SL Series

Feature

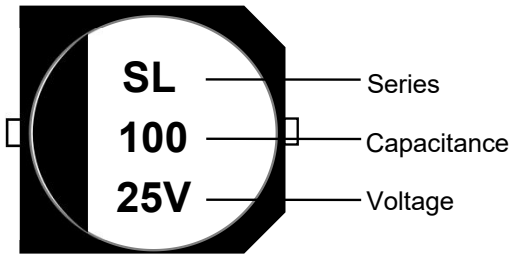
- ◆ High-temperature lead-free reflow soldering products
- ◆ Low impedance, long life
- ◆ High-density surface assembly
- ◆ RoHS compliant

Items	Characteristics									
Temperature Range	-55℃ ~ +105℃									
Rated Voltage Range	6.3V ~ 100V									
Capacitance Range	1 ~ 8200 μF									
Capacitance Tolerance	±20%（20℃，120Hz）									
Leakage Current	I≤0.01CV or 3μA， Take the larger of the two values (after applying the rated operating voltage for 2 minutes) CR: nominal capacitance (μ F) UR: rated voltage (V)									
Dissipation Factor（tg δ）（20℃, 120Hz）	U_R(V)	6.3	10	16	25	35	50	63	80	100
	tg δ	0.26	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.07
	For capacitors with a capacitance greater than 1000μF, the dissipation factor increases by 0.02 for every additional 1000μF.									
Endurance	Under the condition of 105°C, with the rated operating voltage applied, and after returning to 20°C, the capacitors shall meet the following requirements: ΦD = 4, 5, and 6.3x5.7 for 2000 hours; ΦD = 6.3x8.7, 8, 10, 12.5, 16, and 18 for 5000 hours.									
	Capacitance Change	within ±30% of the initial value								
	Dissipation Factor	≤300% of initial rated value								
	Leakage Current	≤ initial ralted value								
High Temperature Storage	After being stored for 1000 hours without voltage application in a 105℃ environment and then recovered to 20℃, the capacitor shall meet the above endurance requirements.									
Low Temperature	U_R(V)	6.3	10	16	25	35	50	63	80	100
	Z(-25℃)/Z(+20℃)	3	2	2	2	2	2	2	2	2
	Z(-55℃)/Z(+20℃)	5	4	4	3	3	3	3	3	3
Resistance to soldering heat	The capacitor shall be maintained on a hot plate at 250°C for 30 seconds. After removal and recovery at room temperature, it shall meet the requirements listed on the right.				Capacitance Change			within ±10% of the initial value		
					Dissipation Factor（tg δ）			≤ initial ralted value		
					Leakage Current			≤ initial ralted value		

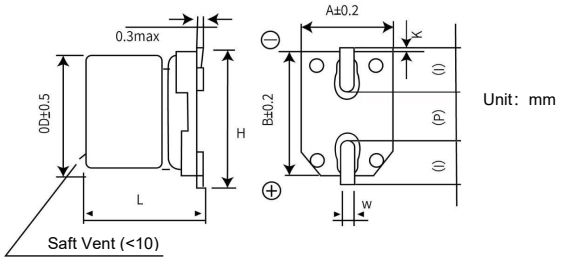
Coefficient of Frequency for Rated Ripple Current

Frequency (Hz)	50~60Hz	120Hz	300Hz	1KHz	10K~100KHz
Coefficient	0.35	0.50	0.64	0.83	1.00

Mark



Appearance & Dimension



ΦD	L	A, B	H	I	W	P	K
4	5.7±0.3	4.3	5.0	1.8	0.5~0.8	1.0	0.35+0.15/-0.20
5		5.3	5.9	2.1		1.3	
6.3		6.6	7.2	2.4		2.2	
	7.7±0.3						
8	6.5±0.5	8.3	9.0	3.4			0.70±0.20
	10.5±0.5				0.8~1.1	3.1	
	12.5±0.5						
10	10.5±0.5	10.3	11.1	3.5		4.5	
	12.5±0.5						
12.5	13.5±0.5	13.5	13.9	4.7	1.1 ~1.4	4.4	
	16.5±0.5						
16	16.5±0.5	17	17.8	5.5		6.4	
	21.5±0.5						
18	16.5±0.5	19	19.7	6.7			
	21.5±0.5						

