

MS series

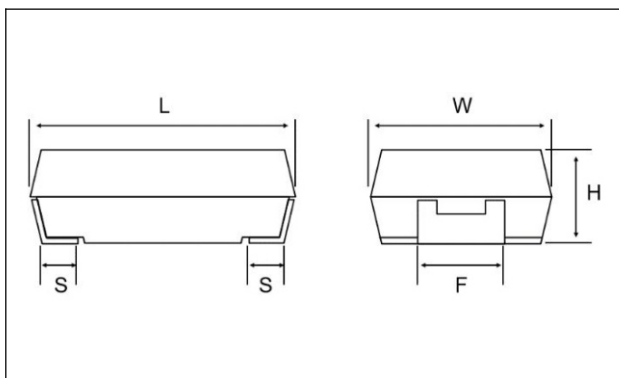
- Standard 标准品
- Load life of 2000 hours at 105°C 直流负载寿命 105°C-2000 小时
- Compliant to the RoHS2.0 directive 符合 RoHS2.0 规范



Specifications 系列参数

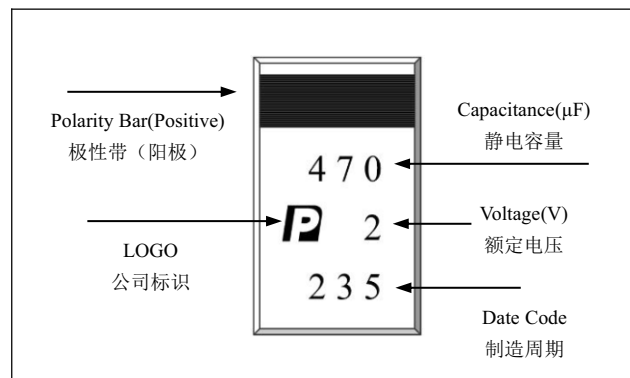
Items 项目	Characteristics 特性				
Operating Temp. Range 工作温度范围	-55°C ~ +105°C				
Capacitance Range 容量范围	47~560μF				
Capacitance Tolerance 容量偏差	M : ±20%				
Rated Voltage Range 额定电压范围	2V ~ 10V DC				
Dissipation Factor 损耗角正切	≤0.06(120Hz,20°C)				
Leakage Current 漏电流	I ≤0.1CV(μA) (after 2 minutes) (2V.DC ~ 6.3V.DC); I ≤0.3CV(μA) (after 2 minutes) (>6.3V.DC)				
Surge Voltage 浪涌电压	Rated working voltage × 1.25 (15°C~35°C) 额定电压的 1.25 倍 (恒定温度 15°C~35°C)				
Endurance 105°C , 2000h , at rated voltage 寿命: 105°C 加载额定电压连续工作 2000 小时	Capacitance Change 容量变化	Within ±20% of the value before test 初始值±20%以内			
	Dissipation Factor 损耗角正切	Not to exceed 200% of the value specified 不超过 2 倍规格值			
	Leakage current 漏电流	Not to exceed 300% of the value specified 不超过 3 倍规格值			
Moisture Resistance 60°C , RH90~95% , 500h , at rated voltage 耐湿性 60°C , RH90~95% 加载额定电压连续工作 500 小时	Capacitance Change 容量变化	2.0V~2.5V	4V	6.3V	10V
		+70%, -20%	+60%, -20%	+50%, -20%	+40%, -20%
	Dissipation Factor 损耗角正切	Not to exceed 200% of the value specified 不超过 2 倍规格值			
	Leakage Current 漏电流	Not to exceed the value specified 不超过规格值			

Dimensions 尺寸 (Unit单位:mm)



Size Code 尺寸代码	L±0.3	W±0.3	H±0.3	F±0.3	S±0.3
X19	7.3	4.3	1.9	2.4	1.3

Marking 标识



Date Code 制造周期说明:

