

HK Film Capacitor Limited

About HK Film Capacitor :

We specialize in designing and manufacturing Power Film Capacitor for AC and DC voltage application. Quality is our prime consideration.

Our engineers design various types of film foil capacitors to suit for various applications. Their jobs not only concentrate on the capacitor electrical characteristic performance but also mechanical and electrical connection need. Different connections and mounting options are provided to increase your design flexibility.

Most of our Power Film Capacitors can meet high RMS Current and high Voltage requirement even at 105C.

Dry Construction : Epoxy Resin with Plastic Case

Advantage for Plastic Case over Metal Can case :

- High Insulation Resistance
- Ability to withstand vibration
- Flameproof
- Plastic Case will not oxidation and against corrosion by acid and alkaline
- smaller capacitor size and light weight
- Longer Life Time

Electrical Characteristic :

Design Capacitor according to your need and meet your Capacitance, Voltage, Testing Voltage, Dissipation Factor, ESR, Size, Current Carrying Capacity, Operating Temperature, Operating Lifetime, Capacitor Mounting & Connection requirement.

Electrical Connection :

Capacitors with different connections and mounting options so as to increase your design flexibility.

- Terminations can be solder tags, single or double quick terminal, Stiff wire, Flexible wire, Twin-core cable, Tin plated copper lead wire (Box type only)
- Stiff wire, Flexible wire : UL #1015, 105C, AWG# 16, 18, 20
- Wire and Cable with receptacle, terminal or even power connectors
- Terminal type : Ring, Y or Pin terminal with various size
- Screw Terminal and Screw Nut

Brand :

HKFC

HK Film Capacitor



Power Film Capacitor :

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GTO Snubber Capacitor :

STG-01A, STG-02A, STG-03A series

This series of capacitors have been designed for high frequency, RMS Current, dv/dt and high peak current application requirement.

Application :

GTO Snubbing and protection, Thyristor controlled rectifier circuits, High Current Snubber circuit, damping of voltage spikes on GTO-Thyristor.

Traction application and Static Drive

Properties :

Very Low Losses, medium frequency range, High RMS Current Rating, High Pulse Current Rating dV/dt, High Voltage Capabilities, Temperature up to 105C, High Insulation Resistance and Flame Retardant Construction

Electrical Characteristic :

STG-01A series

Rated Voltage : 850Vdc ~ 2200Vdc / 450Vrms ~ 1000Vrms

Capacitance range : 0.5 ~ 10uF (can be customized)

Ripple RMS Current up to 75A

Smaller capacitor size and large current capacity

STG-02A series

Rated Voltage : 900Vdc ~ 1300Vdc / 500Vrms ~ 600Vrms

Capacitance range : 0.5 ~ 6uF (can be customized)

Ripple RMS Current up to 85A

For the same capacitance and voltage with larger current capacity when compare with the above series

STG-03A series

Rated Voltage : 1300Vdc ~ 2000Vdc / 700Vrms ~ 1000Vrms

Capacitance range : 0.2 ~ 1.5uF (can be customized)

Ripple RMS Current up to 90A

For the same capacitance and voltage with even higher current capacity when compare with above 2 series.

Capacitance Tolerance : +/-5%; +/-10%

Operating Temperature : -40~+105C

Testing Voltage Terminal to Terminal : Vsurge 10 sec (can be customized)

Testing Voltage Terminal to Case : 4kVrms @ 50Hz for 1min.

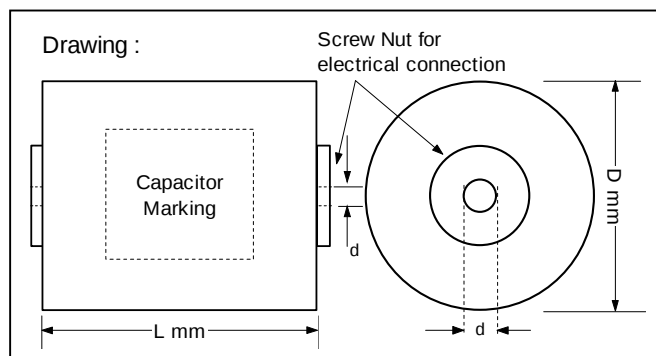
Reference Standard : IEC61071

STG-01A Vndc = 850V / Vrms = 450Vac / Vpeak = 1400V 10s / Vsurge = 1700V 10s/day

Part Number	Cn uF	Diameter D mm	Length L Mm	ESR mohm 100khz	ESL nH	dv/dt v/us 105C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-01A205J850D	2	50	51	1.2	11	730	1460	44	37	28	19	M6
STG-01A255J850D	2.5	65	51	1.1	11	730	1825	46	39	29	20	M6
STG-01A305J850D	3	65	51	1.1	11	730	2190	50	42	31	22	M8
STG-01A355J850D	3.5	65	51	1.0	11	730	2555	53	45	33	23	M8
STG-01A405J850D	4	90	51	0.8	11	730	2920	58	49	37	25	M8
STG-01A505J850D	5	90	51	0.8	11	730	3650	62	52	39	27	M8
STG-01A605J850D	6	90	51	0.7	11	730	4380	67	56	42	29	M8
STG-01A805J850D	8	90	61	0.6	13	440	3520	70	59	44	31	M10
STG-01A106J850D-S1	10	65	125	1.8	14	400	4000	90	76	57	40	M10
STG-01A106J850D-S2	10	90	61	0.5	13	440	4400	75	63	47	33	M10

STG-01A Vndc = 1000V / Vrms = 550Vac / Vpeak = 1600V 10s / Vsurge = 2000V 10s/day

Part Number	Cn uF	Diameter D mm	Length L Mm	ESR mohm 100khz	ESL nH	dv/dt v/us 105C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-01A205J1000D-S1	2	65	51	1.2	11	810	1620	46	39	29	20	M6
STG-01A205J1000D-S2	2	50	61	1.1	13	550	1100	32	27	20	14	M6
STG-01A255J1000D-S1	2.5	90	51	1.1	11	810	2025	52	44	33	23	M8
STG-01A255J1000D-S2	2.5	65	61	1.1	11	550	1375	40	34	25	17	M6
STG-01A305J1000D-S1	3	90	51	1.0	11	810	2430	58	49	37	25	M8
STG-01A305J1000D-S2	3	65	61	1.0	11	550	1650	48	40	30	21	M8
STG-01A355J1000D	3.5	90	61	0.9	11	810	2835	61	51	38	27	M8
STG-01A405J1000D	4	65	61	0.8	11	550	2200	72	61	45	32	M10
STG-01A505J1000D	5	90	61	0.7	11	550	2750	67	56	42	29	M8
STG-01A605J1000D	6	90	61	0.65	13	550	3300	70	59	44	31	M10



STG-01A V_{ndc} = 1300V / V_{rms} = 650Vac / V_{peak} = 2100V 10s / V_{surge} = 2600V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 105C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-01A504J1300D	0.5	50	51	1.4	11	900	450	22	18	14	9	M6
STG-01A105J1300D	1	65	51	1.3	11	900	900	41	34	26	18	M6
STG-01A155J1300D	1.5	65	51	1.1	11	900	1350	46	39	29	20	M6
STG-01A205J1300D	2	65	61	1.0	13	600	1200	40	34	25	17	M6
STG-01A255J1300D	2.5	65	61	0.9	13	600	1500	50	42	31	22	M8
STG-01A305J1300D	3	90	61	0.8	13	600	1800	53	45	33	23	M8
STG-01A355J1300D	3.5	90	61	0.7	13	600	2100	58	49	37	25	M8
STG-01A405J1300D	4	90	61	0.65	13	600	2400	61	51	38	27	M8
STG-01A505J1300D	5	65	125	1.9	14	480	2400	73	62	46	32	M10

