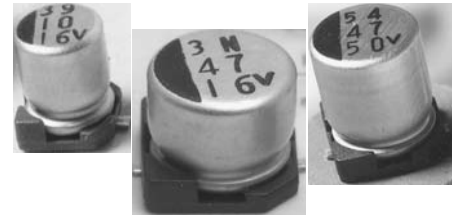


## FEATURES

- Cylindrical leadless type for surface mounting.
- Low cost, general purpose, 2000 hours at 85°C.
- New expanded CV range.
- Solvent resistant (2 minutes).
- Designed for automatic mounting and reflow soldering.



Note: Unless otherwise specified here, the capacitor shall conform to JIC-C-5141 and 5102.

## PART NUMBERING

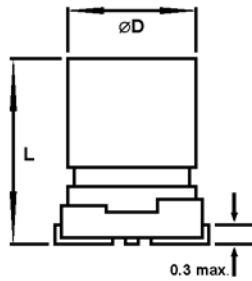
Part Number Example: MXM-016/100M4X5TR13F									
MXM	-	016	/	100	M	4X5	TR	13	F
Type		Rated DC Voltage		Capacitance Code (μF)*	Tolerance Code	Size	Package Code**	Reel Size	RoHs Compliant
* Capacitance Code: First two digits represent significant figure, third digit represents multiplier (number of zeros).									
** Package Code: TR = Tape & Reel.									

## SPECIFICATIONS

Performance Characteristics											
Operating Temperature Range	-40°C ~ +85°C.										
	Impedance Ratio										
Temperature Characteristics (120Hz)	Rated Voltage (WVDC)	4.0	6.3	10	16	25	35	50	63	100	
	4 ~ 100	Z (-25°C) / Z (+20°C)	7	4	3	2	2	2	2	2	2
		Z (-40°C) / Z (+20°C)	15	8	6	4	4	3	3	3	3
Voltage Range	4VDC ~ 100VDC.										
Surge Voltage (20°C, 120Hz)	VDC	5.0	8.0	13	20	32	44	63	79	125	
Capacitance Range	0.47μF ~ 6800μF.										
Capacitance Tolerance	±20%.										
Maximum Dissipation Factor (20°C, 120Hz)	Rated Voltage (WVDC)	4.0	6.3	10	16	25	35	50	63	100	
	DF %	diam. 4.Ø ~6.3	35	26	20	16	14	12	12	12	10
		diam.8.Ø ~16	40	30	24	20	16	14	12	12	10
		if rated capacity exceeds 1000 uF, add 0.02 for each 1000 increase									
Max leakage current @ (20°C) after 2 minutes	0.01CV or 3μA, whichever is greater.										
Load life test (85°C 2000 hours)	Capacitance change	Within +- 25% initial measured value									
	DF%	Less than 200% initial specified value									
	Leakage current	Within maximum specified value									

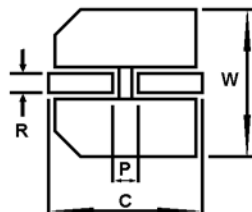
STANDARD PRODUCT TABLE (dØ X L(mm))