“2”: Last digit of Christian year 公历年最后一位

“35”: week 周代码

Characteristics List 规格特性表

W.V. 工作电压 (V)	Capacitance 容量 (μ F)	Size 尺寸(mm)			ESR 等效串联电阻 (m Ω ,100kHz)	Rated Ripple Current 额定纹波电流 (mA,r.m.s)	Part Number 物料编码	
		L	W	H				
2	180	7.3	4.3	1.9	15	5100	PMS181M2R0X19TR0015	
		7.3	4.3	1.9	12	5600	PMS181M2R0X19TR0012	
		7.3	4.3	1.9	9	6300	PMS181M2R0X19TR0009	
	220	7.3	4.3	1.9	15	5100	PMS221M2R0X19TR0015	
		7.3	4.3	1.9	12	5600	PMS221M2R0X19TR0012	
		7.3	4.3	1.9	9	6300	PMS221M2R0X19TR0009	
	270	7.3	4.3	1.9	15	5100	PMS271M2R0X19TR0015	
		7.3	4.3	1.9	12	5600	PMS271M2R0X19TR0012	
		7.3	4.3	1.9	9	6300	PMS271M2R0X19TR0009	
	330	7.3	4.3	1.9	15	5100	PMS331M2R0X19TR0015	
		7.3	4.3	1.9	12	5600	PMS331M2R0X19TR0012	
		7.3	4.3	1.9	9	6300	PMS331M2R0X19TR0009	
	390	7.3	4.3	1.9	15	5100	PMS391M2R0X19TR0015	
		7.3	4.3	1.9	12	5600	PMS391M2R0X19TR0012	
		7.3	4.3	1.9	9	6300	PMS391M2R0X19TR0009	
	470	7.3	4.3	1.9	15	5100	PMS471M2R0X19TR0015	
		7.3	4.3	1.9	12	5600	PMS471M2R0X19TR0012	
		7.3	4.3	1.9	9	6300	PMS471M2R0X19TR0009	
	560	7.3	4.3	1.9	15	5100	PMS561M2R0X19TR0015	
		7.3	4.3	1.9	12	5600	PMS561M2R0X19TR0012	
		7.3	4.3	1.9	9	6300	PMS561M2R0X19TR0009	
	2.5	150	7.3	4.3	1.9	9	6300	PMS151M2R5X19TR0009
		180	7.3	4.3	1.9	9	6300	PMS181M2R5X19TR0009
		220	7.3	4.3	1.9	15	5100	PMS221M2R5X19TR0015
7.3			4.3	1.9	9	6300	PMS221M2R5X19TR0009	
330		7.3	4.3	1.9	15	5100	PMS331M2R5X19TR0015	
		7.3	4.3	1.9	9	6300	PMS331M2R5X19TR0009	
390		7.3	4.3	1.9	15	5100	PMS391M2R5X19TR0015	
		7.3	4.3	1.9	9	6300	PMS391M2R5X19TR0009	
470		7.3	4.3	1.9	15	5100	PMS471M2R5X19TR0015	
		7.3	4.3	1.9	9	6300	PMS471M2R5X19TR0009	
4		82	7.3	4.3	1.9	9	6300	PMS820M004X19TR0009
		100	7.3	4.3	1.9	9	6300	PMS101M004X19TR0009
	150	7.3	4.3	1.9	15	5100	PMS151M004X19TR0015	
		7.3	4.3	1.9	9	6300	PMS151M004X19TR0009	
	180	7.3	4.3	1.9	15	7000	PMS181M004X19TR0015	
		7.3	4.3	1.9	12	5100	PMS181M004X19TR0012	
		7.3	4.3	1.9	9	5600	PMS181M004X19TR0009	
	220	7.3	4.3	1.9	15	6300	PMS221M004X19TR0015	
		7.3	4.3	1.9	12	5100	PMS221M004X19TR0012	
		7.3	4.3	1.9	9	5600	PMS221M004X19TR0009	
	270	7.3	4.3	1.9	15	6300	PMS271M004X19TR0015	
		7.3	4.3	1.9	9	5100	PMS271M004X19TR0009	
330	7.3	4.3	1.9	15	6300	PMS331M004X19TR0015		
	7.3	4.3	1.9	9	5100	PMS331M004X19TR0009		
6.3	100	7.3	4.3	1.9	15	5100	PMS101M6R3X19TR0015	
	120	7.3	4.3	1.9	15	5100	PMS121M6R3X19TR0015	
		7.3	4.3	1.9	9	6300	PMS121M6R3X19TR0009	

