

**MXC SERIES**

**105°C Standard**

\*Load Life : 105°C 3000 hours.



**◆SPECIFICATIONS**

Items	Characteristics																									
Category Temperature Range	-40~+105°C	-25~+105°C																								
Rated Voltage Range	10~250Vdc	315~450Vdc																								
Capacitance Tolerance	±20% (20°C, 120Hz)																									
Leakage Current(MAX)	I=3 √CV (After 5 minutes application of rated voltage) I=Leakage Current(µA)      C=Capacitance(µF)      V=Rated Voltage(Vdc)																									
Dissipation Factor(MAX) (tanδ)	<table border="1"> <thead> <tr> <th>Rated Voltage (Vdc)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160~400</th> <th>420~450</th> <th>(20°C, 120Hz)</th> </tr> </thead> <tbody> <tr> <td>tanδ</td> <td>0.55</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>0.15</td> <td>0.20</td> <td></td> </tr> </tbody> </table>		Rated Voltage (Vdc)	10	16	25	35	50	63	80	100	160~400	420~450	(20°C, 120Hz)	tanδ	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.20	
Rated Voltage (Vdc)	10	16	25	35	50	63	80	100	160~400	420~450	(20°C, 120Hz)															
tanδ	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.20																
Endurance	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>Capacitance Change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> </tr> </tbody> </table>		Capacitance Change	Within ±20% of the initial value.	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.																		
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Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <thead> <tr> <th>Rated Voltage (Vdc)</th> <th>10~250</th> <th>315~450</th> <th>(120Hz)</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>3</td> <td>8</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>12</td> <td>-</td> <td></td> </tr> </tbody> </table>		Rated Voltage (Vdc)	10~250	315~450	(120Hz)	Z(-25°C)/Z(20°C)	3	8		Z(-40°C)/Z(20°C)	12	-													
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Z(-25°C)/Z(20°C)	3	8																								
Z(-40°C)/Z(20°C)	12	-																								

**◆MULTIPLIER FOR RIPPLE CURRENT**

Frequency (Hz)		60(50)	120(100)	300	500	1k	10k≤
Coefficient	10~100Vdc	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
	315~450Vdc	0.80	1.00	1.15	1.20	1.25	1.40

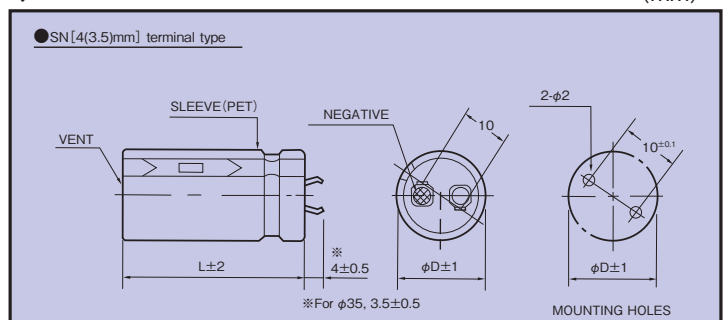
**◆PART NUMBER**

   **MXC**           **M**          **SN**    **DXL**  
 Rated Voltage    Series    Capacitance    Capacitance Tolerance    Option    Terminal Code    Case Size

**◆OPTION**

	Code
PET Sleeve without plate	EFC

**◆DIMENSIONS**



**◆ STANDARD SIZE**

Cap ( $\mu$ F)	Vdc $\phi$ D	10					16					
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	
6800		20x25:1.31					20x25:1.80					
8200		20x30:1.59					20x30:2.08	22x25:2.08				
10000		20x30:1.88	22x25:1.77				20x35:2.15	22x30:2.15				
12000		20x35:2.18	22x30:2.10	25x25:1.94			20x40:2.31	22x30:2.31	25x25:2.31			
15000		20x40:2.27	22x35:2.23	25x30:2.10				22x35:2.68	25x30:2.68			
18000			22x40:2.41	25x30:2.34	30x25:2.25			22x40:3.20	25x30:3.20	30x25:3.20		
22000			22x45:2.58	25x35:2.54	30x30:2.50			22x45:3.36	25x35:3.36	30x30:3.36		
27000			22x50:3.17	25x40:3.07	30x30:2.95			22x50:3.85	25x40:3.85	30x30:3.85		
33000				25x45:3.39	30x35:3.33	35x30:3.21			25x45:4.30	30x35:4.30	35x30:4.30	
39000					30x40:3.70	35x35:3.68			25x50:4.81	30x40:4.81	35x35:4.81	
47000					30x45:4.22	35x40:4.16				30x45:5.53	35x40:5.53	
56000						35x45:5.00				30x50:6.00	35x45:6.00	
68000											35x50:6.40	

