

Metallized Polypropylene Film Capacitor (Axial) Snubber Application

SLW

The SLW series is a polypropylene metallized film capacitor with polyester tape wrapping filled with resin and tinned copper wires.



FEATURES

High ripple current, low losses.

High capacitance density.

Self-healing property and high reliability.

Suitable for high frequency and snubber application.

APPLICATIONS

Energy conversion.

Power semiconductor circuits.

IGBT modules protection.

ELECTRICAL CHARACTERISTICS

Rated Voltage:	850Vdc ~ 2000Vdc
Capacitance range:	0.047 μ F - 4.7 μ F
Capacitance Tolerance:	$\pm$ 5%(J), $\pm$ 10%(K)
Dissipation Factor::	$\leq$ 0.001 (0.1%) at 1KHz at 25°C
Test Voltage Between Terminal:	1.5 x rated voltage for 10s (terminal to terminal)
Test Voltage Terminals to Case:	3.0 KVac 50Hz/60Hz for 10s at 25 °C
Insulation Resistance:	IR x C $\geq$ 50,000s at 100Vdc 1 min at +25 °C
Life Expectancy:	100,000 hours at Un @ hot-spot temperature T=+85 °C
Damp Heat:	IEC 60068-2-78
Change of Temperature:	IEC 60068-2-14

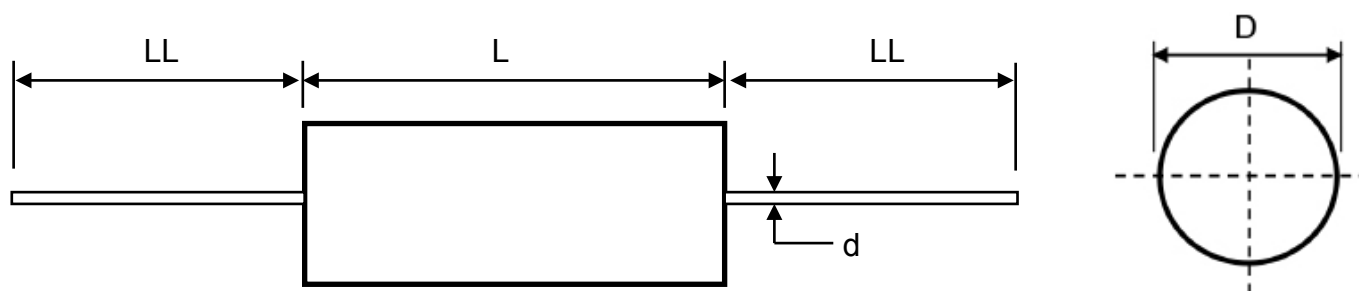
GENERAL TECHNICAL DATA

Application:	Snubber
Standard:	IEC 61071
Climatic Category:	40/85/21 IEC 60068-1
Maximum Operating Temperature:	+105°C
Upper Temperature T max:	+85°C
Lower Temperature T min:	-40°C
Protection:	Polyester wrapping filled with epoxy resin
Leads:	Tinned copper wires
Packaging:	Packed in cardboard boxes with protection for the terminals
RoHS Compliant:	Compliant with the restricted substance requirements of Directive 2002/95/EC

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■ DIMENSION



■ DIMENSION - Lead Wires

D (mm) Max	L (mm) Max	d (mm) ± 0.1	LL (mm) min
11	22	0.8	35
9.5	28	0.8	35
10 ~ 13	34	0.8	35
13.5 ~ 20.5	34	1	35
18 ~ 22.5	44	1	35
23.5 ~ 33	44	1.2	35
15 ~ 27	48	1	35
28 ~ 35	58	1.2	35

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■ DIMENSION (Part Number Reference)