STG-01A V_{ndc} = 1750V / V_{rms} = 800Vac / V_{peak} = 2600V 10s / V_{surge} = 3100V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 105C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-01A504J1750D	0.5	50	51	1.5	11	1000	500	21	17	13	9	M6
STG-01A105J1750D	1	65	51	1.1	11	1000	1000	37	31	23	16	M6
STG-01A155J1750D	1.5	65	61	1.0	13	1000	1500	33	28	21	14	M6
STG-01A205J1750D	2	90	61	0.9	13	700	1400	47	39	30	21	M6
STG-01A255J1750D	2.5	90	61	0.8	13	700	1750	53	45	33	23	M8
STG-01A305J1750D	3	90	61	0.7	13	700	2100	55	46	35	24	M8
STG-01A355J1750D	3.5	65	170	1.9	17	440	1540	65	55	41	29	M8
STG-01A405J1750D	4	65	170	1.8	17	440	1760	73	62	46	32	M10
STG-01A505J1750D	5	65	170	1.8	17	440	2200	78	66	49	34	M10

STG-01A V_{ndc} = 2200V / V_{rms} = 1000Vac / V_{peak} = 3600V 10s / V_{surge} = 4500V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 105C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-01A504J2200D	0.5	65	62	2.1	11	1250	625	31	26	19	13	M6
STG-01A804J2200D	0.8	65	100	2.1	11	800	640	35	29	22	15	M6
STG-01A105J2200D	1	65	125	2	14	520	520	37	31	23	16	M6
STG-01A125J2200D	1.2	65	125	2	14	520	624	41	34	26	18	M6
STG-01A155J2200D	1.5	65	125	2	14	520	780	50	42	31	22	M8
STG-01A205J2200D	2	65	140	1.9	18	460	920	56	47	35	25	M8
STG-01A255J2200D	2.5	65	140	1.8	20	380	950	60	51	38	26	M6

STG-02A V_{ndc} = 900V / V_{rms} = 500Vac / V_{peak} = 1400V 10s / V_{surge} = 1800V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 85C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-02A105J900D	1	50	57	1.7	11	860	860	31	24	17	10	M6
STG-02A155J900D	1.5	65	57	1.5	11	860	1290	42	33	23	14	M6
STG-02A205J900D	2	65	57	1.45	11	860	1720	46	36	25	15	M6
STG-02A255J900D	2.5	90	57	1.3	11	860	2150	52	41	29	17	M8
STG-02A305J900D	3	90	57	1.2	11	860	2580	56	44	31	18	M8
STG-02A355J900D	3.5	90	57	1.1	11	860	3010	58	46	32	19	M8
STG-02A405J900D	4	90	57	0.95	11	860	3440	62	49	34	20	M8
STG-02A505J900D	5	90	115	1	13	570	2850	80	64	44	26	M10
STG-02A605J900D	6	90	115	0.9	13	570	3420	85	68	47	28	M10

STG-02A V_{ndc} = 1000V / V_{rms} = 550Vac / V_{peak} = 1600V 10s / V_{surge} = 2000V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 85C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-02A105J1000D	1	50	57	1.8	11	900	900	33	26	18	11	M6
STG-02A155J1000D	1.5	65	57	1.6	11	900	1350	43	34	24	14	M6
STG-02A205J1000D	2	65	57	1.4	11	900	1800	48	38	26	16	M6
STG-02A255J1000D	2.5	90	57	1.3	11	900	2250	54	43	30	18	M8
STG-02A305J1000D	3	90	57	1.2	11	900	2700	58	46	32	19	M8
STG-02A355J1000D	3.5	90	57	1.1	11	900	3150	60	48	33	20	M8
STG-02A405J1000D	4	90	115	1	13	600	2400	70	56	39	23	M10
STG-02A505J1000D	5	90	115	1	13	600	3000	85	68	47	28	M10
STG-02A605J1000D	6	90	115	0.9	13	600	3600	90	72	50	30	M10

STG-02A Vndc = 1300V / Vrms = 600Vac / Vpeak = 2000V 10s / Vsurge = 2500V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 85C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-02A504J1300D	0.5	50	57	1.45	11	1000	500	22	17	12	7	M6
STG-02A105J1300D	1	50	57	1.3	11	1000	1000	36	28	20	12	M6
STG-02A155J1300D	1.5	65	57	1.25	11	1000	1500	47	37	26	15	M6
STG-02A205J1300D	2	90	57	1.2	11	1000	2000	53	42	29	17	M8
STG-02A255J1300D	2.5	90	57	1.15	11	1000	2500	58	46	32	19	M8
STG-02A305J1300D	3	90	57	1	11	1000	3000	63	50	35	21	M8

STG-03A Vndc = 1300V / Vrms = 700Vac / Vpeak = 2100V 10s / Vsurge = 2600V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 85C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-03A334J1300D	0.33	50	57	1.4	11	2100	693	40	32	22	13	M6
STG-03A504J1300D	0.5	50	57	1.2	11	2000	1000	57	45	31	19	M8
STG-03A105J1300D	1	90	57	1.1	11	2000	2000	80	64	44	26	M10
STG-03A155J1300D	1.5	90	57	1.0	11	2000	3000	90	72	50	30	M10

STG-03A Vndc = 1500V / Vrms = 750Vac / Vpeak = 2400V 10s / Vsurge = 3000V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 85C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-03A254J1500D	0.25	50	57	1.6	11	2400	600	33	26	18	11	M6
STG-03A334J1500D	0.33	50	57	1.45	11	2400	792	40	32	22	13	M6
STG-03A504J1500D	0.5	65	57	1.35	11	2400	1200	52	41	29	17	M8
STG-03A105J1500D	1	90	57	1.2	11	2400	2400	80	64	44	26	M10
STG-03A155J1500D	1.2	90	57	1.1	11	2400	2880	90	72	50	30	M10

STG-03A Vndc = 1650V / Vrms = 850Vac / Vpeak = 2600V 10s / Vsurge = 3200V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 85C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-03A254J1650D	0.25	50	57	1.45	11	2960	740	36	28	20	12	M6
STG-03A334J1650D	0.33	50	57	1.35	11	2960	976	46	36	25	15	M6
STG-03A504J1650D	0.5	65	57	1.2	11	2960	1480	59	47	33	19	M8
STG-03A105J1650D	1	90	57	1.1	11	2960	2960	80	64	44	26	M10

STG-03A Vndc = 2000V / Vrms = 1000Vac / Vpeak = 3100V 10s / Vsurge = 3800V 10s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us 85C	Peak Current I _{peak} A	Irms 70C	Irms 85C	Irms 95C	Irms 105C	d (mm)
STG-03A204J2000D	0.2	50	57	1.6	11	3720	744	35	28	19	11	M6
STG-03A224J2000D	0.22	50	57	1.5	11	3720	818	37	29	20	12	M6
STG-03A254J2000D	0.25	50	57	1.45	11	3720	930	40	32	22	13	M6
STG-03A334J2000D	0.33	65	57	1.4	11	3720	1228	45	36	25	15	M6
STG-03A474J2000D	0.47	65	57	1.3	11	3720	1748	65	52	36	21	M8
STG-03A504J2000D	0.5	90	57	1.2	11	3720	1860	69	55	38	23	M10
STG-03A684J2000D	0.68	90	57	1.1	11	3720	2530	75	60	42	25	M10

For details of individual capacitors, please feel free to contact us.

