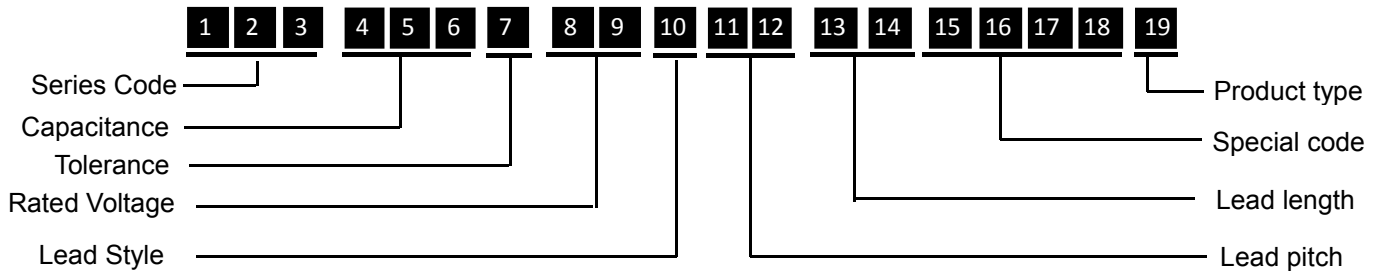


Type: MPX-LP Specification

Part Numbering System



Digit 1~3	Type	MPX											
Digit 4~6	Digit 5~6 indicate the first two figures of the capacitance value and the 7th digit indicate the number of zero added to obtain the rated capacitance in pF. EX.102=1000pF=1nF=0.001μF												
Digit 7	Code		F		G		H		J		K		M
	Tolerance		±1%		±2%		±3%		±5%		±10%		±20%
Digit 8~9		A	B	C	D	E	F	G	H	J	K	L	M
	1				20				50	63			1100
	2	100	125	160	200	250		400	500	630	800	120	
	3	1000	1250	160	2000	2	15 3150	4000	5000	6300	8000	1200	1400
		N	P	Q	R	S	T	U	V	W	X	Y	
	1	15	240	300	330	440	540	600	700	850	900		
	2	150	275	305	350	450	520		760	1800			
	3	1500	280	310			480	550				3000	
Letter and then number indicate AC, but number and then Letter indicate DC. EX.2A=100VDC A2=100VAC													
Digit 10	Code	A			B			C		D		X	
	Lead style	Straight lead			Kink-Cutted			Inward forming		outward forming		straight lead Cutted	
	Code	E			S			T		F		G	
	Lead style	Taping (Ammo) (直脚 TP,P0=12.7mm)			Taping (Ammo) (直脚 TP, P0=15.0mm)			Taping (Ammo) (同等彎 TP)		Taping (Ammo) (內彎 TP)		Taping (Ammo) (外彎 TP)	
Digit 11~12	Code	P2	P3	P4	P5	P6	P8	P9	PA	PB	PC	PD	PE
	Pitch	3.5	4.0	4.5	5.0	6.0	7.0	7.5	8.0	9.0	10.0	31.0	15.0
	Code	PF	PG	PH	PJ	PK	PL	PM	PN	PP	PQ	PR	PS
	Pitch	20.0	21.0	22.0	22.5	28.5	52.5	27.5	30.0	32.5	41.0	12.5	17.5
	Code	PT	PU	PV	PW	PX	PY	PZ	PO				
Digit 13~14	Pitch	51.0	27.0	37.5	25.0	12.0	35.0	16.0	Axial				
	Code	L1*	L2	L3	L4	L5	L6	L7*	L8	L9	LA	LB	LC
	Length	15.0	3.5	4.0	4.5	10.0	15.0	20.0	TP	2.7	8.0	5.0	6.0
	Code	LD*	LE	LF	LG	LH	LJ*	LK	LL	LM	LN	LP	LQ*
	Length	26.0	7.5	5.5	12.0	7.0	25.0	13.0	6.5	3.0	9.0	2.5	17.0
	Code	LR	LS*	LU*	LW*	LX	LY*	LZ*	LV	LO*	LT*	VL*	
Digit 15~16	Length	3.8	24.0	27.0	40.0	16.0	30.0	32.0	3.2	Axial	22	33	