Vdc	Cap	Dimensions		Irms	Peak	ESR _{Typical}	ESL	dv/dt	Pkg	Part Number
	Value	D	L	100KHz	Current	100KHz			Qty	
	uF	mm max	mm max	70°C A	A	mΩ	nH	V/us	pcs	
850	0.22	14.5	34	8	264	9.4	22	1200	184	SLW-224K2TA34LLA
850	0.22	12	44	7	154	11.3	26	700	165	SLW-224K2TA44LLA
850	0.33	17.5	34	9	396	8.8	22	1200	152	SLW-334K2TA34LLA
850	0.33	14	44	10	231	8.7	26	700	140	SLW-334K2TA44LLA
850	0.47	20.5	34	11	564	5.7	22	1200	136	SLW-474K2TA34LLA
850	0.47	16.5	44	9	329	7.2	26	700	120	SLW-474K2TA44LLA
850	0.68	19.5	44	13	476	4.6	26	700	102	SLW-684K2TA44LLA
850	1	23	44	13	700	4.7	26	700	84	SLW-105K2TA44LLA
850	1.5	28.5	44	13	1050	4.0	26	700	66	SLW-155K2TA44LLA
850	2	32	44	13	1400	4.3	26	700	60	SLW-205K2TA44LLA
850	2.2	33.5	44	14	1540	3.3	26	700	55	SLW-225K2TA44LLA
850	2.2	28.5	58	12	990	4.0	32	450	60	SLW-225K2TA58LLA
850	2.5	35.5	44	15	1750	3.7	26	700	55	SLW-255K2TA44LLA
850	2.5	30	58	15	1125	4.0	32	450	60	SLW-255K2TA58LLA
850	3	32.5	58	15	1350	3.7	32	450	50	SLW-305K2TA58LLA
850	3.3	34	58	15	1485	3.3	32	450	50	SLW-335K2TA58LLA
850	4	37.5	58	15	1800	3.3	32	450	50	SLW-405K2TA58LLA
850	4.7	40	58	15	2115	2.9	32	450	20	SLW-475K2TA58LLA
1000	0.22	16.5	34	8	286	8.5	22	1300	152	SLW-224K3AA34LLA
1000	0.33	20	34	9	429	6.5	22	1300	136	SLW-334K3AA34LLA
1000	0.33	16	44	8	264	8.3	26	800	108	SLW-334K3AA44LLA
1000	0.47	23.5	34	10	611	5.4	22	1300	120	SLW-474K3AA34LLA
1000	0.47	18.5	44	9	376	6.7	26	800	108	SLW-474K3AA44LLA
1000	0.68	22	44	12	544	5.7	26	800	84	SLW-684K3AA44LLA
1000	1	26.5	44	12	800	4.6	26	800	72	SLW-105K3AA44LLA
1000	1.5	32	44	13	1200	5.2	26	800	60	SLW-155K3AA44LLA
1000	1.5	27	58	12	750	5.6	32	500	50	SLW-155K3AA58LLA
1000	2	31	58	15	1000	4.3	32	500	50	SLW-205K3AA58LLA
1000	2.2	32	58	15	1100	3.9	32	500	50	SLW-225K3AA58LLA
1000	3	37.5	58	15	1500	3.4	32	500	50	SLW-305K3AA58LLA
1000	3.3	39	58	15	1650	3.1	32	500	20	SLW-335K3AA58LLA

