Hz		Ordering Code
	[μF]@100Hz		[mm]	[mm]	[%]@100Hz	[mΩ]@100Hz	[mΩ]@10KHz	[A]@85°C	[A]@105°C	AZF	
<b>200</b>	1000	NB	35	40	0,10	127	102	96	6,2	2,6	AZF102M200NB1
	1500	NC	35	50	0,10	85	68	64	8,3	3,5	AZF152M200NC1
	2200	NE	35	75	0,10	58	46	43	12,0	5,0	AZF222M200NE1
		QC	45	50	0,10	58	46	43	11,6	4,8	AZF222M200QC1
	3300	PG	40	100	0,10	39	31	29	18,0	7,5	AZF332M200PG1
		QE	45	75	0,10	39	31	29	16,9	7,0	AZF332M200QE1
3900	QG	45	100	0,10	33	26	24	20,9	8,7	AZF392M200QG1	
<b>250</b>	680	NB	35	40	0,10	187	150	141	5,1	2,1	AZF681M250NB1
	1000	NB	35	40	0,10	127	102	96	6,2	2,6	AZF102M250NB1
		NC	35	50	0,10	127	102	96	6,8	2,8	AZF102M250NC1
	1500	NE	35	75	0,10	85	68	64	9,9	4,1	AZF152M250NE1
		PC	40	50	0,10	85	68	64	9,0	3,7	AZF152M250PC1
		PE	40	75	0,10	85	68	64	10,7	4,4	AZF152M250PE1
2200	PG	40	100	0,10	58	46	43	14,7	6,1	AZF222M250PG1	
<b>400</b>	220	MB	30	40	0,10	579	347	434	3,8	1,6	AZF221M400MB1
	330	MB	30	40	0,10	386	232	290	4,7	1,9	AZF331M400MB1
	470	MC	30	50	0,10	271	163	203	6,1	2,6	AZF471M400MC1
		NB	35	40	0,10	271	163	203	6,1	2,5	AZF471M400NB1
		NC	35	50	0,10	271	163	203	6,7	2,8	AZF471M400NC1
	560	NC	35	50	0,10	227	136	171	7,3	3,1	AZF561M400NC1
	680	NC	35	50	0,10	187	112	141	8,1	3,4	AZF681M400NC1
		NN	35	60	0,10	187	112	141	8,7	3,6	AZF681M400NN1
		NE	35	75	0,10	187	112	141	9,6	4,0	AZF681M400NE1
		PC	40	50	0,10	187	112	141	8,7	3,6	AZF681M400PC1
820	NN	35	60	0,10	155	93	117	9,6	4,0	AZF821M400NN1	
	PN	40	60	0,10	155	93	117	10,3	4,3	AZF821M400PN1	