If Capacitance value, Voltage, Dimension, RMS Current, dv/dt, high peak current not listed above, please contact us for a design suited to your particular needs.

Snubber Capacitor : STP-01 series

This series of capacitors have been specially developed for medium frequency range, higher dv/dt, peak current carrying capability.

Application :

Snubber Circuit, IGBT Snubber, SCR Snubber, GTO Thyristor Snubber, Thyristor controlled rectifier circuits, High Current Snubber circuit, Reduce or eliminate voltage or current spikes, Limit dv/dt and di/dt, Motor Control and Static Drive, inverter and converter,

Construction :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

Properties :

Very Low Losses, Excellent Frequency Response, High r.m.s. Current Rating, High Pulse Current Ratings (dv/dt), High Voltage Capabilities, High Temperature, High Insulation Resistance, Non inductive, Flame Retardant Construction, Easy Installation

Electrical Connecting :

Tin plated copper lead wire / Flexible electrical lead wire

M6 / M8 / M10 build-in Threads and Nuts

Quick Terminals / Soldering tags / PCB soldering : 250 type (can be customized)

Electrical Characteristic :

Rated Voltage : 400Vdc ~ 3500Vdc / 200Vac ~ 2500Vac (can be customized)

Capacitance range : 0.01 ~ 40uF (can be customized)

Capacitance Tolerance : +/-5%; +/-10%

Equivalent Series Resistance (ESR) : measured at 25C 100kHz

Dissipation factor (DF) : <0.08% 1KHz) at 23C

Insulation Resistance : $C < 0.33\mu\text{F}$: 30,000M ohm μF 1kVdc 60sec

$C > 0.33\mu\text{F}$: 50,000M ohm μF 1kVdc 60sec

Testing Voltage : $1.75 \times U_n$ 10sec (can be customized)

Operate Temperature : -25~+70C / -40~+85C / -40~+105C

Service Life : 30,000 hours at rated Vac 70C

60,000 hours at rated Vdc 70C

Accelerated Life : 1.25 x rated DC voltage at 85C for 2,000 hours

Pulse Voltage rise & fall time dv/dt : detail information available on request

For details of individual capacitors, please feel free to contact us.



Snubber Capacitor – IGBT SMKP2 series

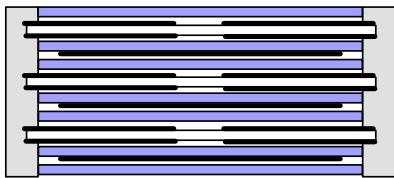
Application :

For protection against voltage and current transients in IGBT modules and applications where high dv/dt is encountered

Constructions :

- Low inductance construction
- Flame retardant plastic case and Epoxy Resin UL94V-0
- High Current carrying capacity Tinned Terminals for direct mounting the capacitor to IGBT module
- other Terminals also available

Construction : SMKP2-series



Electrical Characteristic :

Capacitance : 0.1uF ~ 3uF at 1kHz +25C

Capacitance Tolerance : +/-5%(J), +/-10% (K)

Rated Voltage Ur	1000Vdc	1200Vdc	1600Vdc	2000Vdc
	500Vac	550Vac	630Vac	650Vac

Test Voltage : between Terminals :1.6xUr Vdc for 60s +25C

Terminals to Case : 5kVac at 50Hz 60s

Dissipation Factor : $<5 \times 10^{-4}$ at 1kHz +25C

Rated Temperature : -20C ~ +85C / -40 ~ +105C

Service Life : 30,000 hours at rated Vac 70C

60,000 hours at rated Vdc 70C

Accelerated Life : 1.25 x rated Vac at 85C for 3,000 hours

1.25 x rated Vac at 105C for 1,000 hours

Equivalent Series Resistance ESR : see item table

Equivalent Series Inductance ESL : < 22nH

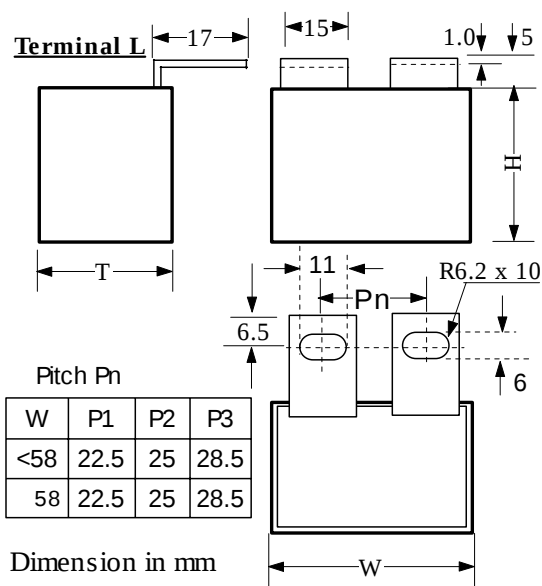
Insulation Resistance : at +25C 500Vdc 1minute.

C<0.33uF : >150,000M ohm

C>0.33uF : >50,000M ohm

Specifications and Size

Part Number	Cap	Voltage		dV/dt	Ipeak	ESR 100kHz 25C	Irms 55C	Dimension mm +/-1mm
	uF	Vdc	Vac	V/us	A	m ohm	A	W x H x T
SMKP2-154X1000DL	0.15	1000	500	800	120	9.1	7.9	45 x 32 x 22
SMKP2-224X1000DL	0.22			800	176	8.5	9.0	45 x 32 x 22
SMKP2-334X1000DL	0.33			800	264	7.6	11	45 x 32 x 22
SMKP2-474X1000DL	0.47			480	226	7.1	12.4	45 x 32 x 22
SMKP2-564X1000DL	0.56			480	269	6.9	14	45 x 32 x 22
SMKP2-684X1000DL	0.68			480	326	6.3	14.5	45 x 32 x 22
SMKP2-754X1000DL	0.75			480	360	5.6	15	45 x 32 x 22
SMKP2-105X1000DL	1.0			480	480	4.4	17.2	51 x 36 x 25
SMKP2-125X1000DL	1.2			480	576	3.6	19	51 x 36 x 25
SMKP2-155X1000DL	1.5			480	720	2.7	21.3	51 x 40 x 30
SMKP2-205X1000DL	2.0			320	640	2.5	25	59 x 45 x 35
SMKP2-225X1000DL	2.2			320	704	2.4	27	59 x 45 x 35
SMKP2-305X1000DL	3.0			320	960	2.2	29	59 x 45 x 35