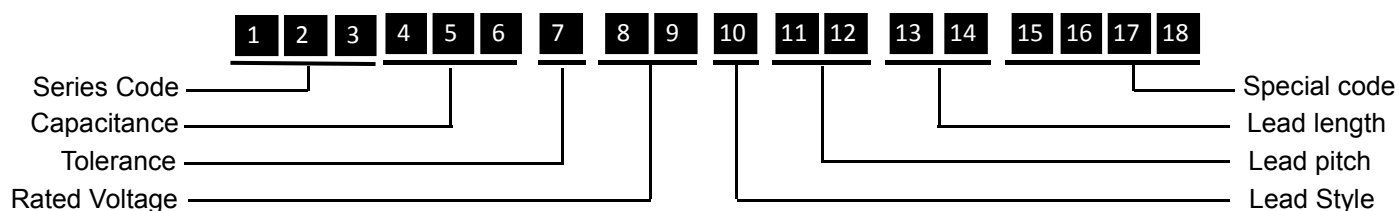
Notes: * Straight,length is minimum

Digit 15~16	Code	Explanation	Code	Explanation	Code	Explanation
	EP	Power loss	HP	HF, Power loss		
Digit 17~18	Special Number.					

Type: MPX-LP

Specification

Part Numbering System



Digit 1~3	Type	MPX												
Digit 4~6	Digit 5~6 indicate the first two figures of the capacitance value and the 7th digit indicate the number of zero added to obtain the rated capacitance in pF. EX.102=1000pF=1nF=0.001μF													
Digit 7	Code		F		G		H		J		K		M	
	Tolerance		±1%		±2%		±3%		±5%		±10%		±20%	
Digit 8~9		A	B	C	D	E	F	G	H	J	K	L	M	
	1				20				50	63			1100	
	2	100	125	160	200	250	315	400	500	630	800	120		
	3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	1200	1400	
		N	P	Q	R	S	T	U	V	W	X	Y		
	1	15	240	300	330	440	540	600	700	850	900			
	2	150	275	305	350	450	520		760	1800				
	3	1500	280	310		480	550					3000		
Letter and then number indicate AC, but number and then Letter indicate DC. EX.2A=100VDC A2=100VAC														
Digit 10	Code	A			B			C			D			X
	Lead style	Straight lead			Kink-Cutted			Inward forming			outward forming			straight lead Cutted
	Code	E			L			T			F			G
	Lead style	Taping (Ammo) (Style A TP,P0=12.7mm)			Taping (Ammo) (Style A TP,P0=15.0mm)			Taping (Ammo) (Style B TP)			Taping (Ammo) (Style C TP)			Taping (Ammo) (Style D TP)
Digit 11~12	Code	P2	P3	P4	P5	P6	P8	P9	PA	PB	PC	PD	PE	
	Pitch	3.5	4.0	4.5	5.0	6.0	7.0	7.5	8.0	9.0	10.0	31.0	15.0	
	Code	PF	PG	PH	PJ	PK	PL	PM	PN	PP	PQ	PR	PS	
	Pitch	20.0	21.0	22.0	22.5	28.5	52.5	27.5	30.0	32.5	41.0	12.5	17.5	
	Code	PT	PU	PV	PW	PX	PY	PZ	PO					
	Pitch	51.0	27.0	37.5	25.0	12.0	35.0	16.0	Axial					
Digit 13~14	Code	L1*	L2	L3	L4	L5	L6	L7*	L8	L9	LA	LB	LC	
	Length	15.0	3.5	4.0	4.5	10.0	15.0	20.0	TP	2.7	8.0	5.0	6.0	
	Code	LD*	LE	LF	LG	LH	LJ*	LK	LL	LM	LN	LP	LQ*	
	Length	26.0	7.5	5.5	12.0	7.0	25.0	13.0	6.5	3.0	9.0	2.5	17.0	
	Code	LR	LS*	LU*	LW*	LX	LY*	LZ*	LV	L0*	LT*	VL*	1L	
	Length	3.8	24.0	27.0	40.0	16.0	30.0	32.0	3.2	Axial	22	33	35	

Notes: * Straight,length is minimum

Digit 15~16	Code	Explanation	Code	Explanation	Code	Explanation
	EP	Power loss	HP	HF, Power loss	EA	Low noise, The different size(T)
Digit 17~18	Special Number.					