W.V. 工作电压 (V)	Capacitance 容量 (μ F)	Size 尺寸(mm)			ESR 等效串联电阻 (m Ω ,100kHz)	Rated Ripple Current 额定纹波电流 (mA,r.m.s)	Part Number 物料编码	
		L	W	H				
6.3	150	7.3	4.3	1.9	15	5100	PMS151M6R3X19TR0015	
		7.3	4.3	1.9	12	5600	PMS151M6R3X19TR0012	
		7.3	4.3	1.9	9	6300	PMS151M6R3X19TR0009	
	180	7.3	4.3	1.9	15	5100	PMS181M6R3X19TR0015	
		7.3	4.3	1.9	9	6300	PMS181M6R3X19TR0009	
	220	7.3	4.3	1.9	15	5100	PMS221M6R3X19TR0015	
		7.3	4.3	1.9	9	6300	PMS221M6R3X19TR0009	
	10	47	7.3	4.3	1.9	28	3800	PMS470M010X19TR0028
			7.3	4.3	1.9	18	4700	PMS470M010X19TR0018
68		7.3	4.3	1.9	28	4000	PMS680M010X19TR0028	
		7.3	4.3	1.9	18	4700	PMS680M010X19TR0018	
		7.3	4.3	1.9	15	5100	PMS680M010X19TR0015	
100		7.3	4.3	1.9	25	4000	PMS101M010X19TR0025	
		7.3	4.3	1.9	15	5100	PMS101M010X19TR0015	
		7.3	4.3	1.9	9	6300	PMS101M010X19TR0009	
120		7.3	4.3	1.9	25	4000	PMS121M010X19TR0025	
		7.3	4.3	1.9	15	5100	PMS121M010X19TR0015	
		7.3	4.3	1.9	9	6300	PMS121M010X19TR0009	
150		7.3	4.3	1.9	25	4000	PMS151M010X19TR0025	
		7.3	4.3	1.9	15	5100	PMS151M010X19TR0015	
		7.3	4.3	1.9	9	6300	PMS151M010X19TR0009	

Temperature Coefficient for Ripple Current 纹波电流温度系数

Temperature 温度	T \leq 45 $^{\circ}$ C	45 $^{\circ}$ C<T \leq 85 $^{\circ}$ C	85 $^{\circ}$ C<T \leq 105 $^{\circ}$ C
Coefficient 系数 (2.0V ~ 6.3V)	1.00	0.70	0.25
Coefficient 系数 (10V)	1.00	0.80	0.50

ML series

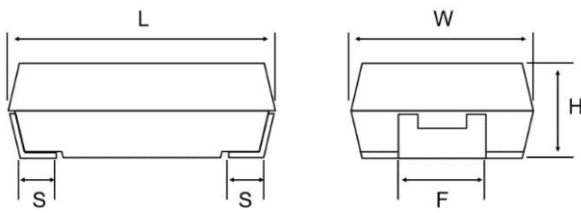
- **Low ESR, High ripple current** 低等效串联电阻, 耐高纹波电流
- **Load life of 2000 hours at 105°C** 直流负载寿命 105°C-2000 小时
- **Compliant to the RoHS2.0 directive** 符合 RoHS2.0 规范



Specifications 系列参数

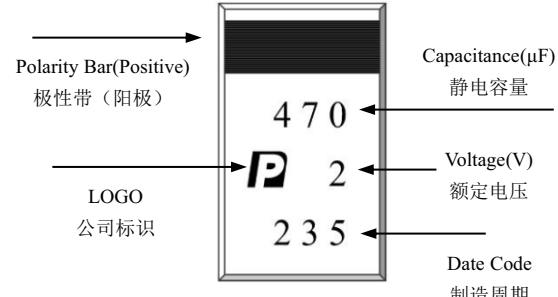
Item 项目	Characteristics 特性		
Operating Temp. Range 工作温度范围	-55°C ~ +105°C		
Capacitance Range 容量范围	150 ~ 560μF		
Capacitance Tolerance 容量偏差	M : ±20%		
Rated Voltage Range 额定电压范围	2V ~ 4V DC		
Dissipation Factor 损耗角正切	≤0.06(120Hz, 20°C)		
Leakage Current 漏电流	I ≤ 0.1CV (μA) (after 2 minutes)		
Surge Voltage 浪涌电压	Rated working voltage × 1.25 (15°C~35°C) 额定电压的 1.25 倍 (恒定温度 15°C~35°C)		
Endurance 105°C · 2000h · at rated voltage 寿命: 105°C 加载额定电压连续工作 2000 小时	Capacitance Change 容量变化	Within ±20% of the value before test 初始值 ±20% 以内	
	Dissipation Factor 损耗角正切	Not to exceed 200% of the value specified 不超过 2 倍规格值	
	Leakage current 漏电流	Not to exceed 300% of the value specified 不超过 3 倍规格值	
Moisture Resistance 60°C · RH90 ~ 95% · 500h · at rated voltage 耐湿性 60°C · RH90 ~ 95% 加载额定电压连续工作 500 小时	Capacitance Change 容量变化	2.0V~2.5V	4V
		+70%, -20%	+60%, -20%
	Dissipation Factor 损耗角正切	Not to exceed 200% of the value specified 不超过 2 倍规格值	
	Leakage Current 漏电流	Not to exceed the value specified 不超过规格值	