Specifications and Size

Part Number	Cap	Voltage		dV/dt	Ipeak	ESR 100kHz 25C	Irms 55C	Dimension mm +/-1mm
	uF	Vdc	Vac	V/us	A	m ohm	A	W x H x T
SMKP2-154X1200DL	0.15	1200	550	900	135	9.1	8.4	45 x 32 x 22
SMKP2-224X1200DL	0.22			900	198	8.5	11	45 x 32 x 22
SMKP2-334X1200DL	0.33			900	297	7.6	11.5	45 x 32 x 22
SMKP2-474X1200DL	0.47			550	258	7.1	13.5	45 x 32 x 22
SMKP2-564X1200DL	0.56			550	308	6.9	14.2	45 x 32 x 22
SMKP2-684X1200DL	0.68			550	374	6.3	15.6	45 x 32 x 22
SMKP2-754X1200DL	0.75			550	412	5.6	16.8	51 x 36 x 25
SMKP2-105X1200DL	1.0			550	550	4.4	18.6	51 x 36 x 25
SMKP2-125X1200DL	1.2			550	660	3.6	21	51 x 40 x 30
SMKP2-155X1200DL	1.5			550	825	2.7	23	51 x 40 x 30
SMKP2-205X1200DL	2.0			350	700	2.5	28	59 x 45 x 35
SMKP2-225X1200DL	2.2			350	770	2.4	29	59 x 45 x 35
SMKP2-305X1200DL	3.0			350	1050	2.1	32	59 x 45 x 35
SMKP2-104X1600DL	0.1	1600	630	1000	100	10	9.4	45 x 32 x 22
SMKP2-154X1600DL	0.15			1000	150	8	11.5	45 x 32 x 22
SMKP2-224X1600DL	0.22			1000	220	7.5	13	45 x 32 x 22
SMKP2-334X1600DL	0.33			800	264	7.0	14	51 x 36 x 25
SMKP2-474X1600DL	0.47			800	376	6.6	16	51 x 36 x 25
SMKP2-564X1600DL	0.56			800	448	6.2	18	58 x 37 x 32
SMKP2-684X1600DL	0.68			800	544	6.0	19	58 x 37 x 32
SMKP2-754X1600DL	0.75			500	375	5.8	20	58 x 37 x 32
SMKP2-105X1600DL	1.0			500	500	3.2	23.8	58 x 37 x 32
SMKP2-125X1600DL	1.2			500	600	2.8	25	59 x 45 x 35
SMKP2-104X2000DL	0.1	2000	650	1100	110	8	10	45 x 32 x 22
SMKP2-154X2000DL	0.15			1100	165	7.5	11	45 x 32 x 22
SMKP2-224X2000DL	0.22			850	187	7	13.8	45 x 32 x 22
SMKP2-334X2000DL	0.33			850	280	6.4	16.9	51 x 36 x 25
SMKP2-474X2000DL	0.47			850	400	6	19	51 x 40 x 30
SMKP2-564X2000DL	0.56			600	336	5.5	21.5	58 x 37 x 32
SMKP2-684X2000DL	0.68			600	408	5.0	24	59 x 45 x 35
SMKP2-754X2000DL	0.75			600	450	4.2	25	59 x 45 x 35

Where X is for Capacitance tolerance : J for +/-5%, K for +/-10% and M for +/-20%

Other Capacitance, Voltage, RMS Current and Terminals is available. Please contact us for a design suited to your particular needs.

Snubber Capacitor – Axial Lead STP-01Q STP-01QE

Application :

- Protecting Thyristor against transient voltage and current
- Applications where high dv/dt is encountered
- SMPS Snubbing circuit

Constructions :

- Axial Lead Configuration with Epoxy Resin (UL94V-0)sealed at both ends
- tin plated Copper Wire for PCB soldering
- STP-01QE can have Terminals at the Electrical Wire (page 26)

Electrical Characteristic :

Capacitance : 0.01uF ~ 4.7uF at 1kHz +25C

Capacitance Tolerance : +/-5%(J), +/-10% (K)

Voltage Range :

600 Vdc	850 Vdc	1000 Vdc	1200 Vdc	1600 Vdc	2000 Vdc	3000 Vdc
275 Vac	450 Vac	500 Vac	500 Vac	630 Vac	630 Vac	750 Vac

Test Voltage : between Terminals :1.6xUn Vdc for 60s +25C

Dissipation Factor : < 0.1% at 1kHz +25C

Rated Temperature : -20C ~ +85C / -40 ~ +105C

Full rated voltage at 85C, derate linearly to 50% rated voltage at 105C.

Service Life : 30,000 hours at rated Vac 70C

60,000 hours at rated Vdc 70C

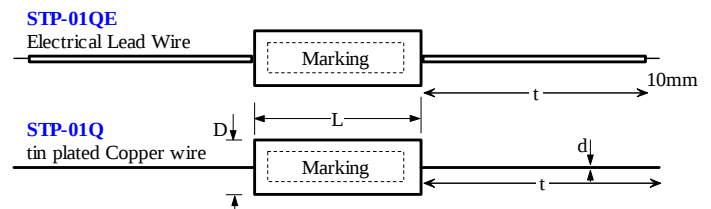
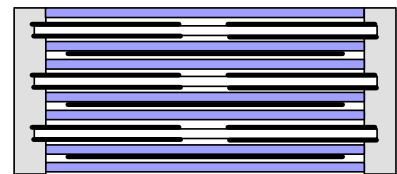
Accelerated Life :

1.25 x rated DC voltage at 85C for 2,000 hours

Insulation Resistance : >100,000Mohm*uF
at +25C 100Vdc 2minute.



Construction :



STP-01Q Specifications and Size : 600Vdc / 275Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.10	34.0	9.0	0.8	28	19	195	19.5	2.5
0.15	34.0	10.5	1.0	13	20	195	29	4.0
0.22	34.0	11.5	1.0	12	20	195	43	4.4
0.33	34.0	13.5	1.0	9	21	195	64	5.6
0.47	34.0	15.5	1.0	7	22	195	91	6.9
0.68	34.0	18.0	1.0	6	23	195	132	8.0
1.00	34.0	21.0	1.0	6	24	195	195	8.9
1.50	34.0	25.0	1.2	5	26	195	293	10.0
2.00	46.0	23.5	1.2	5	31	128	256	11.0
3.30	54.0	27.0	1.2	4	36	105	346	15.0
4.70	54.0	32.5	1.2	4	38	105	490	16.5

STP-01Q Specifications and Size : 850Vdc / 450Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.15	34.0	13.0	1.0	8	21	710	106	5.5
0.22	34.0	15.5	1.0	8	22	710	156	6.3
0.33	34.0	18.0	1.0	7	23	710	234	7.3
0.47	34.0	21.0	1.0	5	24	710	333	9.5
0.68	34.0	24.5	1.2	4	26	710	483	12.0
1.0	46.0	22.5	1.2	5	30	400	400	11.4
1.5	46.0	27	1.2	4	32	400	600	14.0
2.0	46.0	31	1.2	3	34	400	800	17.5
2.2	46.0	32	1.2	3	34	400	880	18.0
2.5	46.0	34	1.2	3	35	400	1000	19.0

STP-01Q Specifications and Size : 1000Vdc / 500Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.15	34.0	15.0	1.0	7	22	855	128	6.5
0.22	34.0	17.5	1.0	7	23	855	188	7.5
0.33	34.0	21.0	1.0	6	24	855	280	8.8
0.47	34.0	24.0	1.2	5	26	855	400	10.5
0.68	34.0	28.0	1.2	5	27	855	580	11.5
1.0	46.0	26.0	1.2	5	32	480	480	12.5
1.5	46.0	31.0	1.2	4	34	480	720	15.3
2.0	46.0	36.0	1.2	3	36	480	960	19.0

