

Surface Mount Type

LS Ultra-miniaturized Series



Features

- High voltage (35V, max)
- Ultra-miniaturized (Height 1.1mm)
- Excellent Ripple Absorption (5600mA, max)
- RoHS & REACH Compliance, Halogen free

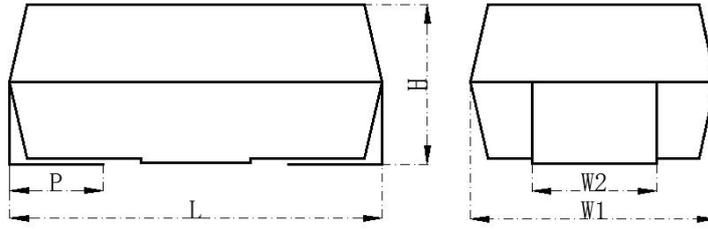
Main Applications

- Ultra-slim Laptops
- Ultra-miniaturized Drones
- Other Ultra-thin Circuit Boards

Specifications

series	LS	
Operating Temp. Range	-55°C~105°C	
Rated Voltage Range	2V~35V	
Rated Capacitance Range	5μF~330μF	
DC Leakage Current (LC)	2V~6.3V: ≤0.1CV, 10V~35V: ≤0.3CV (Rated Voltage, 2minutes)	
Capacitance Tolerance	K(-10%~+10%), M(-20%~+20%), Y(-35%~+10%) or customized	
Dissipation Factor (tgδ)	≤ 0.06 (Frequency: 120Hz, Temp.:20°C)	
Surge Voltage (V)	2V~16V:1.25*VR, 20V~25V:1.15*VR,35V:1.05*VR (15°C~35°C)	
Endurance	Temp.: 105 ±3°C	Appearance: No macroscopi damage
	Applied Voltage: Rated Voltage(DC)	Capacitance Change: -20%~+20% of initial value
	Test time: 2000h	Dissipation Factor (tgδ): ≤0.12
	Stabilizing time: 1~2h	Leakage Current: ≤specified value
Damp heat, Steady state	Temp.: 60 ±2°C	Appearance: No macroscopi damage
	Humidity: 90 ⁺² ₋₃ %RH	Capacitance Change: -20%~+60% of initial value (4V~35V), -20%~+70% of initial value (2V~2.5V)
	No load, Test time: 500h	Dissipation Factor (tgδ): ≤0.12
	Stabilizing time: 1~2h	Leakage Current: ≤300% of specified value

Product Size



Series	L (mm)±0.4	W1 (mm)±0.3	H (mm)±0.2	P (mm)±0.2	W2 (mm)±0.1
LS	7.3	4.3	1.1	1.3	2.4

