

450MXK470MEFCSN35X30 Datasheet

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DiGi Electronics Part Number	450MXK470MEFCSN35X30-DG
Manufacturer	Rubycon
Manufacturer Product Number	450MXK470MEFCSN35X30
Description	CAP ALUM 470UF 20% 450V SNAP
Detailed Description	470 μ F 450 V Aluminum Electrolytic Capacitors Radial, Can - Snap-In 3000 Hrs @ 105°C

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Manufacturer Product Number:

450MXK470MEFCSN35X30

Series:

MXK

Capacitance:

470 μ F

Voltage - Rated:

450 V

Lifetime @ Temp.:

3000 Hrs @ 105°C

Polarization:

Polar

Applications:

General Purpose

Ripple Current @ High Frequency:

2.366 A @ 10 kHz

Size / Dimension:

1.378" Dia (35.00mm)

Surface Mount Land Size:

-

Package / Case:

Radial, Can - Snap-In

Manufacturer:

Rubycon

Product Status:

Active

Tolerance:

\pm 20%

ESR (Equivalent Series Resistance):

-

Operating Temperature:

-25°C ~ 105°C

Ratings:

-

Ripple Current @ Low Frequency:

1.69 A @ 120 Hz

Lead Spacing:

0.394" (10.00mm)

Height - Seated (Max):

1.260" (32.00mm)

Mounting Type:

Through Hole

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8532.22.0040

Moisture Sensitivity Level (MSL):

Not Applicable

ECCN:

EAR99

Rubycon

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SNAP-IN ALUMINUM ELECTROLYTIC CAPACITORS

MXK

MXK series

105°C 3000 時間 超小形品
 Load Life : 105°C 3000 hours, Ultra Miniaturized


◆規格表／SPECIFICATIONS

項目 Item	特性 Characteristics																					
カテゴリ温度範囲 Category Temperature Range	-40~+105°C	-25~+105°C																				
定格電圧範囲 Rated Voltage Range	16~250Vdc	400~500Vdc																				
静電容量許容差 Capacitance Tolerance	±20% (20°C, 120Hz)																					
漏れ電流 Leakage Current (MAX)	$I=3\sqrt{CV}$ 又は5mAいずれかの小なる値(定格電圧印加5分後) $I=3\sqrt{CV}$ or 5mA whichever is smaller(After 5 minutes application of rated voltage) I=漏れ電流(μA) C=静電容量(μF) V=定格電圧(Vdc) Leakage Current Capacitance Rated Voltage																					
損失角の正接(tan δ) Dissipation Factor (MAX)	<table border="1"> <thead> <tr> <th>定格電圧 (Vdc) Rated Voltage</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80~ 100</th> <th>160~ 450</th> <th>475, 500</th> <th>(20°C, 120Hz)</th> </tr> </thead> <tbody> <tr> <td>tan δ</td> <td>0.50</td> <td>0.45</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.25</td> <td></td> </tr> </tbody> </table>		定格電圧 (Vdc) Rated Voltage	16	25	35	50	63	80~ 100	160~ 450	475, 500	(20°C, 120Hz)	tan δ	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.25	
定格電圧 (Vdc) Rated Voltage	16	25	35	50	63	80~ 100	160~ 450	475, 500	(20°C, 120Hz)													
tan δ	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.25														
耐久性 Endurance	105°C中で3000時間定格電圧(リップル重畳)印加後、下記項目を満足すること。 After applying rated voltage with rated ripple current for 3000 hours at 105°C, the capacitors shall meet the following requirements. <table border="1"> <tbody> <tr> <td>静電容量変化率 Capacitance Change</td> <td>初期値の ±20% 以内 Within ±20% of the initial value.</td> </tr> <tr> <td>損失角の正接 Dissipation Factor</td> <td>規格値の 200% 以下 Not more than 200% of the specified value.</td> </tr> <tr> <td>漏れ電流 Leakage Current</td> <td>規格値以下 Not more than the specified value.</td> </tr> </tbody> </table>		静電容量変化率 Capacitance Change	初期値の ±20% 以内 Within ±20% of the initial value.	損失角の正接 Dissipation Factor	規格値の 200% 以下 Not more than 200% of the specified value.	漏れ電流 Leakage Current	規格値以下 Not more than the specified value.														
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低温特性 Low Temperature Stability (インピーダンス比) Impedance Ratio (MAX)	<table border="1"> <thead> <tr> <th>定格電圧 (Vdc) Rated Voltage</th> <th>16~ 100</th> <th>160~ 250</th> <th>400~ 450</th> <th>475, 500</th> <th>(120Hz)</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>3</td> <td>4</td> <td>8</td> <td>10</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>12</td> <td>15</td> <td>—</td> <td>—</td> <td></td> </tr> </tbody> </table>		定格電圧 (Vdc) Rated Voltage	16~ 100	160~ 250	400~ 450	475, 500	(120Hz)	Z(-25°C)/Z(+20°C)	3	4	8	10		Z(-40°C)/Z(+20°C)	12	15	—	—			
定格電圧 (Vdc) Rated Voltage	16~ 100	160~ 250	400~ 450	475, 500	(120Hz)																	
Z(-25°C)/Z(+20°C)	3	4	8	10																		
Z(-40°C)/Z(+20°C)	12	15	—	—																		