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Vdc	Cap	Dimensions		Irms	Peak	ESR _{Typical}	ESL	dv/dt	Pkg	Part Number
	Value	D	L	100KHz	Current	100KHz			Qty	
	uF	mm max	mm max	70°C A	A	mΩ			pcs	
1200	0.22	18	34	9	330	7.7	22	1500	146	SLW-224K3MA34LLA
1200	0.22	14.5	44	8	198	11.0	26	900	136	SLW-224K3MA44LLA
1200	0.33	22	34	10	495	6.6	22	1500	120	SLW-334K3MA34LLA
1200	0.33	17.5	44	9	297	7.7	26	900	108	SLW-334K3MA44LLA
1200	0.47	24	44	10	423	6.8	26	900	84	SLW-474K3MA44LLA
1200	0.68	26	44	12	612	5.8	26	900	78	SLW-684K3MA44LLA
1200	1	29	44	11	900	5.0	26	900	66	SLW-105K3MA44LLA
1200	1	24.5	58	10	550	5.5	32	550	70	SLW-105K3MA58LLA
1200	1.2	32	44	11	1080	4.4	26	900	60	SLW-125K3MA44LLA
1200	1.2	26.5	58	10	660	4.8	32	550	65	SLW-125K3MA58LLA
1200	1.5	35.5	44	14	1350	3.9	26	900	55	SLW-155K3MA44LLA
1200	1.5	29.5	58	13	825	4.4	32	550	50	SLW-155K3MA58LLA
1200	2	33	58	15	1100	3.9	32	550	50	SLW-205K3MA58LLA
1200	2.2	35.5	58	15	1210	3.7	32	550	50	SLW-225K3MA58LLA
1200	3	41	58	15	1650	3.1	32	550	20	SLW-305K3MA58LLA
2000	0.047	11	44	5	56.4	30.0	26	1200	180	SLW-473K3DA44LLA
2000	0.068	16	34	7	136	16.8	22	2000	152	SLW-683K3DA34LLA
2000	0.068	13	44	6	81.6	23.3	26	1200	140	SLW-683K3DA44LLA
2000	0.1	19	34	10	200	12.0	22	2000	144	SLW-104K3DA34LLA
2000	0.1	15.5	44	9	120	17.7	26	1200	120	SLW-104K3DA44LLA
2000	0.15	18.5	44	12	180	9.5	26	1200	108	SLW-154K3DA44LLA
2000	0.22	21.5	44	13	264	8.6	26	1200	96	SLW-224K3DA44LLA
2000	0.33	26.5	44	14	396	6.7	26	1200	72	SLW-334K3DA44LLA
2000	0.47	32	44	14	564	5.6	26	1200	60	SLW-474K3DA44LLA
2000	0.56	34.5	44	15	672	5.2	26	1200	55	SLW-564K3DA44LLA
2000	0.56	29	58	15	392	6.5	32	700	50	SLW-564K3DA58LLA
2000	0.68	31	58	15	476	5.7	32	700	50	SLW-684K3DA58LLA
2000	1	37.5	58	15	700	4.7	32	700	50	SLW-105K3DA58LLA
2000	1.2	40.5	58	15	840	4.3	32	700	20	SLW-125K3DA58LLA

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PART NUMBERING SYSTEMS

■ EXPLANATION OF ARTICLE CODE

S L W -	1 0 5	K	3 A	A	4 4	L	L
①	②	③	④	⑤	⑥	⑦	⑧

① Capacitor Type

TYPE	SLW
CODE	SLW-

② Rated Capacitance (EIA Code)

The rated Capacitance value of the product is indicated with three digits. The first two digits indicate the two most significant digits of the capacitance value, and the third digit gives the number of following zeroes. This gives the capacitance value expressed in picofarads.

Examples:

105	=	1,000,000pF	=	1,000nF	=	1uF
106	=	10,000,000pF	=	10,000nF	=	10uF

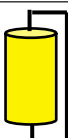
③ Capacitance Tolerance

TOLERANCE	±5%	±10%	±20%
CODE	J	K	M

④ Rated Voltage

Vac	700V	800V	850V	900V	1000V	1200V	1600V	2000V
CODE	2S	2K	2T	2U	3A	3M	3C	3D

⑤ Lead Configuration

CODE	A	V
LEAD TYPE		

⑥ Lead Pitch (L)

Lead Pitch (mm)	22.0	28.0	34.0	44.0	48.0	58.0
CODE	22	28	34	44	48	58

⑦ Lead Forming Pitch

LEAD PITCH	N/A
CODE	A

⑧ Lead Length (Straight)