STP-01Q Specifications and Size : 1200Vdc / 500Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.10	34.0	15.5	1.0	9	22	1140	114	6
0.15	34.0	18.5	1.0	7	23	1140	170	7.5
0.22	34.0	22.0	1.0	7	24	1140	250	8.2
0.33	46.0	20.0	1.0	7	29	640	210	9
0.47	46.0	23.0	1.2	7	30	640	300	9.8
0.68	46.0	27.0	1.2	6	32	640	435	11.5
1.0	46.0	33.0	1.2	5	35	640	640	14.1
1.5	54.0	35.0	1.2	4	39	500	750	17.9

STP-01Q Specifications and Size : 1600Vdc / 630Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.10	34.0	18.0	1.0	7	25	1425	140	7.0
0.15	34.0	22.0	1.0	5	24	1425	210	9.9
0.22	34.0	26.0	1.2	7	26	1425	310	9.0
0.33	46.0	24.0	1.2	7	31	800	260	10.0
0.47	46.0	28.0	1.2	6	32	800	375	11.5
0.68	46.0	33.0	1.2	6	35	800	540	13.0
1.00	46.0	39.0	1.2	5	37	800	800	16.0
1.50	54.0	42.0	1.2	4	42	625	940	20.0
2.00	64.0	43.0	1.2	3	45	470	940	21.0

STP-01Q Specifications and Size : 2000Vdc / 630Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.022	34.0	12	1.0	35	6	1710	37	2.5
0.033	34.0	14	1.0	20	21	1710	56	3.6
0.047	34.0	15	1.0	12	22	1710	80	5.0
0.068	34.0	18	1.0	8	23	1710	116	6.6
0.10	34.0	21	1.0	7	24	1710	170	8.0
0.15	46.0	20	1.0	7	29	960	141	8.6
0.22	46.0	22	1.0	8	30	960	210	9.0
0.33	46.0	27	1.2	8	32	960	316	10.0
0.47	46.0	32	1.2	6	34	960	451	13.0
0.56	54.0	31	1.2	7	37	754	420	12.4
0.68	54.0	34	1.2	6	39	754	512	14.0
1.00	54.0	41	1.2	5	42	754	750	17.3

STP-01Q Specifications and Size : 3000Vdc / 750Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.01	34.0	12	1.0	60	20	2568	25	2
0.015	34.0	14	1.0	40	21	2568	38	2.5
0.022	34.0	16	1.0	25	22	2568	56	3.5
0.033	34.0	18	1.0	14	23	2568	84	5.0
0.047	46.0	17	1.0	14	28	1440	67	5.5
0.068	46.0	19	1.0	12	29	1440	98	6.5
0.10	46.0	23	1.2	10	30	1440	140	8.0
0.15	46.0	27	1.2	8	32	1440	210	10

Energy Storage Capacitor Pulse Grade Capacitor : STP-02 series

Application :

Electric Fence Energizer, Welding Energizer Equipment, High intensity discharge lighting, High Energy and Current Discharge applications

Construction :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

Properties :

Low D.F. & Dielectric loss, High Discharge Current & Voltage Capabilities; High Insulation Resistance; AC and DC voltage; Flame Retardant Construction; Easy Installation

Electrical Connecting :

Tin plated copper lead wire

Flexible electrical lead wire

Terminals : 250 type 6.35mm (page.25, 28 and 33)

Terminals – which can deliver larger discharge current Ipp & Ir.m.s. when compare with lead wires

Mounting : Plastic Cylindrical Case : with stud – M8 / without stud

Electrical Characteristic :

Rated Voltage : 400 ~ 1600Vdc / 220 ~ 570Vac (can customized design)

Capacitance range : 0.1uF ~ 60uF

Capacitance Tolerance : +/-5%; +/-10%

Equivalent Series Resistance (ESR) : measured at 25C 100kHz

Dissipation factor (DF) : <0.1% 1KHz) at 23C

Testing Voltage : (can be customized design)

STP-02R : $1.2 \times U_n$ 10sec 25C

STP-02QT, STP-02QL, STP-02QI : $1.6 \times U_n$ 10sec 25C

Insulation Resistance : Terminal – Terminal : 15000M ohm 1kVdc 60sec

Terminal – Case : 5000M ohm 1kVdc 60sec

Operate Temperature : -25~+85C / -40~+105C

Options :

Thermocouple can be build-in :

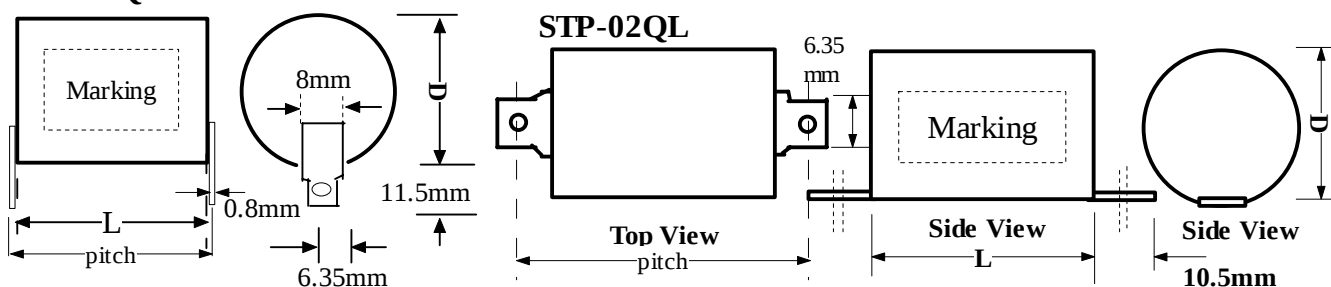
- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function



Energy Storage Capacitor - STP-02QT and STP-02QL series

- large Terminals to deliver larger discharge current Ipp and Ir.m.s. when compare with traditional copper tin wires
- for Welding Equipment and power supply application

STP-02QT



Dimension and standard value : 450Vdc / 280Vac at 70C

+/- 1mm

Capacitance uF	Diameter D mm	Length L mm	STP-02QT pitch mm	STP-02QL pitch mm	I.R in Mohm 100V	ESR 100KHz mohm	dv/dt V/us	Peak Pulse Current A 70C	r.m.s. Current A 70C
2.0uF	22.5	37.5	38.5	51.5	600,000	3.1	90	180	10A
2.2uF	23.5	37.5	38.5	51.5	600,000	3.0	90	198	10A
2.5uF	24.5	37.5	38.5	51.5	600,000	3.0	90	225	10A
3.0uF	26	37.5	38.5	51.5	600,000	3.0	90	270	10A
4.0uF	31.5	37.5	38.5	51.5	600,000	2.9	90	360	10A
6.0uF	37	37.5	38.5	51.5	600,000	2.9	90	540	12A
6.8uF	38.5	37.5	38.5	51.5	600,000	2.5	90	621	12A
8.0uF	43	37.5	38.5	51.5	600,000	2.2	90	720	12A
9.0uF	44.5	37.5	38.5	51.5	600,000	2.2	90	810	12A
10.0uF	38	49	50	63	400,000	2.3	70	700	13.5A
12.0uF	41.5	49	50	63	400,000	2.3	70	840	13.5A
15.0uF	45	49	50	63	400,000	2.0	70	1050	13.5A
17.0uF	47	49	50	63	400,000	2.0	70	1190	13.5A
20.0uF	52	49	50	63	400,000	1.8	70	1400	13.5A