◆呼称方法／PART NUMBER

MXK M D x L
 定格電圧 シリーズ名 静電容量 静電容量許容差 副記号 端子記号 ケースサイズ
 Rated Voltage Series Capacitance Capacitance Tolerance Option Terminal Code Case Size

◆リップル電流補正係数／
MULTIPLIER FOR RIPPLE CURRENT

周波数 (Hz) Frequency	60 (50)	120 (100)	300	500	1k	10k≤	
係数 Coefficient	16~ 100Vdc	0.90	1.00	1.03	1.05	1.10	1.15
	160~ 250Vdc	0.80	1.00	1.15	1.20	1.30	1.50
	400~ 500Vdc	0.80	1.00	1.15	1.20	1.25	1.40

◆副記号／OPTION

EFC : PET スリーブ、底板なし
 PET Sleeve without plate

◆端子記号／Terminal Code

SN : 標準端子 Standard Terminal
 その他の形状は端子形状一覧をご確認ください。
 For other type, please refer to the list of terminal type.

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SNAP-IN ALUMINUM ELECTROLYTIC CAPACITORS

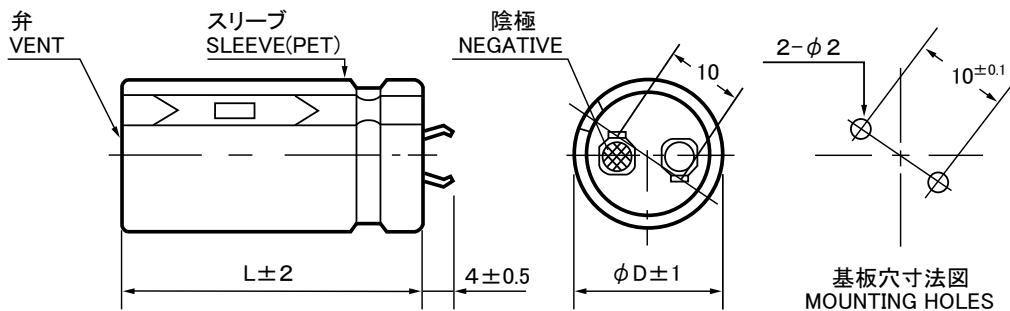
MXK

◆寸法図／DIMENSIONS

- SN[4mm]端子タイプ
SN[4mm]terminal type

端子記号 : SN(錫メッキ)
Terminal code : SN(Tin plating)

(mm)



