High Performance 85°C - Extra Long Life – Low ESR **AF – 20.000 hrs – 85°**

Parameters	U.M.	Symbol/Value	Notes
Expected lifetime	[hrs]	20.000	@rated voltage, temperature and ripple current
Climatic category		40/85/56	-40°C / +85°C / 85% Relative Humidity
Voltage	[V]	V_R	160 - 450
Capacitance	[µF]	C	C_{t0} rated value at t=0hrs
Capacitance tolerance	%	M = 20 %	Other capacitance on request as indicated in the data book
Series resistance	[mΩ]	ESR	ESR_{t0} rated value at t=0hrs
Leakage Current	[mA]	I_f=0,004*C*V	I_{ft0} rated value at t=0hrs
I Ripple	[A]	I_R	Ripple current @ rated parameters
		$I_t=K_f*K_t*I_R$	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		$\Delta C/C_{t0} \leq 30\%$	
		$ESR \leq 3*ESR_{t0}$	
		$I_f \leq I_{ft0}$	
Surge Voltage	[V]	$V_{surge}=1,1*V_R$	≤450V
		$V_{surge}=1,05*V_R$	

Ripple Current Coefficient

Hz	50	100	120	200	300	400	500	1000
Kf	0.72	1.00	1.03	1.14	1.24	1.29	1.32	1.37

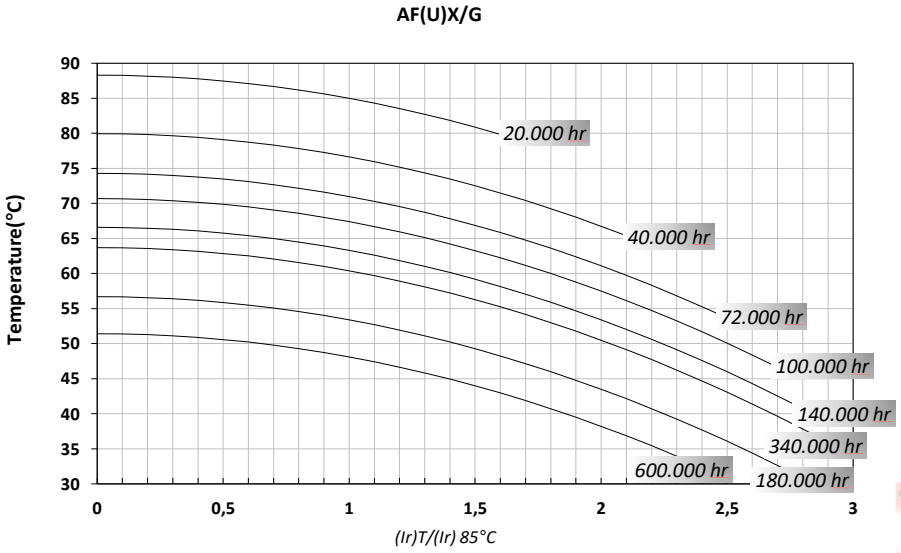
°C	40	55	65	75	85
Kt	1.65	1.50	1.40	1.20	1.00

***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 – AFUX472M450DF1

AF	(U)	X	472	M	450	DF	1
Series	U=mounting stud	Terminals	C with multiplying factor:	Tolerance	V_R	Size	1=sleeve 0=no sleeve
	Void=flat bottom		1=x10, 2=x100, 3=x1.000,				