SL Characteristics Table

Rated Voltage (V.DC)	Capacitance (±20%) (μF)	Dimension (mm)		Electrical Characteristics			Minimum Packaging Quantity (PCS)
		ΦD	L	Rated Ripple Current 100KHz/105℃ (mA r.m.s)	tan δ (120HZ/20℃)	Impedance (100KHz) (20℃) (Ω)	
6.3	27	4	5.7	80	0.26	1.80	2000
	33	5	5.7	150	0.26	0.80	1000
	47	5	5.7	150	0.26	0.80	1000
	56	5	5.7	150	0.26	0.80	1000
	68	6.3	5.7	230	0.26	0.44	1000
	100	6.3	5.7	230	0.26	0.44	1000
	150	6.3	5.7	230	0.26	0.44	1000
	220	6.3	5.7	230	0.26	0.44	1000
	330	6.3	8.7	280	0.26	0.38	900
	330	8	6.5	280	0.26	0.40	1000
	470	8	10.5	450	0.26	0.17	500
	680	8	10.5	450	0.26	0.17	500
	1000	8	10.5	450	0.26	0.17	500
	1500	10	10.5	670	0.26	0.09	500
	2200	12.5	13.5	820	0.28	0.07	200
	3300	12.5	16.5	950	0.30	0.06	150
	4700	16	16.5	1260	0.32	0.054	125
	6800	18	16.5	1500	0.36	0.048	125
	8200	18	21.5	1750	0.40	0.038	75
10	22	4	5.7	80	0.20	1.80	2000
	27	5	5.7	150	0.20	0.80	1000
	33	5	5.7	150	0.20	0.80	1000
	47	6.3	5.7	230	0.20	0.44	1000
	56	6.3	5.7	230	0.20	0.44	1000
	68	6.3	5.7	230	0.20	0.44	1000
	100	6.3	5.7	230	0.20	0.44	1000
	150	6.3	5.7	230	0.20	0.44	1000
	220	6.3	8.7	280	0.20	0.38	900
	220	8	6.5	280	0.20	0.40	1000
	330	8	10.5	450	0.20	0.17	500
	470	8	10.5	450	0.20	0.17	500
	680	10	10.5	670	0.20	0.09	500
	1000	10	10.5	670	0.20	0.09	500
	1500	12.5	13.5	820	0.20	0.07	200
	2200	12.5	16.5	950	0.22	0.06	150
	3300	16	16.5	1260	0.24	0.054	125
	4700	16	16.5	1260	0.26	0.054	125
	6800	18	16.5	1500	0.30	0.048	125
	8200	18	21.5	1750	0.34	0.038	75

SL Characteristics Table

Rated Voltage (V.DC)	Capacitance (±20%) (μF)	Dimension (mm)		Electrical Characteristics			Minimum Packaging Quantity (PCS)
		ΦD	L	Rated Ripple Current 100KHz/105℃ (mA r.m.s)	tan δ (120HZ/20℃)	Impedance (100KHz) (20℃) (Ω)	
16	15	4	5.7	80	0.16	1.80	2000
	22	5	5.7	80	0.16	0.80	1000
	27	5	5.7	150	0.16	0.80	1000
	33	6.3	5.7	230	0.16	0.44	1000
	47	6.3	5.7	230	0.16	0.44	1000
	56	6.3	5.7	230	0.16	0.44	1000
	68	6.3	5.7	230	0.16	0.44	1000
	100	6.3	5.7	230	0.16	0.44	1000
	150	8	6.5	280	0.16	0.40	1000
	220	6.3	8.7	280	0.16	0.38	900
	330	8	10.5	450	0.16	0.17	500
	470	8	10.5	450	0.16	0.17	500
	680	10	10.5	670	0.16	0.09	500
	1000	10	10.5	670	0.16	0.09	500
	1500	12.5	13.5	820	0.16	0.07	200
	2200	12.5	16.5	1260	0.18	0.06	150
	3300	16	16.5	1260	0.20	0.054	125
	4700	18	16.5	1260	0.22	0.048	125
25	10	4	5.7	80	0.14	1.80	2000
	15	5	5.7	150	0.14	0.80	1000
	22	5	5.7	80	0.14	0.80	1000
	27	6.3	5.7	230	0.14	0.44	1000
	33	6.3	5.7	230	0.14	0.44	1000
	47	6.3	5.7	230	0.14	0.44	1000
	56	6.3	5.7	230	0.14	0.44	1000
	68	6.3	5.7	230	0.14	0.44	1000
	100	6.3	8.7	280	0.14	0.38	900
	100	8	6.5	280	0.14	0.40	1000
	150	6.3	8.7	280	0.14	0.38	900
	220	8	10.5	450	0.14	0.17	500
	330	8	10.5	450	0.14	0.17	500
	470	10	10.5	670	0.14	0.09	500
	680	10	10.5	670	0.14	0.09	500
	1000	12.5	13.5	820	0.14	0.07	200
	1500	12.5	16.5	950	0.14	0.06	150
	2200	16	16.5	1260	0.16	0.054	125
	3300	18	21.5	1260	0.18	0.038	75