Dimension and standard value : 600Vdc / 330Vac at 70C

Capacitance uF	Diameter D mm	Length L mm	STP-02QT pitch mm	STP-02QL pitch mm	I.R in Mohm 100V	ESR 100KHz mohm	dv/dt V/us	Peak Pulse Current A 70C	r.m.s. Current A 70C
2.0uF	22.5	38.5	39.5	52.5	600,000	3.1	120	240	11A
2.2uF	23.5	38.5	39.5	52.5	600,000	3.0	120	264	11A
2.5uF	24.5	38.5	39.5	52.5	600,000	3.0	120	300	11A
3.0uF	26	38.5	39.5	52.5	600,000	3.0	120	360	11A
4.0uF	31.5	38.5	39.5	52.5	600,000	2.9	120	480	11A
6.0uF	37	38.5	39.5	52.5	600,000	2.9	120	720	13.5A
6.8uF	38.5	38.5	39.5	52.5	600,000	2.5	120	816	13.5A
8.0uF	43	38.5	39.5	52.5	600,000	2.2	120	960	13.5A
9.0uF	44.5	38.5	39.5	52.5	600,000	2.2	120	1080	13.5A
10.0uF	39.5	48	49	62	400,000	2.3	100	1000	15A
12.0uF	43	48	49	62	400,000	2.3	100	1200	15A
15.0uF	47	48	49	62	400,000	2.0	100	1500	15A
17.0uF	50	48	49	62	400,000	2.0	100	1700	15A
20.0uF	54	48	49	62	400,000	1.8	100	2000	15A

For other Capacitance, Voltage and Peak Pulse Discharge Current not listed, please contact us for details.

DC Filter Capacitor / Pulse Current Capacitor : STP-03 / STP-04

- medium Frequency range and higher r.m.s. Current
- is designed for 20~100kHz frequency

Application :

For Switching Power Supply input filtering, DC blocking and output filter, welding equipment, DC Filtering application.

Construction :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

Properties :

Medium Frequency range and RMS Current Capacity; very Low Losses and Low Inductance, High Insulation Resistance; both AC and DC voltage; Flame Retardant Construction; Easy Installation

Electrical Connecting :

Large Terminals - to deliver larger discharge current I_{pp} and $I_{r.m.s.}$ when compare with traditional copper tin wires

Electrical Characteristic :

STP-03QI / STP-03QL / STP-03QT – higher RMS current

Rated Voltage : 100 ~ 400Vdc / 70 ~ 250Vac

STP-04QI / STP-04QL / STP-04QT – smaller size & higher voltage range

Rated Voltage : 250 ~ 700Vdc / 160 ~ 400Vac

Capacitance range : 1 μ F ~ 30 μ F

Capacitance Tolerance : +/-5%; +/-10%

Equivalent Series Resistance (ESR) : measured at 25C 100kHz

Dissipation factor (DF) : <0.1% 1KHz) at 23C

Testing Voltage : 2 x U_n 60sec 25C (can be customized design)

Insulation Resistance : Terminal – Terminal : 300,000M ohm 500Vdc 60sec

Terminal – Case : 5000M ohm 500Vdc 60sec

Operate Temperature : -25~+85C / -25C~+105C

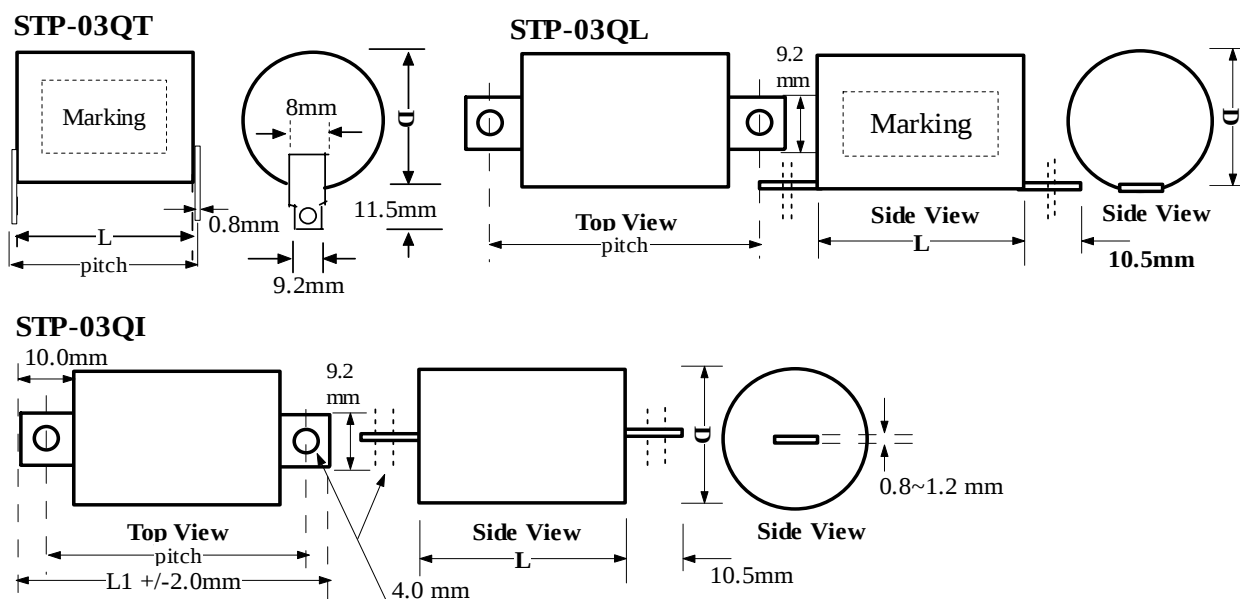
Full rated voltage at 85C, derate linearly to 50% rated voltage at 105C.

Pulse Voltage rise & fall time dV/dt : detail information available on request

Options :

Thermocouple can be build-in :

- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function



Dimension Tolerance : +/-1mm unless specify

DC Filter Capacitor / Pulse Current Capacitor - STP-03QI

Dimension and standard value : 100Vdc / 75Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	15	29	48	11	9.9	8.9	8.0	6.5	5.2	4.4	22	22	15
2.0 uF	18	31	50	12.5	11.3	10.1	9	7.2	6.4	5.5	38	19	12
2.2 uF	20	31	50	13	11.7	10.5	9.3	7.4	6.6	5.6	41	19	12
3.0 uF	21	36	55	13.5	12.2	10.9	9.8	8.8	7.7	6.5	45	15	11
3.3 uF	22.5	36	55	14	12.4	11.2	10.2	9.0	7.9	6.7	49.5	15	11
5.0 uF	25.5	36	55	15.5	13.1	11.8	10.6	9.6	8.6	7.5	75	15	10
10.0 uF	26.5	40	59	18	15.3	13.7	12.3	11.2	10.0	8.5	100	10	9
20.0 uF	33	50	69	23	19.5	17.5	15.8	14.2	12.8	11	140	7	8
30.0 uF	39	50	69	25	21.2	19.1	17.2	15.4	13.9	12.2	210	7	6