Type: MPX-LP Specification			Electrical characteristics		
No	項 目 Item		性 能 Performance	條 件 Test Conditions	參考標準 Reference Standard
1	使用溫度範圍 Operating Temperature Range		-40°C ~ +110°C		IEC 60384-14 2.1.1
2	額 定 電 壓 Rated Voltage		250VAC,275VAC,310VAC (50/60Hz) 560VDC,630VDC(Max)		IEC 60384-14 2.2.3
3	耐電壓 Withstand Voltage	端 子 間 Between Terminals	無 Short 現象.	VR x 430% (VDC) 2~5 sec Charge and Discharge current shall not exceed 10 mA	IEC 60384-14 4.2.1
		端子外裝間 Between Terminals & Enclosure		2120 VAC 1 min	
4	Rated Voltage Pluse slope dv/dt		P:15.0 mm 300v/μs P:22.5 mm 180v/μs P:27.5 mm 120v/μs	Test temp:20°C	
5	絕 緣 阻 抗 Insulation Resistance		C≦0.33μF:15,000MΩ min C>0.33μF:5,000MΩ*μF min	Charge time: 60 ±5sec. Charge voltage: 100VDC Test Temp: 20°C	IEC 60384-14 4.2.5
6	靜 電 容 量 Capacitance		於 指 定 範 圍 內 Within specified tolerance	at 1 KHz ±10% Measure voltage at 1 Vrms Test temp: 20°C	IEC 60384-14 4.2.2
7	散 逸 因 數 Dissipation Factor		0.1 %max at 1KHz C≦6.8uF 0.4%max at 1KHz C>6.8uF	Measure voltage at 1 Vrms Test temp: 20°C	IEC 60384-14 4.2.3
8	端子強度 Terminal Strength	抗拉強度 Pull Strength	端 子 不 鬆 斷 No cutting or slack of terminals	Wire diameter: 0.6&0.8mm Load: 1 kg, time: 10 sec. Wire diameter: 1.0 mm Load: 2 kg, time: 20 sec.	IEC 60384-14 4.3
		扭轉強度 Bending Strength		Wire diameter:0.6&0.8 mm 1.0&1.2 mm 90° x 4 time	
9	焊 錫 附 著 性 Solder ability		導線浸入後的表面至少需附著 95%的新焊錫 At least 95% of the surface of the lead wire dipped into is covered with new solder.	Solder temp: 245°C ±5°C Immersion time: 2±0.5sec. Solder: SnAgCu (Sn:96.5% Ag:3% Cu:0.5%)	IEC 60384-14 4.5
10	焊錫耐熱性 Resistance to Soldering heat	外 觀 Appearance	無 明 顯 異 常 No abnormality on appearance	Solder temp: 265 ±5°C Immersion time: 10±0.5sec.	IEC 60384-14 4.4
		耐 電 壓 Withstand Voltage	依 項 目 3 Comply with item 3		
		靜電容量變化率 Capacitance Change	△C/C≦±3% Within ±3%		
		散逸因數 Dissipation Factor	於 項 目 7 範 圍 以 內 Within spec of item 7 above.		
		絕緣阻抗 Insulation Resistance	Same as the spec of item 5 above		