LEAD LENGTH	N/A
CODE	L

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PART NUMBERING SYSTEMS

■ PERFORMANCE NOTES

Rs: Equivalent series resistance - Ohmic resistances (Ohm)

Dielectric Dissipation Factor: $\tan\delta$ (Polypropylene: 0.0002)

Ta: Ambient temperature

Rth: Thermal resistance °C/W, indicates hot spot temperature rise due to power dissipation losses

Pj: Joule losses $P_j = R_s \cdot I_{rms}^2$

Pd: Dielectric losses

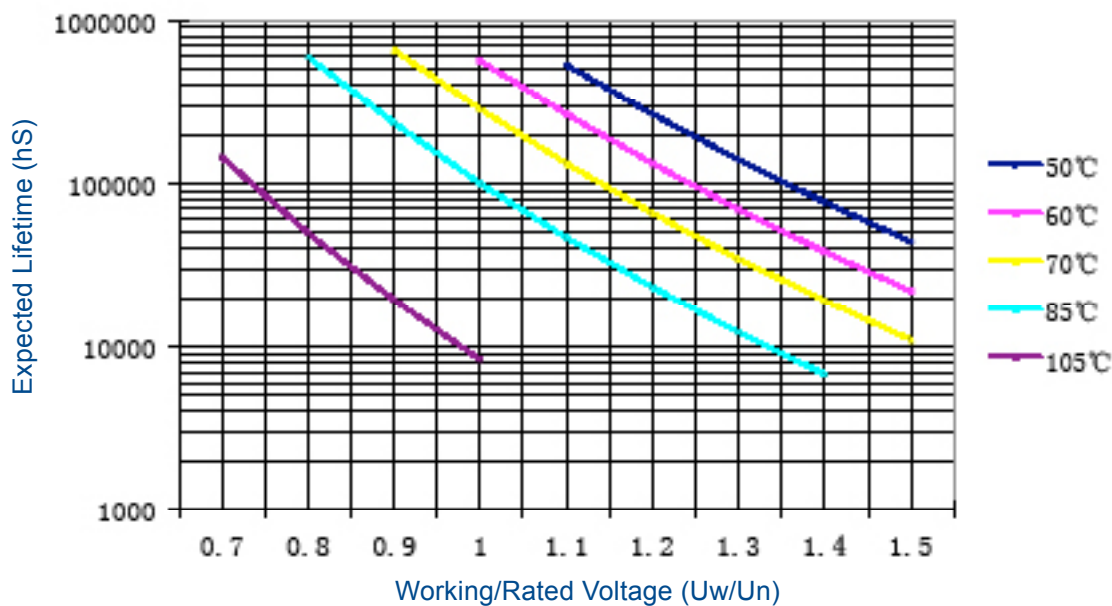
$$P_d = X_c \cdot I_{rms}^2 \cdot \tan\delta = I_{rms}^2 / (2 \cdot \pi \cdot f \cdot C) \cdot \tan\delta$$

Ths: Hot spot temperature within the capacitor

$$T_{hs} = T_a + (P_j + P_d) \cdot R_{th}$$

Design life: 100,000 hours at U_n @ Hot-Spot temperature $\leq +85^\circ\text{C}$

Expected Life Curve



■ CAUTIONS AND WARNING

- Don't exceed the upper category temperature.
- For longtime storage, maximum relative humidity 80%, no dew allowed on the capacitor.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environments regular maintenance and cleaning especially of the terminals is required to avoid conductive path between terminal / or terminal and ground.
- Don't apply any mechanical stress to the capacitor terminals, and avoid any compressive, tensile or flexural stresses.
- Don't move the capacitor after soldered to the PC board, and don't pick up the PC board by soldered capacitor.
- Don't place the capacitor on a PC board whose holes pitch differs from the specified space.
- Avoid overload of the capacitors
- Do not have unlimited service life expectancy, the max service life expectancy may vary depending on the application the capacitor is used in.