Cap ( $\mu$ F)	Vdc $\phi$ D	25					35					
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	
2700							20x25:1.29					
3300							20x30:1.57					
3900							20x30:1.78	22x25:1.78				
4700		20x25:1.65					20x35:2.02	22x30:2.02				
5600		20x30:1.85	22x25:1.85				20x40:2.13	22x35:2.13	25x25:2.13			
6800		20x35:2.11	22x30:2.11					22x40:2.41	25x30:2.41			
8200		20x40:2.34	22x30:2.34	25x25:2.34				22x45:2.85	25x35:2.85	30x25:2.85		
10000			22x35:2.65	25x30:2.65				22x50:3.05	25x40:3.05	30x30:3.05		
12000			22x40:2.81	25x30:2.81	30x25:2.81				25x45:3.37	30x35:3.37	35x30:3.37	
15000			22x45:3.13	25x35:3.13	30x30:3.13				25x50:3.72	30x40:3.72	35x35:3.72	
18000				25x40:3.56	30x30:3.56					30x45:4.37	35x35:4.37	
22000				25x50:4.04	30x35:4.04	35x30:4.04				30x50:4.92	35x40:4.92	
27000					30x40:4.74	35x35:4.74					35x50:5.30	
33000					30x50:5.50	35x40:5.50						
39000						35x45:5.80						
47000						35x50:6.30						

Cap ( $\mu$ F)	Vdc $\phi$ D	50					63					
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	
1200							20x25:1.20					
1500							20x30:1.47	22x25:1.47				
1800		20x25:1.39					20x35:1.58	22x30:1.58				
2200		20x30:1.60	22x25:1.60				20x40:1.82	22x35:1.82	25x25:1.82			
2700		20x35:1.73	22x30:1.73	25x25:1.73				22x35:2.11	25x30:2.11			
3300		20x40:1.97	22x35:1.97	25x30:1.97				22x45:2.33	25x35:2.33	30x25:2.33		
3900			22x40:2.22	25x30:2.22				22x50:2.55	25x40:2.55	30x30:2.55		
4700			22x45:2.43	25x35:2.43	30x25:2.43				25x45:2.97	30x35:2.97		
5600			22x50:2.75	25x40:2.75	30x30:2.75				25x50:3.22	30x35:3.22	35x30:3.22	
6800				25x45:3.30	30x35:3.30					30x40:3.65	35x35:3.65	
8200				25x50:3.60	30x40:3.60	35x30:3.60				30x50:4.04	35x40:4.04	
10000					30x45:4.05	35x35:4.05					35x45:4.48	
12000					30x50:4.56	35x40:4.56					35x50:4.75	
15000						35x50:4.77						

Cap ( $\mu$ F)	Vdc $\phi$ D	80					100					
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	
560							20x25:0.95					
680							20x30:1.15	22x25:1.15				
820		20x25:1.04					20x35:1.32	22x30:1.32				
1000		20x30:1.24	22x25:1.24				20x35:1.47	22x30:1.47	25x25:1.47			
1200		20x35:1.44	22x30:1.44				20x40:1.69	22x35:1.69	25x30:1.69			
1500		20x35:1.59	22x30:1.59	25x25:1.59				22x40:1.98	25x35:1.98	30x25:1.98		
1800		20x40:1.79	22x35:1.79	25x30:1.79				22x45:2.23	25x35:2.23	30x30:2.23		
2200			22x40:2.03	25x30:2.03	30x25:2.03				25x45:2.55	30x35:2.55	35x30:2.55	
2700			22x45:2.39	25x35:2.39	30x30:2.39				25x50:2.89	30x40:2.89	35x30:2.89	
3300				25x40:2.64	30x35:2.64					30x45:3.30	35x35:3.30	
3900				25x50:2.97	30x35:2.97	35x30:2.97				30x50:3.67	35x40:3.67	
4700					30x40:3.38	35x35:3.38					35x45:3.80	
5600					30x45:3.80	35x40:3.80					35x50:4.05	
6800						35x45:4.10						
8200						35x50:4.30						