Dimensions 尺寸 (Unit 单位: mm)



Size Code 尺寸代码	L±0.3	W±0.3	H±0.3	F±0.3	S±0.3
X19	7.3	4.3	1.9	2.4	1.3

Marking 标识



Date Code 制造周期说明:
 “2”: Last digit of Christian year 公历年最后一位
 “35”: week 周代码

Characteristics List 规格特性表

W.V. 工作电压 (V)	Capacitance 容量 (μ F)	Size 尺寸(mm)			ESR 等效串联电阻 (m Ω ,100kHz)	Rated Ripple Current 额定纹波电流 (mA,r.m.s)	Part Number 物料编码	
		L	W	H				
2	220	7.3	4.3	1.9	6	7500	PML221M2R0X19TR0006	
	270	7.3	4.3	1.9	6	7500	PML271M2R0X19TR0006	
		7.3	4.3	1.9	4.5	8500	PML271M2R0X19TR04R5	
	330	7.3	4.3	1.9	6	7500	PML331M2R0X19TR0006	
		7.3	4.3	1.9	4.5	8500	PML331M2R0X19TR04R5	
	390	7.3	4.3	1.9	6	7500	PML391M2R0X19TR0006	
		7.3	4.3	1.9	4.5	8500	PML391M2R0X19TR04R5	
	470	7.3	4.3	1.9	6	7500	PML471M2R0X19TR0006	
		7.3	4.3	1.9	4.5	8500	PML471M2R0X19TR04R5	
	560	7.3	4.3	1.9	6	7500	PML561M2R0X19TR0006	
		7.3	4.3	1.9	4.5	8500	PML561M2R0X19TR04R5	
	2.5	220	7.3	4.3	1.9	7	7000	PML221M2R5X19TR0007
		270	7.3	4.3	1.9	7	7000	PML271M2R5X19TR0007
		330	7.3	4.3	1.9	6	7500	PML331M2R5X19TR0006
7.3			4.3	1.9	4.5	8500	PML331M2R5X19TR04R5	
390		7.3	4.3	1.9	6	7500	PML391M2R5X19TR0006	
		7.3	4.3	1.9	4.5	8500	PML391M2R5X19TR04R5	
470		7.3	4.3	1.9	6	7500	PML471M2R5X19TR0006	
		7.3	4.3	1.9	4.5	8500	PML471M2R5X19TR04R5	
4		150	7.3	4.3	1.9	7	7000	PML151M004X19TR0007
		330	7.3	4.3	1.9	6	7500	PML331M004X19TR0006

Temperature Coefficient for Ripple Current 纹波电流温度系数

Temperature 温度	$T \leq 45^{\circ}\text{C}$	$45^{\circ}\text{C} < T \leq 85^{\circ}\text{C}$	$85^{\circ}\text{C} < T \leq 105^{\circ}\text{C}$
Coefficient 系数	1.00	0.70	0.25

MU series

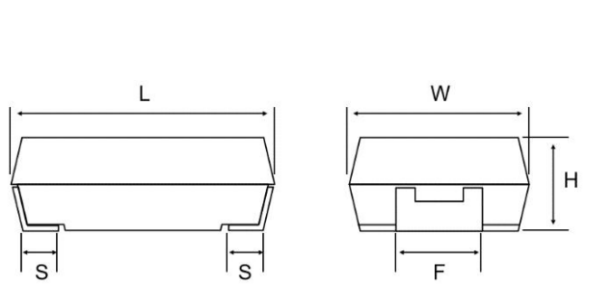
- Ultra low ESR, High ripple current 极低等效串联电阻，耐高纹波电流
- Load life of 2000 hours at 105°C 直流负载寿命 105°C-2000 小时
- Compliant to the RoHS2.0 directive 符合 RoHS2.0 规范