◆標準品一覧表／STANDARD SIZE

Cap. (μ F)	16Vdc				25Vdc			
	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 22	ϕ 25	ϕ 30	ϕ 35
8200					22x25	2.91		
10000					22x30	3.41		
12000					22x30	3.34	25x25	2.82
15000	22x25	2.90			22x35	3.75	25x30	3.33
18000	22x30	3.43	25x25	2.91	22x40	4.14	25x35	3.78
22000	22x35	3.87	25x30	3.44	22x50	4.88	25x40	4.14
27000	22x40	4.25	25x30	3.27	22x55	5.12	25x45	4.44
33000	22x45	4.57	25x35	3.69			30x30	5.13
39000	22x50	4.88	25x40	4.08			30x35	5.76
47000	22x60	5.50	25x50	4.87			30x40	6.30
56000			30x30	5.27			35x35	5.76
68000			30x30	5.14			25x50	4.72
82000			30x35	5.78			25x60	5.34
			35x30	5.07			30x45	6.79
			35x30	5.14			30x50	7.20
			35x35	5.76			35x40	6.09
			30x40	6.34			30x60	8.07
			35x40	6.30			35x45	6.57
			30x50	7.40			35x55	7.52
			30x55	7.76				
			35x45	6.76				
Cap. (μ F)	35Vdc				50Vdc			
	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 22	ϕ 25	ϕ 30	ϕ 35
3300					22x25	2.47		
3900					22x30	2.90		
4700					22x30	2.89	25x25	2.48
5600	22x25	2.80			22x35	3.27	25x30	2.94
6800	22x30	3.29			22x40	3.63	25x35	3.34
8200	22x35	3.72	25x25	2.73	22x50	4.28	25x40	3.69
10000	22x40	4.10	25x30	3.22	22x55	4.55	25x45	3.99
12000	22x45	4.44	25x35	3.66			30x25	3.79
15000	22x50	4.72	25x40	3.99			30x30	4.43
18000	22x60	5.33	25x45	4.33			30x35	5.00
22000			30x30	5.04			35x25	3.82
27000			30x30	4.94			35x30	4.52
33000			30x35	5.57			35x30	4.41
39000			35x30	4.95			35x35	5.58
47000			35x30	4.95			35x40	6.07
			30x40	6.10			35x45	6.07
			35x35	5.58			35x50	6.45
			30x50	7.12			35x60	7.26
			35x40	6.10				
			35x45	6.55				
			35x50	6.95				
			35x60	7.82				
Cap. (μ F)	63Vdc				80Vdc			
	ϕ 22	ϕ 25	ϕ 30	ϕ 35	ϕ 22	ϕ 25	ϕ 30	ϕ 35
1800					22x25	2.21		
2200	22x25	2.28			22x30	2.59	25x25	2.32
2700	22x30	2.67			22x35	2.94	25x30	2.72
3300	22x30	2.70	25x25	2.38	22x40	3.27	25x30	2.70
3900	22x35	3.06	25x30	2.80	22x45	3.58	25x35	3.07
4700	22x40	3.40	25x35	3.18	22x50	3.89	25x40	3.41
5600	22x45	3.72	25x40	3.48	22x60	4.41	25x45	3.71
6800	22x55	4.29	25x50	4.12			30x25	3.39
8200	22x60	4.55	30x25	3.53			30x30	3.99
10000			30x30	4.11			35x25	3.52
12000			30x30	4.11			30x35	4.50
15000			35x25	3.65			35x30	4.15
18000			35x30	4.29			30x40	4.99
22000			35x30	4.29			35x35	4.69
			35x30	4.24			35x40	5.19
			35x35	4.80			35x45	5.63
			30x45	5.60			35x50	6.04
			35x40	5.30			35x60	6.80
			35x45	5.72				
			35x55	6.59				
			35x60	6.92				

ケースサイズ Case Size $\phi D \times L$ (mm) \rightarrow
リップル電流 Ripple Current (A.r.m.s./120Hz,105°C) \rightarrow

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SNAP-IN ALUMINUM ELECTROLYTIC CAPACITORS

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◆標準品一覧表／STANDARD SIZE

Cap. (μ F)	100Vdc								160Vdc							
	ϕ 22		ϕ 25		ϕ 30		ϕ 35		ϕ 22		ϕ 25		ϕ 30		ϕ 35	
560									22x25	1.60						
680									22x30	1.87	25x25	1.72				
820									22x35	2.14	25x30	1.92				
1000	22x25	2.01							22x40	2.42	25x30	2.07	30x25	1.84		
1200	22x30	2.33							22x45	2.69	25x35	2.36	30x30	2.00		
1500	22x30	2.41	25x25	2.17					22x55	3.17	25x40	2.67	30x30	2.16	35x25	1.77
1800	22x35	2.74	25x30	2.54					22x60	3.46	25x50	3.18	30x35	2.46	35x30	2.13
2200	22x40	3.05	25x35	2.89	30x25	3.15					25x55	3.48	30x40	2.77	35x35	2.45
2700	22x50	3.59	25x40	3.21	30x30	3.67	35x25	3.31					30x50	3.32	35x40	2.73
3300	22x55	3.89	25x45	3.51	30x35	4.15	35x30	3.88					30x55	3.59	35x45	2.96
3900			25x50	3.79	30x40	4.60	35x30	3.89							35x50	3.23
4700			25x60	4.31	30x45	5.04	35x35	4.40							35x60	3.72
5600					30x50	5.46	35x40	4.87								
6800					30x60	6.16	35x45	5.32								
8200							35x55	6.10								