SL Characteristics Table

Rated Voltage (V.DC)	Capacitance (±20%) (μF)	Dimension (mm)		Electrical Characteristics			Minimum Packaging Quantity (PCS)
		ΦD	L	Rated Ripple Current 100KHz/105℃ (mA r.m.s)	tan δ (120HZ/20℃)	Impedance (100KHz) (20℃) (Ω)	
35	4.7	4	5.7	80	0.12	1.80	2000
	10	5	5.7	150	0.12	0.80	1000
	15	5	5.7	150	0.12	0.80	1000
	22	5	5.7	80	0.12	0.80	1000
	27	6.3	5.7	230	0.12	0.44	1000
	33	6.3	5.7	230	0.12	0.44	1000
	47	6.3	5.7	230	0.12	0.44	1000
	56	6.3	8.7	280	0.12	0.38	900
	68	6.3	8.7	280	0.12	0.38	900
	68	8	6.5	280	0.12	0.40	1000
	100	8	10.5	300	0.12	0.17	500
	150	8	10.5	300	0.12	0.17	500
	220	8	10.5	450	0.12	0.17	500
	330	10	10.5	670	0.12	0.09	500
	470	10	10.5	670	0.12	0.09	500
	680	12.5	13.5	820	0.12	0.07	200
	1000	16	16.5	1260	0.12	0.054	125
	1500	18	16.5	1500	0.12	0.048	125
	2200	18	21.5	1750	0.14	0.038	75
50	1	4	5.7	30	0.10	5.0	2000
	2.2	4	5.7	30	0.10	5.0	2000
	3.3	4	5.7	30	0.10	5.0	2000
	4.7	5	5.7	85	0.10	1.52	1000
	10	6.3	5.7	165	0.10	0.88	1000
	15	6.3	5.7	165	0.10	0.88	1000
	22	6.3	5.7	165	0.10	0.88	1000
	27	6.3	8.7	185	0.10	0.68	900
	33	6.3	8.7	185	0.10	0.68	900
	47	6.3	8.7	185	0.10	0.68	900
	47	8	6.5	185	0.10	0.68	1000
	56	8	10.5	300	0.10	0.34	500
	68	8	10.5	300	0.10	0.34	500
	100	8	10.5	300	0.10	0.34	500
	150	10	10.5	550	0.10	0.18	500
	220	10	10.5	550	0.10	0.18	500
	330	10	12.5	550	0.10	0.18	500
	470	12.5	13.5	650	0.10	0.12	200
	680	16	16.5	1000	0.10	0.073	125
	1000	18	16.5	1500	0.10	0.066	125
	1500	18	21.5	1620	0.10	0.05	75

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Rated Voltage (V.DC)	Capacitance (±20%) (μF)	Dimension (mm)		Electrical Characteristics			Minimum Packaging Quantity (PCS)
		ΦD	L	Rated Ripple Current 100KHz/105℃ (mA r.m.s)	tan δ (120HZ/20℃)	Impedance (100KHz) (20℃) (Ω)	
63	4.7	5	5.7	70	0.10	1.90	1000
	10	6.3	5.7	130	0.10	1.20	1000
	22	6.3	8.7	150	0.10	0.90	900
	33	8	10.5	280	0.10	0.50	500
	47	8	10.5	280	0.10	0.50	500
	100	10	10.5	450	0.10	0.25	500
	150	12.5	13.5	700	0.10	0.15	200
	220	12.5	13.5	700	0.10	0.15	200
	330	16	16.5	900	0.10	0.082	125
	470	16	16.5	900	0.10	0.082	125
	680	16	21.5	1150	0.10	0.08	75
80	22	8	10.5	130	0.08	1.30	75
	33	8	10.5	130	0.08	1.30	500
	47	10	10.5	200	0.08	0.70	500
	100	10	10.5	200	0.08	0.70	500
	150	12.5	13.5	450	0.08	0.32	500
	220	12.5	16.5	550	0.08	0.26	200
	330	16	16.5	650	0.08	0.17	150
	470	16	21.5	900	0.08	0.15	125
	680	18	21.5	950	0.08	0.15	75
100	22	8	10.5	130	0.07	1.30	500
	33	10	10.5	200	0.07	0.70	500
	47	10	10.5	200	0.07	0.70	500
	56	10	10.5	200	0.07	0.70	500
	68	12.5	13.5	500	0.07	0.32	200
	100	12.5	13.5	500	0.07	0.32	200
	120	12.5	13.5	500	0.07	0.32	200
	150	12.5	13.5	500	0.07	0.32	200
	150	12.5	16.5	600	0.07	0.30	150
	180	12.5	16.5	600	0.07	0.30	150
	220	18	16.5	920	0.07	0.15	125
	330	18	16.5	920	0.07	0.15	125