↑  
Ripple Current (A r.m.s./120Hz, 105°C)  
↑  
Case Size  $\phi$ D×L(mm)

**◆ STANDARD SIZE**

Cap ( $\mu$ F)	Vdc $\phi$ D	160					180				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
270		20x25:1.10					20x25:0.93				
330		20x30:1.20	22x25:1.21				20x30:1.20	22x25:1.20			
390		20x30:1.24	22x25:1.30				20x35:1.30	22x30:1.35			
470		20x35:1.42	22x30:1.41				20x40:1.40	22x35:1.42	25x25:1.38		
560		20x40:1.57	22x35:1.54	25x25:1.51			20x45:1.55	22x40:1.60	25x30:1.55		
680		20x45:1.70	22x40:1.74	25x30:1.74	30x25:1.74			22x45:1.78	25x35:1.78	30x25:1.55	
820			22x45:2.00	25x35:2.00	30x30:2.00			22x50:2.00	25x40:2.00	30x30:2.00	35x25:2.00
1000			22x50:2.25	25x40:2.25	30x30:2.25	35x25:2.25			25x45:2.25	30x35:2.25	35x30:2.26
1200				25x45:2.49	30x35:2.49	35x30:2.45			25x50:2.54	30x40:2.52	35x30:2.60
1500					30x40:2.84	35x30:2.68				30x45:2.90	35x35:2.95
1800					30x45:3.32	35x35:3.00				30x50:3.00	35x40:3.30
2200						35x45:3.50					35x50:3.65
2700						35x50:4.00					

Cap ( $\mu$ F)	Vdc $\phi$ D	200					220				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
180							20x25:0.86				
220		20x25:1.00					20x30:1.04	22x25:0.99			
270		20x30:1.10	22x25:1.10				20x30:1.08	22x25:1.04			
330		20x30:1.15	22x30:1.25				20x35:1.30	22x30:1.32	25x25:1.26		
390		20x35:1.25	22x30:1.31	25x25:1.31			20x40:1.45	22x35:1.42	25x30:1.45		
470		20x40:1.42	22x35:1.45	25x30:1.45			20x45:1.63	22x40:1.67	25x30:1.54	30x25:1.48	
560			22x40:1.60	25x30:1.60	30x25:1.60			22x45:1.77	25x35:1.66	30x30:1.65	
680			22x45:1.75	25x35:1.78	30x30:1.78				25x40:1.87	30x30:1.82	35x25:1.78
820			22x50:1.95	25x40:1.95	30x30:2.00				25x45:2.04	30x35:2.00	35x30:1.93
1000				25x45:2.10	30x35:2.30	35x30:2.30				30x40:2.48	35x35:2.33
1200					30x40:2.64	35x35:2.65				30x45:2.88	35x40:2.65
1500					30x50:3.08	35x40:3.08					35x45:2.96
1800						35x45:3.48					35x50:3.39
2200						35x50:3.55					

Cap ( $\mu$ F)	Vdc $\phi$ D	250					315				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
82							20x25:0.64				
100							20x30:0.69	22x25:0.62			
120							20x30:0.75	22x25:0.75	25x25:0.76		
150							20x35:0.82	22x30:0.82	25x25:0.82		
180							20x40:0.90	22x35:0.92	25x25:0.90		
220		20x30:1.00	22x25:1.00				20x50:1.00	22x40:1.04	25x30:1.04	30x25:1.04	
270		20x35:1.10	22x30:1.15					22x45:1.16	25x35:1.15	30x25:1.15	35x25:1.15
330		20x40:1.20	22x35:1.28					22x50:1.22	25x40:1.23	30x30:1.33	35x25:1.32
390		20x45:1.35	22x40:1.49	25x30:1.35	30x25:1.49				25x45:1.40	30x35:1.47	35x30:1.47
470			22x45:1.60	25x35:1.57	30x30:1.65					30x40:1.70	35x30:1.70
560			22x50:1.72	25x40:1.80	30x30:1.80					30x45:2.05	35x35:1.90
680				25x45:1.85	30x35:2.00	35x30:2.00				30x50:2.14	35x40:2.17
820				25x50:2.10	30x40:2.18	35x35:2.30					35x45:2.20
1000					30x45:2.40	35x35:2.35					
1200						35x40:2.50					
1500						35x50:3.00					