	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	AZF	
<b>400</b>	1000	NN	35	60	0,10	127	76	96	10,6	4,4	AZF102M400NN1
		NE	35	75	0,10	127	76	96	11,7	4,9	AZF102M400NE1
		PN	40	60	0,10	127	76	96	11,4	4,8	AZF102M400PN1
		PE	40	75	0,10	127	76	96	12,6	5,2	AZF102M400PE1
		QC	45	50	0,10	127	76	96	11,3	4,7	AZF102M400QC1
		QN	45	60	0,10	127	76	96	12,2	5,1	AZF102M400QN1
	1200	PE	40	75	0,10	106	64	80	13,8	5,7	AZF122M400PE1
		PG	40	100	0,10	106	64	80	15,7	6,5	AZF122M400PG1
	1500	PG	40	100	0,10	85	51	64	17,5	7,3	AZF152M400PG1
		QN	45	60	0,10	85	51	64	15,0	6,2	AZF152M400QN1
	1500	QE	45	75	0,10	85	51	64	16,5	6,9	AZF152M400QE1
	1800	QG	45	100	0,10	71	42	53	20,5	8,5	AZF182M400QG1
	2200	QG	45	100	0,10	58	35	43	22,6	9,4	AZF222M400QG1
3300	RG	50	100	0,10	39	23	29	29,4	12,2	AZF332M400RG1	
<b>450</b>	330	NB	35	40	0,10	386	232	290	5,1	2,1	AZF331M450NB1
	470	NB	35	40	0,10	271	163	203	6,1	2,5	AZF471M450NB1
		NC	35	50	0,10	271	163	203	6,7	2,8	AZF471M450NC1
	560	NC	35	50	0,10	227	136	171	7,3	3,1	AZF561M450NC1
		NE	35	75	0,10	227	136	171	8,7	3,6	AZF561M450NE1
		PC	40	50	0,10	227	136	171	7,9	3,3	AZF561M450PC1
	680	NC	35	50	0,10	187	112	141	8,1	3,4	AZF681M450NC1
		NN	35	60	0,10	187	112	141	8,7	3,6	AZF681M450NN1
		NE	35	75	0,10	187	112	141	9,6	4,0	AZF681M450NE1
		PE	40	75	0,10	187	112	141	10,4	4,3	AZF681M450PE1
	820	QC	45	50	0,10	187	112	141	9,3	3,9	AZF681M450QC1
		NN	35	60	0,10	155	93	117	9,6	4,0	AZF821M450NN1
	1000	NE	35	75	0,10	155	93	117	10,6	4,4	AZF821M450NE1
		PN	40	60	0,10	127	76	96	11,4	4,8	AZF102M450PN1
		PE	40	75	0,10	127	76	96	12,6	5,2	AZF102M450PE1
		PG	40	100	0,10	127	76	96	14,3	6,0	AZF102M450PG1
	1200	QE	45	75	0,10	127	76	96	13,4	5,6	AZF102M450QE1
PG		40	100	0,10	106	64	80	15,7	6,5	AZF122M450PG1	
1500	QG	45	100	0,10	85	51	64	18,7	7,8	AZF152M450QG1	
2200	QG	45	100	0,10	58	35	43	22,6	9,4	AZF272M450RG1	
2700	RG	50	100	0,10	47	28	35	26,6	11,1	AZF272M450RG1	
4700	RH	50	105	0,10	27	16	20	35,1	14,6	AZF472M450RH1	



**Technical Drawing**


PCB Thickness: 1.57 mm Minimum		
DRILL	Ø1.613 ± 0.025	
COPPER THICKNESS	0.025 minimum	
FINAL PLATED THROUGH-HOLE DIAMETER	Ø1.486 ± 0.076	
Pin Insertion Force: 125 N (28 lbf) maximum Pin Retention Force: 62 N (14 lbf) minimum		

Vibrations Tests			Requirements
D ≤ 40 mm	0.75 mm displacement amplitude or 10 G maximum acceleration. Vibration applied for three directions 2-hour sessions at 10 – 500 Hz (Capacitor clamped by body)	D > 40 mm	No leakage of electrolyte or other visible damage. Deviations in capacitance from initial measurements must not exceed Δ C/C ± 5%
			0.35 mm displacement amplitude or 5 G maximum acceleration. Vibration applied for three directions 0.5-hour sessions at 10 – 55 Hz (Capacitor clamped by body)

**Dimension, Quantity and Weight for Box**

Case		Connections		Packaging	
Code	DxL (mm)	PINS		Code	DxL (mm)
		AZF	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	4	6.3	126	9-10
PC	40x50	4	6.3	126	9-10
PN	40x60	4	6.3	63	9-10
PE	40x75	4	6.3	63	7-9
PG	40x100	4	6.3	63	9-10
PH	40x105	4	6.3	63	9-10
QC	45x50	4	6.3	96	6-8
QN	45x60	4	6.3	48	6-8
QE	45x75	4	6.3	48	7-9
QG	45x100	4	6.3	48	8-10
QH	45x105	4	6.3	48	8-10
RE	50x75	4	6.3	48	8-10
RG	45x100	4	6.3	48	8-10
RH	45x105	4	6.3	48	8-10

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