Expected Lifetime Vs Temperature and Ripple Current



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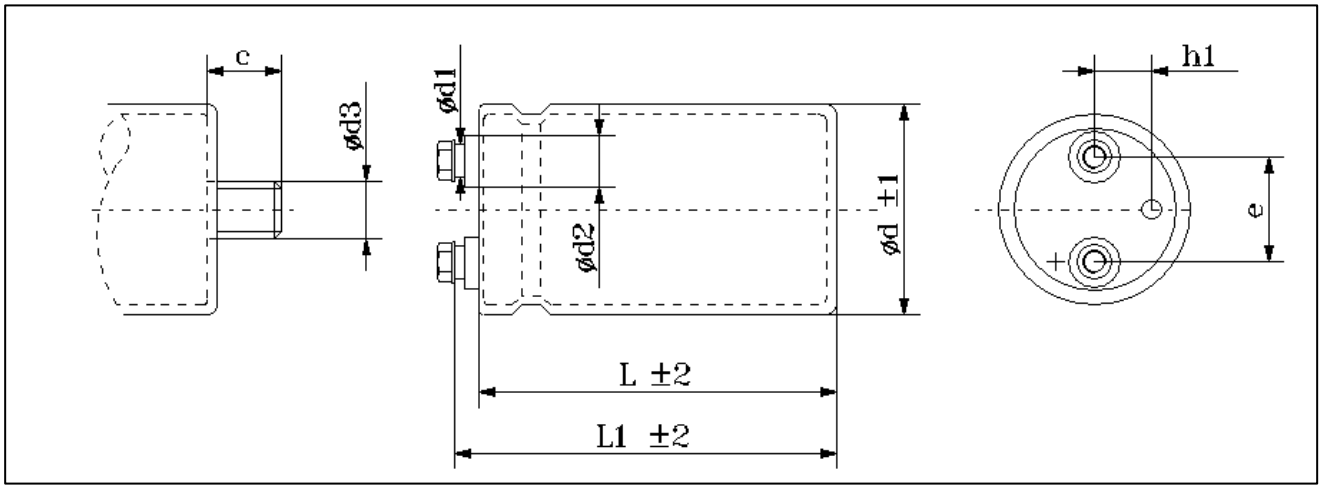
	Capacitance	Case	Diam	Height	Tanδ	ESRmax | typ		Zmax	Iripple @100Hz		Ordering Code
	[uF]@100Hz		[mm]	[mm]	[%]@100Hz	[mΩ]@100Hz		[mΩ]@10KHz	[A]@55°C	[A]@85°C	(U) for mounting stud
350	2200	CC	63	105	0,06	43	35	33	15,1	10,1	AF(U)X222M350CC1
	3300	DF	76	145	0,06	29	23	22	23,7	15,8	AF(U)X332M350DF1
	4700	DF	76	145	0,06	20	16	15	28,3	18,9	AF(U)X472M350DF1
	6800	DF	76	145	0,06	14	11	11	34,1	22,7	AF(U)X682M350DF1
		DJ	76	222	0,06	14	11	11	41,3	27,5	AF(U)X682M350DJ1
	10000	DJ	76	222	0,06	10	8	7	50,1	33,4	AF(U)X103M350DJ1
		EF	90	145	0,06	10	8	7	45,4	30,3	AF(U)G103M350EF1
	15000	EJ	90	222	0,06	6	5	5	67,2	44,8	AF(U)G153M350EJ1
400	1500	DC	76	105	0,06	64	51	48	14,0	9,4	AF(U)X152M400DC1
	2200	DC	76	105	0,06	43	35	33	17,0	11,3	AF(U)X222M400DC1
	3300	DC	76	105	0,06	29	23	22	20,8	13,9	AF(U)X332M400DC1
		DF	76	145	0,06	29	23	22	23,9	16,0	AF(U)X332M400DF1
	4700	DC	76	145	0,06	20	16	15	24,8	16,6	AF(U)X472M400DC1
		DF	76	145	0,06	20	16	15	28,6	19,0	AF(U)X472M400DF1
	6800	DF	76	145	0,06	14	11	11	34,4	22,9	AF(U)X682M400DF1
		DJ	76	222	0,06	14	11	11	41,7	27,8	AF(U)X682M400DJ1
	10000	DJ	76	222	0,06	10	8	7	50,5	33,7	AF(U)X103M400DJ1
		EF	90	145	0,06	10	8	7	45,8	30,5	AF(U)G103M400EF1
	15000	EJ	90	222	0,06	6	5	5	67,8	45,2	AF(U)G153M400EJ1
450	1500	CC	63	105	0,06	64	51	48	12,6	8,4	AF(U)X152M450CC1
	2200	CC	63	105	0,06	43	35	33	15,3	10,2	AF(U)X222M450CC1
	3300	DC	76	105	0,06	29	23	22	20,8	13,9	AF(U)X332M450DC1
		DF	76	145	0,06	29	23	22	23,9	16,0	AF(U)X332M450DF1
	3900	DF	76	145	0,06	24	20	18	26,0	17,3	AF(U)X392M450DF1
	4700	DF	76	145	0,06	20	16	15	28,6	19,0	AF(U)X472M450DF1
	5600	DF	76	145	0,06	17	14	13	31,2	20,8	AF(U)X562M450DF1
	6800	EF	90	145	0,06	14	11	11	37,8	25,2	AF(U)G682M450EF1
		DJ	76	222	0,06	14	11	11	41,7	27,8	AF(U)X682M450DJ1
	10000	DJ	76	222	0,06	10	8	7	50,5	33,7	AF(U)X103M450DJ1
		EJ	90	222	0,06	10	8	7	55,4	36,9	AF(U)G103M450EJ1

Technical Drawing



Dimension, Quantity and Weight for Box

Case				Connections							Mounting Stud			Packaging	
Code	DxL *(mm)*	L1	h1	d1	d2	e	Terminal	Screw			Screw			Pcs Box	Weight Box *(Kg).*
							Code	Thread	Torque *(Nm)*	Length	d3	c	Torque *(Nm)*		
BB	51x83	89	13	13	18	22.2	X	M5	2,0	10	M12	16	10	30	5-7
BC	51x105	111	13	13	18	22.2	X	M5	2,0	10	M12	16	10	30	6-9
CC	63x105	111	16	13	18	28.6	X	M5	2,0	10	M12	16	10	20	6-8
CF	63x145	151	19	13	18	28.6	X	M5	2,0	10	M12	16	10	20	9-10
DC	76x105	111	19	13	18	31.8	X	M5	2,0	10	M12	16	10	12	6-8
DF	76x145	151	19	13	18	31.8	X	M5	2,0	10	M12	16	10	12	8-14
				18	23		G	M6	2,5						
DK	76x165	173	19	13	18	31.8	X	M5	2,0	10	M12	16	10	12	9-14
				18	23		G	M6	2,5						
DG	76x200	207	19	13	18	31.8	X	M5	2,0	10	M12	16	10	12	9-13
				18	23		G	M6	2,5						
DJ	76x222	227	19	13	18	31.8	X	M5	2,0	10	M12	16	10	8	9-12
				18	23		G	M6	2,5						
DL	76x240	245	19	13	18	31.8	X	M5	2,0	10	M12	16	10	12	9-13
				18	23		G	M6	2,5						
EC	90x105	111	19	18	23	31,8	G	M6	2,5	10	M12	16	10	6	7-9
EF	90x145	151	19	18	23	31,8	G	M6	2,5	10	M12	16	10	6	9-11
EG	90x200	207	19	18	23	31,8	G	M6	2,5	10	M12	16	10	6	9-11
EJ	90x222	227	19	18	23	31,8	G	M6	2,5	10	M12	16	10	6	8-12
EL	90x240	245	19	18	23	31,8	G	M6	2,5	10	M12	16	10	6	9-13

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