Dimension and standard value : 200Vdc / 140Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	18	31	50	8	8	8	8	8	6.8	5.4	15	15	20
2.0 uF	21.5	36	55	14.5	12.3	11	9.9	9	8.1	7.2	22	11	15
2.2 uF	22.5	36	55	15	12.7	11.5	10.3	9.2	8.3	7.3	24.2	11	15
3.0 uF	26	36	55	16	13.6	12.2	11	9.9	8.9	7.5	33	11	13
3.3 uF	27	36	55	16.5	14.8	13.3	12	10.8	9.6	7.7	36.3	11	13
5.0 uF	33	36	55	19	16.2	14.5	13	11	10	8.5	55	11	11
10.0 uF	37.5	48	67	22.5	19	17	15.5	13.9	12.5	10.6	100	10	9
20.0 uF	44.5	63	84	28	23.8	21	18.9	16	14.5	13	140	7	6

Dimension and standard value : 400Vdc / 270Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	I rms A							Peak Pulse Current A	Max. dv/dt V/us	Max. ESR @ 100KHz mohm 90C
				+25C	+45C	+55C	+65C	+75C	+85C	+90C			
1.0 uF	19.5	36	55	9.5	9.5	9.5	9.5	8.3	7.5	6.7	20	20	18
2.0 uF	22	48	67	15	15	15	14.2	12.4	10.5	8.5	32	16	15
2.2 uF	22.5	48	67	15.5	15.5	15.5	14.7	12.9	11	9.0	35	16	15
3.0 uF	26	48	67	21	17.8	16	15.2	13.7	11.6	9.6	48	16	11
3.3 uF	27	48	67	21.5	18	16.4	15	13.8	12.4	9.8	52	16	11
5.0 uF	28	63	84	24.4	20.7	18.6	16.7	15	13.5	11.5	55	11	8
10.0 uF	40	63	84	30	25.5	22.9	20.5	18.5	16.6	14.5	110	11	6

For other Capacitance, Voltage, r.m.s. Current and Peak Pulse Current not listed, please contact us for details.

DC Filter Capacitor / Pulse Current Capacitor - STP-04QI

Dimension and standard value : 250Vdc / 160Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
1	11.5	20	41	2.4	99	99	5.4
1.5	10.5	32	53	4.9	55	82.5	7.1
2.2	11.5	32	53	3.3	55	121	9.1
2.5	12.5	32	53	3	55	138	9.1
3	14	32	53	2.6	55	165	9.1
5	17.5	32	53	1.9	55	275	9.7
6.8	20.5	32	53	1.6	55	374	9.7
10	20.5	43	64	1.9	33	330	9.7
15	25	43	64	1.4	33	495	13.2
20	28.5	43	64	1.3	33	660	13.2
25	32	43	64	1.3	33	825	13.2
30	30	56	77	2.3	22	660	13.2

Dimension and standard value : 400Vdc / 250Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
0.68	10.5	32	53	6.7	77	53	6.1
1	12.5	32	53	4.6	77	77	8.1
1.5	15	32	53	3.2	77	116	9.1
2	17	32	53	2.6	77	154	9.7
2.2	18	32	53	2.5	77	169	9.7
2.5	19	32	53	2.3	77	193	9.7
3	20.5	32	53	2.1	77	231	9.7
4	20	43	64	2.7	55	220	9.7
4.7	21.5	43	64	2.4	55	259	10.8
5	22	43	64	2.3	55	275	10.8
6.8	25.5	43	64	1.9	55	374	13.2
10	30.5	43	64	1.6	55	550	13.2
15	32.5	56	77	2.8	33	495	13.2

Dimension and standard value : 600Vdc / 330Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
1	16	32	53	3.8	110	110	9.7
2	19	43	64	3.7	83	166	9.7
2.2	20	43	64	3.5	83	183	9.7
3	23	43	64	2.8	83	249	10.8
4.7	28	43	64	2.1	83	390	13.2
5	29	43	64	2	83	415	13.2
6.8	29	56	77	4.1	55	374	13.2
10	35	56	77	3.2	55	550	13.2

Dimension and standard value : 700Vdc / 400Vac

Capacitance uF	Diameter D mm	Capacitor Length L mm	Total Length L1 mm	Max. ESR @ 100KHz mohm	Max. dv/dt V/us	Peak Current A	Irms 70C 100kHz A
0.68	17.5	32	53	4.1	138	94	9.7
1	21	32	53	3.1	138	138	10.8
1.5	21	43	64	3.8	99	149	10.8
2	24	43	64	3	99	198	13.2
2.2	25	43	64	2.8	99	218	13.2
3	29	43	64	2.3	99	297	13.2
4	33.5	43	64	2	99	396	13.2
4.7	30	56	77	4.7	66	310	13.2
5	31	56	77	4.4	66	330	13.2

Snubber Capacitor, Energy Storage Capacitor, DC Filter and Pulse Capacitor – Part Number :

ST P-01 - - - - -

1 2 3 4 5 5 6 7

1 : series designation : ST

2 : basic design

P-01: Snubber Capacitor

P-02: Energy Storage Capacitor / Pulse Grade Capacitor

P-03: DC Filter / Pulse Current Capacitor – higher RMS current

P-04: DC Filter / Pulse Current Capacitor – higher voltage, smaller size

G-01: GTO Capacitor

G-02: GTO Capacitor

G-03: GTO Capacitor

3 : * Capacitor Configuration and Packaging :

A : Cylindrical plastic case with **epoxy seal at both ends** – with Tin Plated **Copper Lead Wire** at both ends

AE : Cylindrical plastic case with **epoxy seal at both ends** – with **Electrical Lead wire** at both ends

AN : Cylindrical plastic case with **epoxy seal at both ends** - with **Screw Nut** M8 etc at both ends

ANL : Cylindrical plastic case with **epoxy seal at both ends** - with **Screw Nut** M8 etc at both ends + **Mounting Foot-L** at both ends

AB : Cylindrical plastic case with **epoxy seal at both ends** - with **Screw Bolt/Thread** M8 etc at both ends

ABL : Cylindrical plastic case with **epoxy seal at both ends** - with **Screw Bolt/Thread** M8 etc at both ends + **Mounting Foot-L** at both ends

AT : Cylindrical plastic case with **epoxy seal at both ends** - with **T-Terminal Foot** at both ends for Electrical Connection and Capacitor Installation.

AL : Cylindrical plastic case with **epoxy seal at both ends** - with **L-Terminal Foot** at both ends for Electrical Connection and Capacitor Installation.

AI : Cylindrical plastic case with **epoxy seal at both ends** - with **I-Terminal Foot** at both ends for Electrical Connection and Capacitor Installation.

R : Cylindrical plastic case – with Terminals or Electrical Lead Wires at one end. Configuration STR see P30.

RC : Cylindrical - plastic case or wrapped with flame-retardant tape : epoxy end seal at one end–with **short Tin plated Copper leads for PCB mount**

RN : Cylindrical plastic case – **Screw Nuts at one end**

RB : Cylindrical plastic case – **Screw Bolt/Threads at one end**

Q : **axial** lead Cylindrical type wrapped with flame-retardant tape with **Tin plated Copper lead at both ends**

QO : **axial** lead **Oval** sharp wrapped with flame-retardant tape with **Tin plated Copper lead at both ends**

QE : **axial** lead Cylindrical wrapped with flame-retardant tape wrapped with **Electrical Lead wire at both ends**

QT : **axial** Cylindrical type wrapped with flame-retardant tape with **T-Terminal** at both ends (see page 14)

QL : **axial** Cylindrical type wrapped with flame-retardant tape with **L-Terminal** at both ends (see page 14)

QI : **axial** Cylindrical type wrapped with flame-retardant tape with **I-Terminal** at both ends (see page 14)

B : box type with Terminals

BN : Box type with screw **Nuts** at one end

BB : Box type with Screw **Bolt/Threads** at one end

BC : box type with Tin plated **Copper Lead Wires**

B : box type with **electrical lead wires**

D : epoxy dipped type – small capacitance value only

4 : capacitance : 104 : 0.1uF

105 : 1uF

106 : 10uF

5 : voltage : 180, 250, 270, 380, 400, 450, 500, 600, 660, 900, 1000, 1200, 1600, 2000, 3000

6 : A : ac voltage

D : dc voltage

DP : dc peak voltage

R : r.m.s. voltage

7 : tolerance : J : +/-5% K : +/-10%

* The above **Capacitor Configuration and Packaging Code** can be applied on most of all our capacitor series.