Specifications 系列参数

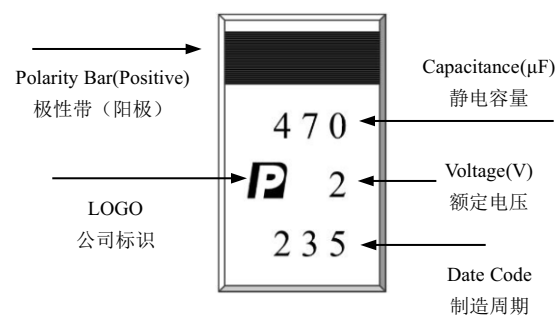
Item 项目	Characteristics 特性	
Operating Temp. Range 工作温度范围	-55°C ~ +105°C	
Capacitance Range 容量范围	330 ~ 470 μ F	
Capacitance Tolerance 容量偏差	M : \pm 20%	
Rated Voltage Range 额定电压范围	2V ~ 2.5V DC	
Dissipation Factor 损耗角正切	\leq 0.06(120Hz, 20°C)	
Leakage Current 漏电流	$I \leq 0.1CV(\mu A)$ (after 2 minutes)	
Surge Voltage 浪涌电压	Rated working voltage \times 1.25 (15°C~35°C) 额定电压的 1.25 倍 (恒定温度 15°C~35°C)	
Endurance 105°C, 2000h, at rated voltage 寿命: 105°C 加载额定电压连续工作 2000 小时	Capacitance Change 容量变化	Within \pm 20% of the value before test 初始值 \pm 20% 以内
	Dissipation Factor 损耗角正切	Not to exceed 200% of the value specified 不超过 2 倍规格值
	Leakage current 漏电流	Not to exceed 300% of the value specified 不超过 3 倍规格值
Moisture Resistance 60°C, RH90~95%, 500h, at rated voltage 耐湿性 60°C, RH90~95% 加载额定电压连续工 作 500 小时	Capacitance Change 容量变化	2.0V~2.5V +70%, -20%
	Dissipation Factor 损耗角正切	Not to exceed 200% of the value specified 不超过 2 倍规格值
	Leakage Current 漏电流	Not to exceed the value specified 不超过规格值

Dimensions 尺寸 (Unit 单位: mm)



Size Code 尺寸代码	L \pm 0.3	W \pm 0.3	H \pm 0.3	F \pm 0.3	S \pm 0.3
X19	7.3	4.3	1.9	2.4	1.3

Marking 标识



Date Code 制造周期说明:
 “2”: Last digit of Christian year 公历年最后一位
 “35”: week 周代码

Characteristics List 规格特性表

W.V. 工作电压 (V)	Capacitance 容量 (μ F)	Size 尺寸(mm)			ESR 等效串联电阻 ($m\Omega$,100kHz)	Rated Ripple Current 额定纹波电流 (mA,r.m.s)	Part Number 物料编码
		L	W	H			
2	330	7.3	4.3	1.9	3	10200	PMU221M2R0X19TR0003
	390	7.3	4.3	1.9	3	10200	PMU391M2R0X19TR0003
	470	7.3	4.3	1.9	3	10200	PMU471M2R0X19TR0003
	560	7.3	4.3	1.9	3	10200	PMU561M2R0X19TR0003
2.5	330	7.3	4.3	1.9	3	10200	PMU221M2R5X19TR0003
	390	7.3	4.3	1.9	3	10200	PMU271M2R5X19TR0003
	470	7.3	4.3	1.9	3	10200	PMU471M2R5X19TR0003

Temperature Coefficient for Ripple Current 纹波电流温度系数

Temperature 温度	$T \leq 45^{\circ}\text{C}$	$45^{\circ}\text{C} < T \leq 85^{\circ}\text{C}$	$85^{\circ}\text{C} < T \leq 105^{\circ}\text{C}$
Coefficient 系数	1.00	0.70	0.25