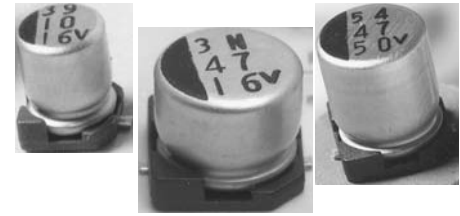


## FEATURES

- Cylindrical leadless type for surface mounting.
- 2000 hour life, 105°C.
- Wide temperature (-40°C to +105°C).
- Solvent resistant (2 minutes).
- Designed for automatic mounting and reflow soldering.



## PART NUMBERING

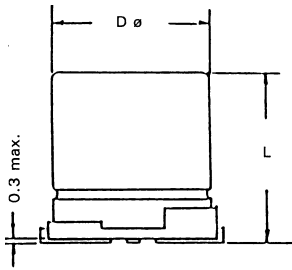
Part Number Example: MXWS-016/100M4X5TR13F									
MXWS	-	016	/	100	M	4X5	TR	13	F
Type		Rated DC Voltage		Capacitance Code (μF)*	Tolerance Code	Size	Package Code**	Reel Size	RoHs Compliant
* Capacitance Code: First two digits represent significant figure, third digit represents multiplier (number of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

## SPECIFICATIONS

Performance Characteristics							
Operating Temperature Range	-40°C ~ +105°C.						
Temperature Characteristics (120Hz)	Impedance Ratio						
	Rated Voltage (WVDC)	6.3	10	16	25	35	50
	Z (-40°C) / Z (+20°C)	6	4	4	3	2	2
	Z (-55°C) / Z (+20°C)	12	10	8	6	4	4
Voltage Range	6.3VDC ~ 50VDC.						
Surge Voltage (20°C, 120Hz)	VDC	8	13	20	32	44	63
Capacitance Range	0.1μF ~ 1000μF.						
Capacitance Tolerance	±20%.						
Maximum Dissipation Factor (20°C, 120Hz)	Rated Voltage (WVDC)	6.3	10	16	25	35	50
	DF %	30	24	20	16	14	14
Maximum Leakage Current (20°C) (after 2 minutes)	0.01CV or 3μA, whichever is greater.						
Load Life Test (105°C, 2000 hours)	Capacitance Change	Within ±25% of initial measured value.					
	DF	Less than 200% of specific value.					
	Leakage Current	Less than specified value.					

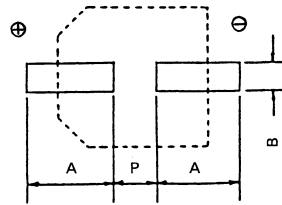
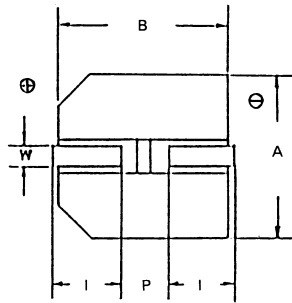
## STANDARD PRODUCT TABLE (dØ X L(mm))

Capacitance (μF)	WVDC					
	6.3	10	16	25	35	50
0.10						4 x 5.5
0.22						4 x 5.5
0.33						4 x 5.5
0.47						4 x 5.5
1						4 x 5.5
2.2						4 x 5.5
3.3						4 x 5.5
4.7						4 x 5.5
10				4 x 5.5	4 x 5.5	5 x 5.5
22	4 x 5.5	4 x 5.5	5 x 5.5	4 x 5.5	6.3 x 5.5	8 x 6.5
33	4 x 5.5	4 x 5.5	5 x 5.5	6.3 x 5.5	8 x 6.5	8 x 10.5
47	5 x 5.5	6.3 x 5.5	6.3 x 5.5	4 x 5.5	8 x 6.5	8 x 10.5
100	6.3 x 5.5	8 x 6.5	8 x 6.5	8 x 10.5	8 x 10.5	10 x 10.5
220	8 x 6.5	8 x 10.5	8 x 10.5	10 x 10.5	10 x 10.5	
330	8 x 10.5	8 x 10.5	10 x 10.5			
470	8 x 10.5	10 x 10.5				
1000	10 x 10.5					



**DIMENSIONS (mm)**

Case Size	dØ ± 0.5	L Max.	A ± 0.2	B ± 0.2	1 ± 0.2	W	P ± 0.2
4 x 5.5	4	5.5	4.3	4.3	1.8	0.5 ~ 0.8	1.0
5 x 5.5	5	5.5	5.3	5.3	2.1	0.5 ~ 0.8	1.5
6.3 x 5.5	6.3	5.5	6.6	6.6	2.5	0.5 ~ 0.8	2.2
8 x 6.5	8	6.5	8.3	8.3	2.9	0.7 ~ 1.0	3.2
8 x 10.5	8	10.5	8.3	8.3	2.9	0.7 ~ 1.0	3.2
10 x 10.5	10	10.5	10.3	10.3	3.2	0.7 ~ 1.0	4.6



**RECOMMENDED LAND PATTERN (mm)**

Case Size	A	B	P
4 x 5.5	2.5	1.6	1.0
5 x 5.5	2.7	1.6	1.4
6.3 x 5.5	3.1	1.6	2.2
8 x 6.5	4.15	1.9	2.8
8 x 10.5	4.15	1.9	2.8
10 x 10.5	4.3	4.4	2.8

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

Cap. (µF)	VVDC					
	6.3	10	16	25	35	50
0.1						1
0.22						2
0.33						3
0.47						4
1.0						8.4
2.2						11
3.3						13
4.7				12	14	18
10			20	22	24	28
22	23	25	31	38	46	55
33	28	34	40	48	50	135
47	37	40	56	60	65	155
100	53	60	62	180	180	315
220	65	70	185	190	360	
330	70	195	195			
470	210	440				
1000	480					

**MAXIMUM ESR (Ω @ 120Hz & 20°C)**

Cap. (µF)	VVDC					
	6.3	10	16	25	35	50
0.1						1993
0.22						906
0.33						604
0.47						424
1.0						199
2.2						90.8
3.3						60.4
4.7				49.5	44	42.4
10			26.6	24.1	19	19.9
22	18.1	15	12.1	11.5	9	8
33	12.6	11.1	8.2	7.05	4.52	5.4
47	8.4	7.4	5.6	5.1	2.44	3.5
100	4	313	2.8	2.4	1.6	2
220	2.6	2.2	1.3	1.2	1.1	
330	1.8	1.6	1.1			
470	1.2	1.2				
1000	0.6					