Type: MPX-LP Specification			Electrical characteristics																	
No	項 目 Item		性 能 Performance	條 件 Test Conditions	參考標準 Reference Standard															
11	耐 震 性 Vibration Proof		無 明 顯 異 常 No abnormality of the appearance	Frequency range 10-55-10-55 Hz Amplitude: 0.75 mm, 2 hrs/direction for 3 directions	IEC 60384-14 4.7															
12	耐 寒 性 Cold Resistance	靜電容量變化率 Capacitance Change	$\triangle C/C \leq \pm 5\%$ Within $\pm 5\%$	Temperature: -40 $\pm 2^{\circ}\text{C}$ Duration: 96 ± 4 hrs	IEC 60384-14 4.11.4															
13	耐 熱 性 Dry Heat Resistance	絕 緣 阻 抗 Insulation Resistance	50% of minimum specified value	Temperature: +110 $\pm 2^{\circ}\text{C}$ Duration: 96 ± 4 hrs	IEC 60384-14 4.11.2															
		靜電容量變化率 Capacitance Change	$\triangle C/C \leq \pm 5\%$ Within $\pm 5\%$																	
14	溫度循環 Temperature Cycle	外 觀 Appearance	無 明 顯 異 常 No abnormality on appearance	Total: 5 cycle <table><tr><td>Step</td><td>Temp</td><td>Time</td></tr><tr><td>1</td><td>-40$\pm 2^{\circ}\text{C}$</td><td>30 ± 1min</td></tr><tr><td>2</td><td>+25$\pm 2^{\circ}\text{C}$</td><td>3min max</td></tr><tr><td>3</td><td>+110$\pm 2^{\circ}\text{C}$</td><td>30 ± 1min</td></tr><tr><td>4</td><td>+25$\pm 2^{\circ}\text{C}$</td><td>3min max</td></tr></table>	Step	Temp	Time	1	-40 $\pm 2^{\circ}\text{C}$	30 ± 1 min	2	+25 $\pm 2^{\circ}\text{C}$	3min max	3	+110 $\pm 2^{\circ}\text{C}$	30 ± 1 min	4	+25 $\pm 2^{\circ}\text{C}$	3min max	IEC 60384-14 4.6
		Step	Temp		Time															
		1	-40 $\pm 2^{\circ}\text{C}$		30 ± 1 min															
		2	+25 $\pm 2^{\circ}\text{C}$		3min max															
		3	+110 $\pm 2^{\circ}\text{C}$		30 ± 1 min															
4	+25 $\pm 2^{\circ}\text{C}$	3min max																		
耐 電 壓 Withstand Voltage	依 項 目 3 Comply with item 3																			
絕 緣 阻 抗 Insulation Resistance	50% of minimum specified value																			
靜電容量變化率 Capacitance Change	$\pm 5\%$ 以內 Within $\pm 5\%$																			
散逸因數變化量 Dissipation Factor Change	0.3 %max at 1KHz (20 $^{\circ}\text{C}$)																			
15	穩態濕熱試驗 Damp heat , Steady state	外 觀 Appearance	無 明 顯 異 常 No abnormality on appearance 印 字 可 辨 識 Marking to be legible	Humidity: 90~95% RH Temperature: +40 $\pm 2^{\circ}\text{C}$ Duration: 56Days +48/-0hrs Measure after exposing at normal state for 4hrs.	IEC 60384-14 4.12															
		耐 電 壓 Withstand Voltage	依 項 目 3 Comply with item 3																	
		絕 緣 阻 抗 Insulation Resistance	50% of minimum specified value																	
		靜電容量變化率 Capacitance Change	$\triangle C/C \leq \pm 5\%$ Within $\pm 5\%$																	
		散逸因數變化量 Dissipation Factor Change	$\triangle DF \leq 0.8\%$ at 10KHz, C $\leq 1.0\mu\text{F}$ $\triangle DF \leq 0.5\%$ at 1KHz ,C >1.0 μF (20 $^{\circ}\text{C}$)																	

Type: MPX-LP Specification			Electrical characteristics	
No	項 目 Item	性 能 Performance	條 件 Test Conditions	參考標準 Reference Standard
16	高溫負荷 Endurance Test	外觀 Appearance	無明顯異常 No abnormality on appearance 印字可辨識 Marking to be legible	IEC 60384-14 4.14
		耐電壓 Withstand Voltage	依項目3 Comply with item 3	
		絕緣阻抗 Insulation Resistance	50% of minimum specified value	
		靜電容量變化率 Capacitance Change	$\Delta C/C \leq \pm 10\%$ Within $\pm 10\%$	
		散逸因數變化量 Dissipation Factor Change	$\Delta DF \leq 0.8\%$ at 10KHz, $C \leq 1.0\mu F$ $\Delta DF \leq 0.5\%$ at 1KHz, $C > 1.0\mu F$ (20°C)	
17	脈衝試驗 Impulse voltage	If any three successive impulses are shown by the oscilloscope monitor to have had a waveform indicating that no self-healing breakdowns or flashovers have taken place in the capacitor, then no further impulses shall be applied and the capacitor shall be counted as conforming.		IEC 60384-14 4.13
18	阻燃性測試 Flammability test	1.每次火焰燃燒后每一試片的燃燒秒數不可超過 10S. Maximum flaming time per specimen per flame application:10 sec. 2.五個試片,兩次火焰燃燒的試片總燃燒秒數不能超過 50S. Maximum total flaming time ,5 specimens,2 ignitions: 50 sec. 3.每一試片最長的燃燒秒數不能超過 30S Maximum after glow time, Per specimen: 30sec.		UL94

1.此系列電容器只限用於 $\leq 310VAC$ (頻率 $\leq 100Hz$) 或 $\leq 630VDC$.

2.此產品不適合用於阻容降壓