Characteristics List

Product Part No.	Rated Voltage (V)	Capacitance (μF) ^{*1}	D.F. ^{*2}	ESR (mΩ) ^{*3}	R.C. (mA) ^{*4}	L.C. (μA) ^{*5}	
LS0D101MR045A0	2	100	0.06	45	3000	20	
LS0D151MR045A0		150	0.06	45	3000	30	
LS0D221MR030A0		220	0.06	30	3500	44	
LS0D221MR012A0		220	0.06	12	5600	44	
LS0D331YR012A0		330	0.06	12	5600	66	
LS0E101MR045A0		100	0.06	45	3000	25	
LS0E151MR045A0	2.5	150	0.06	45	3000	37.5	
LS0E221MR030A0		220	0.06	30	3500	55	
LS0E221MR012A0		220	0.06	12	5600	55	
LS0G121MR015A0		120	0.06	15	5100	48	
LS0J470MR045A0	6.3	47	0.06	45	3000	29.6	
LS0J560MR045A0		56	0.06	45	3000	35.3	
LS0J680MR045A0		68	0.06	45	3000	42.8	
LS0J680MR015A0		68	0.06	15	5100	42.8	
LS0J820MR030A0		82	0.06	30	3500	51.7	
LS0J101MR030A0		100	0.06	30	3500	63	
LS0J151MR030A0		150	0.06	30	3500	94.5	
LS1A470MR045A0		10	47	0.06	45	3000	141
LS1A470MR040A0	47		0.06	40	3200	141	
LS1A560MR045A0	56		0.06	45	3000	168	
LS1A680MR045A0	68		0.06	45	3000	204	
LS1A820MR030A0	82		0.06	30	3500	246	
LS1A101MR030A0	100		0.06	30	3500	300	
LS1B330MR045A0	12.5		33	0.06	45	3000	123.8
LS1B470MR045A0			47	0.06	45	3000	176.3
LS1B560MR030A0		56	0.06	30	3500	210	
LS1B680MR030A0		68	0.06	30	3500	255	
LS1C150MR040A0		15	0.06	40	3200	72	
LS1C220MR040A0	16	22	0.06	40	3200	105.6	
LS1C330MR040A0		33	0.06	40	3200	158.4	
LS1C330MR045A0		33	0.06	45	3000	158.4	
LS1C470MR045A0		47	0.06	45	3000	225.6	
LS1C560MR030A0		56	0.06	30	3500	268.8	
LS1C680MR030A0		68	0.06	30	3500	326.4	
LS1D100MR060A0		20	10	0.06	60	1400	60
LS1D100MR040A0	10		0.06	40	3200	60	
LS1D150MR060A0	15		0.06	60	1400	90	
LS1D150MR040A0	15		0.06	40	3200	90	
LS1D220MR060A0	22		0.06	60	1400	132	
LS1D220MR040A0	22		0.06	40	3200	132	
LS1D330MR045A0	33		0.06	45	3000	198	
LS1E100MR060A0	25		10	0.06	60	1400	75
LS1E100MR040A0		10	0.06	40	3200	75	
LS1E150MR060A0		15	0.06	60	1400	112.5	
LS1E150MR040A0		15	0.06	40	3200	112.5	
LS1E220MR045A0		22	0.06	45	3000	165	
LS1E330MR045A0		33	0.06	45	3000	247.5	
LS1V050MR100A0	35	5	0.06	100	900	52.5	
LS1V100MR100A0		10	0.06	100	900	105	
LS1V100MR040A0		10	0.06	40	3200	105	

Note:

*1: 120Hz, +20±1°C

*2: 120Hz, +20±1°C

*3: 100KHz, +20±1°C

*4: 100KHz, +45±1°C

*5: Rated Voltage, 2 minutes

Temperature Coefficient for Ripple Current

Products	T≤45°C	45°C<T≤85°C	85°C<T≤105°C	Products
2 V~6.3 V	1.0	0.7	0.25	2 V~6.3 V
10 V~35 V	1.0	0.8	0.5	10 V~35 V

表面贴装型

LS极小型化系列



产品特点

- 高电压 (35V, max)
- 极小型化 (高度 1.1mm)
- 耐纹波电流能力好 (5600mA, max)
- 环保 (符合无卤、RoHS和REACH规定)

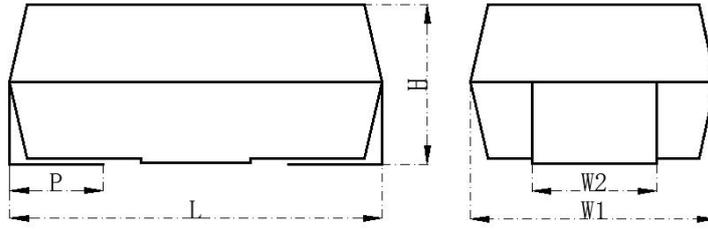
产品应用

- 超薄型笔记本电脑
- 超小型化无人机
- 其他超薄型电路板

产品规格

系列	LS	
类别温度	-55°C~105°C	
额定电压	2V~35V	
静电容量范围 (120Hz, 20°C)	5μF~330μF	
漏电流 (LC)	2V~6.3V: ≤0.1CV, 10V~35V: ≤0.3CV (额定电压, 2分钟)	
静电容量容差	K档(-10%~+10%), M档(-20%~+20%), Y档(-35%~+10%) 或定制其他档位	
损耗角正切 (tgδ)	≤ 0.06 (频率: 120Hz, 温度: 20°C)	
浪涌电压 (V)	2V~16V: 1.25*VR, 20V~25V: 1.15*VR, 35V: 1.05*VR (15°C~35°C)	
耐久性	温度: 105 ±3°C	外观: 无明显损伤
	施加电压: 额定电压(DC)	容量变化: 初始值的-20%~+20%
	测试时间: 2000h	损耗角正切 (tgδ): ≤0.12
	恢复时间: 1~2h	漏电流: ≤规定值
高温高湿	温度: 60 ±2°C	外观: 无明显损伤
	湿度: 90 ⁺² ₋₃ %RH	容量变化: 初始值的-20%~+70% (2V~2.5V), 初始值的-20%~+60% (4V~35V)
	空载, 测试时间: 500h	损耗角正切(tgδ): ≤0.12
	恢复时间: 1~2h	漏电流: ≤规定值的300%

