Surface Mount Type **SP-Cap**

Series: **SR, LR, SS, LS, ST, LT, CS, CT** (Low Profile Products)



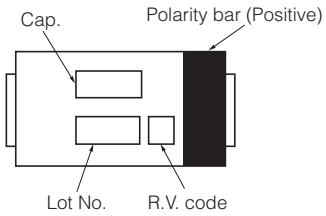
■ Features

- Low profile (1.0 mm (max.), 1.1 mm, 1.4 mm height)
- Low ESR (4.5 mΩ to 15 mΩ)
- Low ESL (3-terminals : 50% less then 2-terminals) [LR,LS,LT series]
- RoHS directive compliant

■ Specifications

Series & Size Code	SR	LR	SS	LS	ST	LT	CS	CT
Category Temp. Range	–55 °C to +105 °C							
Rated Voltage Range	2 V.DC to 6.3 V.DC		2 V.DC to 2.5 V.DC				4 V.DC to 6.3 V.DC	
Nominal Cap.Range	68 µF to 220 µF		180 µF to 220 µF		270 µF to 330 µF		68 µF to 120 µF	100 µF to 180 µF
Capacitance Tolerance	±20 % (120 Hz / + 20 °C)							
DC Leakage Current	I ≦ 0.1 CV (µA) 2minutes							
tan δ	≦ 0.06 (120 Hz/+20 °C)							
Surge Voltage	Rated Voltage × 1.25 (15 °C to 35 °C)							
Endurance	After applying rated voltage for 2000 hours at 105 °C±2 °C, and then being stabilized at +20 °C, capacitor shall meet the following limits.							
	Capacitance change		±20% of initial measured value					
	tan δ		≦ 200 % of initial specified value					
	DC leakage current		≦ 300 % of initial specified value					
Moisture resistance	After storing for 500 hours at 60 °C, 90 %							
	Capacitance change of initial measurd value		2, 2.5 V.DC	4 V.DC	6.3 V.DC			
			+70, –20 %	+60, –20 %	+50, –20 %			
	tan δ		≦ 200 % of initial specified value					
	DC leakage current		≦ Initial specified value					

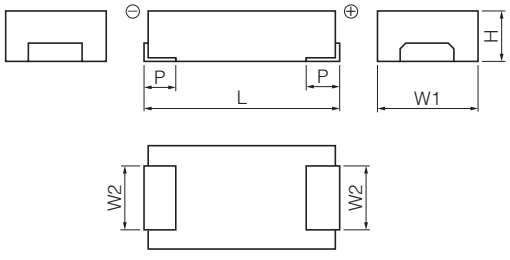
■ Marking



■ Dimensions in mm(not to scale)

(Unit : mm)

SR, SS, ST, CS, CT series

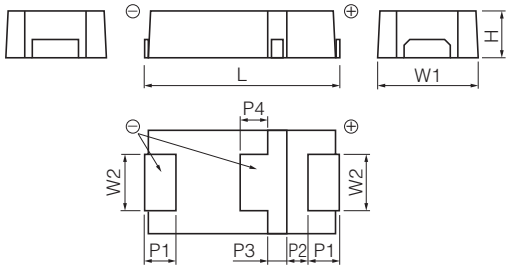


Series & Size Code	L±0.2	W1±0.2	W2±0.1	H±0.1	P±0.3
SR	7.3	4.3	2.4	1.0*1	1.3
SS, CS	7.3	4.3	2.4	1.1	1.3
ST, CT	7.3	4.3	2.4	1.4	1.3

✻ Externals of figure are the reference. ✻1 : Maximum

(Unit : mm)

LR, LS, LT series



Series & Size Code	L±0.2	W1±0.2	W2±0.1	H±0.1	P1±0.3	P2±0.1	P3±0.2	P4±0.2
LR	7.3	4.3	2.4	1.0*1	1.3	1.1	0.7	1.4
LS	7.3	4.3	2.4	1.1	1.3	1.1	0.7	1.4
LT	7.3	4.3	2.4	1.4	1.3	1.1	0.7	1.4

✻ Externals of figure are the reference. ✻1 : Maximum

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.
Should a safety concern arise regarding this product, please be sure to contact us immediately.

NEW

■ Standard Products

Reflow *3 | <Standard>

Series & Size Code	Rated Voltage (V.DC)	Capacitance (±20 %) (μF)	Case Size L (mm)	Case Size W (mm)	Case Size H (mm)	Specification *1 Ripple current (Ar.m.s.)	Specification *2 ESR (mΩ max.)	The number of terminals 2	The number of terminals 3	Part number	*4 Min. Packaging Q'ty (pcs)
SR	2	220	7.3	4.3	1.0 max.	8.5	4.5	○		EEFSR0D221R4	3500
			7.3	4.3	1.0 max.	7.5	6	○		EEFSR0D221R	3500
	2.5	180	7.3	4.3	1.0 max.	8.5	4.5	○		EEFSR0E181R4	3500
			7.3	4.3	1.0 max.	7.5	6	○		EEFSR0E181R	3500
	4	120	7.3	4.3	1.0 max.	6.3	9	○		EEFSR0G121R	3500
	6.3	68	7.3	4.3	1.0 max.	6.3	9	○		EEFSR0J680R	3500
LR	2	220	7.3	4.3	1.0 max.	8.5	4.5		○	EEFLR0D221R4	3500
			7.3	4.3	1.0 max.	7.5	6		○	EEFLR0D221R	3500
	2.5	180	7.3	4.3	1.0 max.	8.5	4.5		○	EEFLR0E181R4	3500
			7.3	4.3	1.0 max.	7.5	6		○	EEFLR0E181R	3500
	4	120	7.3	4.3	1.0 max.	6.3	9		○	EEFLR0G121R	3500
	6.3	68	7.3	4.3	1.0 max.	6.3	9		○	EEFLR0J680R	3500
SS	2	220	7.3	4.3	1.1	7.5	6	○		EEFSS0D221R	3500
	2.5	180	7.3	4.3	1.1	7.5	6	○		EEFSS0E181R	3500
LS	2	220	7.3	4.3	1.1	7.5	6		○	EEFLS0D221R	3500
	2.5	180	7.3	4.3	1.1	7.5	6		○	EEFLS0E181R	3500
ST	2	330	7.3	4.3	1.4	7.5	6	○		EEFST0D331R	3500
	2.5	270	7.3	4.3	1.4	7.5	6	○		EEFST0E271R	3500
LT	2	330	7.3	4.3	1.4	7.5	6		○	EEFLT0D331R	3500
	2.5	270	7.3	4.3	1.4	7.5	6		○	EEFLT0E271R	3500
CS	4	120	7.3	4.3	1.1	5.1	15	○		EEFCS0G121R	3500
	6.3	68	7.3	4.3	1.1	5.1	15	○		EEFCS0J680R	3500
CT	4	180	7.3	4.3	1.4	5.1	15	○		EEFCT0G181R	3500
	6.3	100	7.3	4.3	1.4	5.1	15	○		EEFCT0J101R	3500

*1: Ripple current (100 kHz/ +45 °C), *2: ESR (100 kHz/+20 °C)
*3: Please refer to the page of "Mounting Specifications".
*4: Please contact us when 500 pcs packing is necessary.

Temperature Compensation Multipliers for Ripple Current		
T ≦ 45 °C	45 °C < T ≦ 85 °C	85 °C < T ≦ 105 °C
1.0	0.7	0.25

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