Cap. (μ F)	180Vdc								200Vdc							
	ϕ 22		ϕ 25		ϕ 30		ϕ 35		ϕ 22		ϕ 25		ϕ 30		ϕ 35	
470	22x25	1.53							22x25	1.53						
560	22x30	1.75							22x30	1.78	25x25	1.65				
680	22x30	1.87	25x25	1.70					22x35	2.04	25x30	1.85				
820	22x35	2.13	25x30	2.00					22x40	2.30	25x30	1.99	30x25	1.79		
1000	22x40	2.41	25x35	2.29	30x25	1.79			22x45	2.58	25x35	2.28	30x30	1.94		
1200	22x50	2.85	25x40	2.58	30x30	2.13	35x25	1.79	22x50	2.85	25x40	2.56	30x30	2.10	35x25	1.75
1500	22x60	3.32	25x45	2.87	30x35	2.44	35x30	1.91			25x50	3.06	30x35	2.41	35x30	2.09
1800			25x55	3.36	30x40	2.73	35x30	2.09			25x60	3.52	30x45	2.99	35x35	2.41
2200					30x45	3.00	35x35	2.38					30x50	3.22	35x40	2.66
2700						30x55	3.53	35x45	2.99				30x60	3.72	35x45	2.91
3300								35x50	3.21						35x55	3.43
3900								35x55	3.45						35x60	3.66

Cap. (μ F)	220Vdc								250Vdc							
	ϕ 22		ϕ 25		ϕ 30		ϕ 35		ϕ 22		ϕ 25		ϕ 30		ϕ 35	
330									22x25	1.38						
390	22x25	1.46							22x30	1.58						
470	22x30	1.70							22x30	1.68	25x25	1.55				
560	22x35	1.93	25x25	1.64					22x35	1.91	25x30	1.81				
680	22x40	2.19	25x30	1.91					22x40	2.16	25x35	2.07	30x25	1.66		
820	22x45	2.44	25x35	2.19	30x25	1.74			22x50	2.55	25x40	2.33	30x30	1.97	35x25	1.68
1000	22x50	2.72	25x40	2.47	30x30	2.06	35x25	1.74	22x55	2.82	25x45	2.59	30x35	2.26	35x30	1.89
1200	22x60	3.13	25x45	2.74	30x35	2.36	35x30	2.09			25x50	2.86	30x40	2.51	35x30	1.94
1500			25x55	3.22	30x40	2.64	35x35	2.22					30x45	2.76	35x35	2.22
1800					30x45	2.91	35x35	2.34					30x50	3.03	35x40	2.49
2200						30x55	3.42	35x45	2.92				30x60	3.49	35x50	3.00
2700								35x50	3.13						35x55	3.23
3300								35x60	3.62							

Cap. (μ F)	400Vdc								420Vdc							
	ϕ 22		ϕ 25		ϕ 30		ϕ 35		ϕ 22		ϕ 25		ϕ 30		ϕ 35	
120									22x25	0.95						
150	22x25	1.03							22x25	1.02						
180	22x30	1.19	25x25	1.15					22x30	1.20	25x25	1.16				
220	22x30	1.26	25x25	1.20					22x35	1.38	25x30	1.35				
270	22x35	1.37	25x30	1.32					22x40	1.57	25x35	1.55	30x25	1.36		
330	22x45	1.77	25x35	1.65	30x25	1.39			22x45	1.72	25x35	1.61	30x30	1.59	35x25	1.45
390	22x50	1.97	25x40	1.85	30x30	1.65	35x25	1.48	22x50	1.85	25x40	1.76	30x30	1.61	35x25	1.45
470	22x55	2.11	25x45	2.07	30x35	1.89	35x30	1.69	22x60	2.19	25x50	2.18	30x35	1.82	35x30	1.66
560	22x60	2.20	25x55	2.32	30x40	2.12	35x30	1.75			25x45	1.96	30x35	1.82	35x30	1.66
680			25x60	2.56	30x45	2.35	35x35	2.00			25x55	2.32	30x40	2.07	35x35	1.97
820					30x50	2.53	35x40	2.21			25x60	2.43	30x45	2.27	35x35	1.97
1000					30x55	2.66	35x45	2.48					30x45	2.29	35x40	2.22
1200					30x60	2.91	35x50	2.70					30x50	2.50	35x40	2.22
							35x55	2.85					30x55	2.68	35x45	2.45
							35x60	2.99					30x60	2.79	35x45	2.45
														35x50	2.64	
														35x55	2.76	
														35x60	3.03	