Cap. (µF)	WVDC								
	4	6.3	10	16	25	35	50	63	100
0.47							4 x 5.4	4 x 5.4	
1.0							4 x 5.4	4 x 5.4	4 x 6.0
2.2							4 x 5.4	4 x 5.4	6.3 x 6.0
3.3							4 x 5.4	5 x 5.4	6.3 x 6.0
4.7					4 x 5.4	4 x 5.4	5 x 5.4	5 x 5.4	6.3 x 6.0
10				4 x 5.4	5 x 5.4	5 x 5.4	6.3 x 5.4	6.3 x 5.4	6.3 x 7.7
22		4 x 5.4	5 x 5.4	5 x 5.4	6.3 x 5.4	6.3 x 5.4	6.3 x 6.0	6.3 x 7.7	8 x 10.2
33	4 x 5.4	5 x 5.4	5 x 5.4	6.3 x 5.4	6.3 x 5.4	6.3 x 6.0	6.3 x 7.7	8 x 10.2	10 x 10.2
47	4 x 5.4	5 x 5.4	6.3 x 5.4	6.3 x 5.4	6.3 x 6.0	6.3 x 6.0	6.3 x 7.7	8 x 10.2	12.5 x 13.5
68								8 x 10.2	12.5 x 13.5
82							10 x 7.7		
100	5 x 5.4	6.3 x 5.4	6.3 x 5.4	6.3 x 5.4	6.3 x 7.7	6.3 x 7.7	8 x 10.2	10 x 10.2	16 x 16.5
150			6.3 x 6.0	6.3 x 7.7	8 x 10.2	8 x 10.2 10 x 7.7			16 x 16.5
220	6.3 x 5.4	6.3 x 6.0	6.3 x 7.7	6.3 x 7.7	8 x 10.2 10 x 7.7	8 x 10.2	10 x 10.2	12.5 x 13.5	
330	6.3 x 6.0	6.3 x 7.7	8 x 10.2	8 x 10.2 10 x 7.7	8 x 10.2	10 x 10.2	12.5 x 13.5		
390							12.5 x 13.5		
470	6.3 x 7.7	8 x 10.2	8 x 10.2 10 x 7.7	8 x 10.2	10 x 10.2	12.5 x 13.5		16 x 16.5	
680		8 x 10.2 10 x 7.7		10 x 10.2		12.5 x 13.5			
1000	10 x 7.7	8 x 10.2	10 x 10.2		12.5 x 13.5	16 x 16.5	16 x 16.5		
1500		10 x 10.2		12.5 x 13.5		16 x 16.5			
2200			12.5 x 13.5		16 x 16.5				
3300		12.5 x 13.5		16 x 16.5					
4700			16 x 16.5						
6800		16 x 16.5							



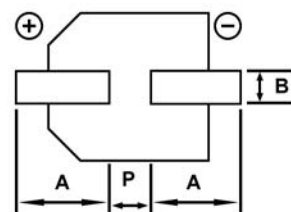
DIMENSIONS (mm)

D +0.5 Max.	L	W ± 0.2	H ± 0.2	C ± 0.2	R	P ± 0.2
4.0	5.4 +0.1, -0.2	4.3	4.3	5.0	0.5 ~ 0.8	1.0
4.0	6.0 ± 0.3	4.3	4.3	5.0	0.5 ~ 0.8	1.0
5.0	5.4 +0.1, -0.2	5.3	5.3	6.0	0.5 ~ 0.8	1.4
6.3	5.4 +0.1, -0.2	6.6	6.6	7.3	0.5 ~ 0.8	2.2
6.3	6.0 ± 0.3	6.6	6.6	7.3	0.5 ~ 0.8	2.2
6.3	7.7 ± 0.3	6.6	6.6	7.3	0.5 ~ 0.8	2.2
8.0	10.2 ± 0.3	8.3	8.3	9.0	0.7 ~ 1.0	3.2
10.0	7.7 ± 0.3	10.3	10.3	11.0	1.0 ~ 1.4	4.6
10.0	10.2 ± 0.3	10.3	10.3	11.0	1.0 ~ 1.4	4.6
12.5	13.5 ± 0.5	12.8	12.8	13.5	1.0 ~ 1.4	4.6
16	16.5 ± 0.5	16.3	16.3	17.3	1.18 ~ 2.1	7.0



RECOMMENDED LAND PATTERN (mm)

Case Size	A	B	P
4 x 5.4	2.6	1.6	1.0
5 x 5.4	3.0	1.6	1.4
6.3 x 5.4	3.5	1.6	2.1
6.3 x 6.0			
6.3 x 7.7			
8 x 10.2	4.15	1.9	2.8
10 x 10.2	4.4	1.9	4.3
12.5 x 13.5	5.65	2.1	4.3
16 x 16.5	6.5	5.0	6.6



MAXIMUM RIPPLE (mA rms @ 120Hz & 105°C)

Cap. (µF)	WVDC								
	4	6.3	10	16	25	35	50	63	100
0.47							5.0	5	
1.0							10	10	10
2.2							15	15	20
3.3							18	20	28
4.7					19	20	23	23	35
10				25	28	30	34	34	50
22		31	35	39	52	54	60	70	120
33	26	39	43	57	63	60	85	160	190
47	34	47	59	68	68	70	90	170	330
68								180	350
82							200		
100	61	71	76	86	130	120	200	280	550
150			88	135	200	220			560
						220			
220	82	95	150	150	250	270	320	410	
					250				
330	102	150	280	280	310	340	520		
390							550		
470	150	300	300	330	430	590		700	
			300						
680		300		450		610			
		300							
1000	330	330	450		660	1000	940		
1500		450		710		1060			
2200			730		1150				
3300		750		1200					
4700			1260						
6800		1330							