产品尺寸



系列	L (mm)±0.4	W1 (mm)±0.3	H (mm)±0.2	P (mm)±0.2	W2 (mm)±0.1
LS	7.3	4.3	1.1	1.3	2.4

特性一览表

产品编号	额定电压 (V)	容量 (μF) ^{*1}	损耗 ^{*2}	ESR (mΩ) ^{*3}	纹波电流 (mA) ^{*4}	漏电流 (μA) ^{*5}
LS0D101MR045A0	2	100	0.06	45	3000	20
LS0D151MR045A0		150	0.06	45	3000	30
LS0D221MR030A0		220	0.06	30	3500	44
LS0D221MR012A0		220	0.06	12	5600	44
LS0D331YR012A0		330	0.06	12	5600	66
LS0E101MR045A0	2.5	100	0.06	45	3000	25
LS0E151MR045A0		150	0.06	45	3000	37.5
LS0E221MR030A0		220	0.06	30	3500	55
LS0E221MR012A0		220	0.06	12	5600	55
LS0G121MR015A0	4	120	0.06	15	5100	48
LS0J470MR045A0	6.3	47	0.06	45	3000	29.6
LS0J560MR045A0		56	0.06	45	3000	35.3
LS0J680MR045A0		68	0.06	45	3000	42.8
LS0J680MR015A0		68	0.06	15	5100	42.8
LS0J820MR030A0		82	0.06	30	3500	51.7
LS0J101MR030A0		100	0.06	30	3500	63
LS0J151MR030A0		150	0.06	30	3500	94.5
LS1A470MR045A0	10	47	0.06	45	3000	141
LS1A470MR040A0		47	0.06	40	3200	141
LS1A560MR045A0		56	0.06	45	3000	168
LS1A680MR045A0		68	0.06	45	3000	204
LS1A820MR030A0		82	0.06	30	3500	246
LS1A101MR030A0		100	0.06	30	3500	300
LS1B330MR045A0	12.5	33	0.06	45	3000	123.8
LS1B470MR045A0		47	0.06	45	3000	176.3
LS1B560MR030A0		56	0.06	30	3500	210
LS1B680MR030A0		68	0.06	30	3500	255
LS1C150MR040A0	16	15	0.06	40	3200	72
LS1C220MR040A0		22	0.06	40	3200	105.6
LS1C330MR040A0		33	0.06	40	3200	158.4
LS1C330MR045A0		33	0.06	45	3000	158.4
LS1C470MR045A0		47	0.06	45	3000	225.6
LS1C560MR030A0		56	0.06	30	3500	268.8
LS1C680MR030A0		68	0.06	30	3500	326.4
LS1D100MR060A0	20	10	0.06	60	1400	60
LS1D100MR040A0		10	0.06	40	3200	60
LS1D150MR060A0		15	0.06	60	1400	90
LS1D150MR040A0		15	0.06	40	3200	90
LS1D220MR060A0		22	0.06	60	1400	132
LS1D220MR040A0		22	0.06	40	3200	132
LS1D330MR045A0		33	0.06	45	3000	198
LS1E100MR060A0	25	10	0.06	60	1400	75
LS1E100MR040A0		10	0.06	40	3200	75
LS1E150MR060A0		15	0.06	60	1400	112.5
LS1E150MR040A0		15	0.06	40	3200	112.5
LS1E220MR045A0		22	0.06	45	3000	165
LS1E330MR045A0		33	0.06	45	3000	247.5
LS1V050MR100A0	35	5	0.06	100	900	52.5
LS1V100MR100A0		10	0.06	100	900	105
LS1V100MR040A0		10	0.06	40	3200	105

备注:
 *1: 120Hz, +20±1°C
 *2: 120Hz, +20±1°C
 *3: 100KHz, +20±1°C
 *4: 100KHz, +45±1°C
 *5: 额定电压, 2分钟

纹波电流温度系数

产品	T≤45°C	45°C<T≤85°C	85°C<T≤105°C	产品
2V~6.3V	1.0	0.7	0.25	2V~6.3V
10V~35V	1.0	0.8	0.5	10V~35V