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SNAP-IN ALUMINUM ELECTROLYTIC CAPACITORS

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◆標準品一覧表／STANDARD SIZE

Cap. (μ F)	450Vdc								475Vdc							
	ϕ 22		ϕ 25		ϕ 30		ϕ 35		ϕ 22		ϕ 25		ϕ 30		ϕ 35	
82									22x25	0.79						
100									22x30	0.90	25x25	0.90				
120	22x25	0.95							22x25	0.84	25x30	1.02				
									22x30	0.97						
150	22x30	1.12	25x25	1.08					22x30	1.00	25x25	0.98	30x25	1.11		
											22x35	1.13			25x30	1.12
180	22x30	1.17	25x25	1.14					22x35	1.14	25x30	1.13	30x30	1.27		
	22x35	1.27	25x30	1.24					22x40	1.27	25x35	1.27				
220	22x35	1.34	25x30	1.34	30x25	1.29			22x40	1.30	25x35	1.29	30x25	1.18	35x25	1.27
	22x40	1.45									22x45	1.44	25x40	1.44		
270	22x40	1.53	25x35	1.54	30x25	1.34			22x45	1.45	25x40	1.47	30x30	1.38	35x25	1.30
	22x45	1.65			30x30	1.49			22x55	1.68	25x45	1.63	30x35	1.56	35x30	1.51
330	22x50	1.81	25x40	1.72	30x30	1.58	35x25	1.42	22x55	1.72	25x45	1.67	30x35	1.59	35x30	1.57
	22x55	1.88	25x45	1.85							25x50	1.83	30x40	1.77		
390	22x55	1.98	25x45	1.91	30x35	1.80	35x30	1.68			25x50	1.84	30x40	1.85	35x30	1.57
	22x60	2.07	25x50	2.04							25x60	2.08			35x35	1.79
470			25x55	2.21	30x40	2.02	35x30	1.69			25x60	2.13	30x45	1.99	35x35	1.79
							35x35	1.92					30x50	2.17	35x40	2.00
560			25x60	2.41	30x45	2.24	35x35	1.92					30x50	2.18	35x40	2.00
							35x40	2.15			30x55	2.38	35x45	2.22		
680					30x50	2.41	35x40	2.16					30x60	2.52	35x45	2.20
					30x55	2.54	35x45	2.38							35x50	2.45
820					30x60	2.77	35x45	2.36							35x55	2.59
							35x50	2.59							35x60	2.80
1000							35x55	2.78								
							35x60	2.90								

Cap. (μ F)	500Vdc							
	ϕ 22		ϕ 25		ϕ 30		ϕ 35	
68	22x25	0.73						
82	22x30	0.83						
100	22x25	0.80						
	22x30	0.91						
120	22x30	0.92	25x30	1.03				
	22x35	1.03						
150	22x40	1.18	25x25	0.96				
			25x30	1.12				
180	22x35	1.13	25x30	1.13	30x30	1.28	35x25	1.20
	22x45	1.33	25x35	1.28				
220	22x45	1.37	25x35	1.30	30x25	1.18	35x30	1.42
	22x50	1.50	25x40	1.45	30x30	1.36		
270	22x50	1.55	25x40	1.49	30x30	1.38	35x25	1.29
	22x60	1.73	25x50	1.70	30x35	1.56	35x30	1.50
330	22x60	1.78	25x50	1.76	30x35	1.57	35x30	1.51
			25x55	1.90	30x40	1.76	35x35	1.71
390			25x55	1.91	30x45	1.95	35x35	1.72
							35x40	1.91
470					30x50	2.09	35x40	1.93
					30x55	2.26	35x45	2.13
560					30x55	2.28	35x45	2.13
					30x60	2.47	35x50	2.33
680							35x50	2.34
							35x55	2.56
820							35x60	2.68

ケースサイズ Case Size ϕ D×L(mm)

リップル電流 Ripple Current (A.r.m.s./120Hz,105°C)

OUR CERTIFICATE

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