Cap ( $\mu$ F)	Vdc $\phi$ D	350					385				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
56							20x25:0.42				
68		20x25:0.47					20x30:0.47	22x25:0.49			
82		20x30:0.55					20x30:0.52	22x25:0.55			
100		20x30:0.60	22x25:0.69				20x35:0.60	22x30:0.66	25x25:0.66		
120		20x35:0.70	22x30:0.75	25x25:0.75			20x40:0.68	22x35:0.71	25x25:0.71		
150		20x40:0.78	22x35:0.82	25x30:0.83				22x40:0.83	25x30:0.83	30x25:0.77	
180		20x45:0.88	22x40:0.92	25x30:0.92	30x25:0.92			22x45:0.92	25x35:0.92	30x30:0.89	
220			22x45:1.05	25x35:1.05	30x30:1.02			22x50:1.03	25x40:1.03	30x30:1.01	35x25:1.03
270			22x50:1.18	25x40:1.18	30x30:1.18	35x25:1.20			25x45:1.14	30x35:1.15	35x30:1.13
330				25x45:1.30	30x35:1.35	35x30:1.22				30x40:1.32	35x30:1.35
390				25x50:1.45	30x40:1.52	35x35:1.48				30x45:1.46	35x35:1.50
470					30x45:1.65	35x35:1.70				30x50:1.72	35x40:1.79
560					30x50:1.85	35x40:1.90					35x45:1.99
680						35x45:2.00					

↑ Ripple Current (A r.m.s./120Hz, 105°C)  
↑ Case Size  $\phi$ D×L(mm)

**◆ STANDARD SIZE**

Cap ( $\mu$ F)	Vdc $\phi$ D	400					420					
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35	
56		20x25:0.51					20x25:0.44					
68		20x30:0.56	22x25:0.52				20x30:0.49	22x25:0.51				
82		20x30:0.64	22x25:0.64				20x35:0.54	22x30:0.65	25x25:0.65			
100		20x35:0.70	22x30:0.70	25x25:0.70			20x35:0.61	22x30:0.68	25x25:0.67			
120		20x40:0.75	22x35:0.75	25x25:0.75			20x40:0.70	22x35:0.73	25x30:0.76	30x25:0.81		
150		20x45:0.83	22x40:0.88	25x30:0.88	30x25:0.82		20x45:0.78	22x40:0.86	25x35:0.87	30x25:0.84		
180			22x45:0.98	25x35:0.98	30x30:0.95			22x45:0.96	25x35:0.95	30x30:0.97	35x25:0.91	
220			22x50:1.10	25x40:1.10	30x30:1.10	35x25:1.10			25x40:1.08	30x35:1.14	35x30:1.07	
270				25x45:1.21	30x35:1.22	35x30:1.22			25x50:1.38	30x35:1.20	35x35:1.29	
330					30x40:1.44	35x30:1.44				30x40:1.37	35x35:1.44	
390					30x45:1.55	35x35:1.60				30x45:1.50	35x40:1.63	
470						35x40:1.90					35x45:1.88	
560						35x45:2.12						

Cap ( $\mu$ F)	Vdc $\phi$ D	450				
		$\phi$ 20	$\phi$ 22	$\phi$ 25	$\phi$ 30	$\phi$ 35
47		20x25:0.39				
56		20x30:0.51	22x25:0.44			
68		20x35:0.56	22x30:0.53			
82		20x35:0.64	22x30:0.64	25x25:0.64		
100		20x45:0.69	22x35:0.69	25x30:0.69	30x25:0.69	
120		20x50:0.75	22x40:0.75	25x30:0.75	30x25:0.80	
150			22x45:0.88	25x35:0.88	30x30:0.88	35x25:0.75
180				25x40:0.95	30x30:1.00	35x30:0.86
220				25x45:1.10	30x35:1.12	35x30:1.05
270					30x40:1.28	35x35:1.27
330					30x50:1.45	35x40:1.45
390						35x40:1.65
470						35x50:1.85

↑ Ripple Current (A r.m.s./120Hz, 105°C)  
 ↑ Case Size  $\phi$ D×L(mm)