High Voltage Power Film Capacitor : STHVI and STHVE series

Application :

medium Frequency range and RMS Current
High Voltage Energy Storage and Discharge
DC filter circuit (Filter Capacitor)
High Voltage Decoupling
Induction heating
act as discharge capacitor to trigger laser
for high voltage capacitor bank or array
Higher Frequency, High Voltage and RMS Current application.



Features :

- Plastic enclosure : safer when compare with metal Can. This is importance especially for high voltage application.
- Dry construction : Epoxy Resin end seal and doesn't have impregnant liquid leakage problem
- Plastic enclosure and Epoxy Resin are flame retardant UL94V-0 grade
- Polypropylene film dielectric
- very low losses and low inductance
- high Insulation Resistance
- excellent Frequency Response
- high RMS Current Rating
- high peak Pulse Current Ratings (dv/dt)
- high Voltage Capabilities
- higher Temperature range
- Flame Retardant Construction
- M6, M8 and M10 screw threads/nut as capacitor electrical terminal

Electrical Characteristic :

STHV - High Voltage Film Capacitor

STHVI - High Voltage Medium Frequency Capacitor

Voltage range :

4500Vdc	6000Vdc	8000Vdc	10,000Vdc
1500Vac	2000Vac	2250Vac	2500Vac

Capacitance : 0.05uF ~ 1uF

RMS Current - Irms : up to 15Arms

peak discharge current - I peak : up to 2000A

STHVE - High Voltage Energy Storage Capacitor

Voltage range :

10,000Vdc	12,000Vdc	15,000Vdc	20,000Vdc
2000Vac	2400Vac	3000Vac	3300Vac

Capacitance : 0.033uF ~ 0.68uF

RMS Current – Irms up to 7.8A

peak discharge current - I peak : up to 2000A

high voltage range

Tol : +/-10%, +/-5% at 23C 1kHz

Standard Voltage : up to 20,000Vdc

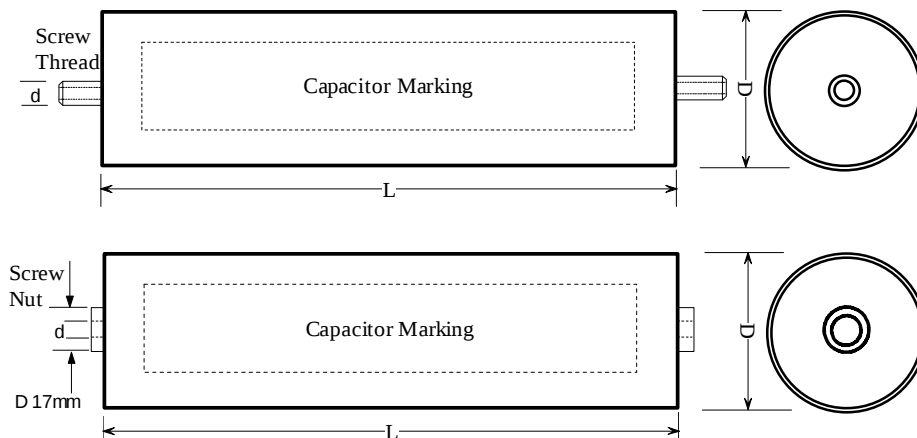
Testing Voltage : 1.3 x Un 10sec (can be customized design)

Low ESR and series Inductance

Temperature range : -40C ~ +105C

Pulse Voltage rise & fall time dV/dt : detail information available on require

Drawing :



STHVI Specifications and Size : 4500Vdc / 1500Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	I _{rms} 100kHz 100C	ESR mohm 100khz	ESL nH	Electrical connection Thread / Nut d
0.2	65	135	4500	900	8.3	8	17	M6
0.25	65	135	4500	1125	10.4	7	17	M6
0.33	65	135	4500	1485	11.4	6	17	M6
0.47	65	170	2500	1175	9.3	5.5	18	M6
0.5	65	170	2500	1250	11	5.5	18	M6
0.68	65	170	2500	1700	13.6	5	18	M6
0.75	65	170	2500	1875	14.5	5	18	M6
1.0	65	220	1560	1560	9.5	4	22	M6

STHVI Specifications and Size : 6000Vdc / 2000Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	I _{rms} 100kHz 100C	ESR mohm 100khz	ESL NH	Electrical connection Thread / Nut d
0.15	65	135	5400	810	7.6	10	17	M6
0.2	65	135	5400	1080	10	8	17	M6
0.25	65	135	5400	1350	11.4	8	17	M6
0.3	65	135	5400	1620	12.4	8	17	M6
0.33	65	170	3000	990	8.5	7	18	M6
0.47	65	170	3000	1410	11.9	7	18	M6
0.5	65	170	3000	1500	12.7	7	18	M6
0.68	65	190	2400	1632	12.5	6	20	M6
0.75	65	220	1800	1350	8.5	6	22	M6

STHVI Specifications and Size : 8000Vdc / 2250Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	I _{rms} 100kHz 100C	ESR mohm 100khz	ESL nH	Electrical connection Thread / Nut d
0.1	65	135	10000	1000	6	13	17	M6
0.12	65	135	10000	1200	6.6	13	17	M6
0.15	65	170	5650	847.5	6.3	12	18	M6
0.2	65	170	5650	1130	7.6	12	18	M6
0.25	65	170	5650	1412	8.6	12	18	M6
0.3	65	190	4500	1350	8.4	10	20	M6
0.33	65	190	4500	1485	9.1	10	20	M6

STHVI Specifications and Size : 10000Vdc / 2500Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	I _{rms} 100kHz 100C	ESR mohm 100khz	ESL NH	Electrical connection Thread / Nut d
0.05	65	165	12500	625	3.75	24	19	M6
0.075	65	165	12500	937.5	4.3	20	19	M6
0.082	65	165	12500	1025	4.7	20	19	M6
0.1	65	165	12500	1250	6.25	20	19	M6
0.12	65	215	7000	840	4.5	18	20	M6
0.15	65	215	7000	1050	5.8	18	20	M6
0.2	65	245	5600	1120	5.5	17	22	M6
0.25	65	285	4400	1100	4.3	17	24	M6

STHVE Specifications and Size : 10,000Vdc / 2000Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	Irms 100kHz 100C	ESR mohm 100khz	ESL nH	Electrical connection Thread / Nut d
0.05	65	135	7700	385	1.8	23	17	M6
0.075	65	135	7700	577	2.1	23	17	M6
0.1	65	135	7700	770	2.7	15	17	M6
0.12	65	135	7700	924	3.3	15	17	M6
0.15	65	215	4300	645	3.5	13	20	M6
0.2	65	215	4300	860	4.15	13	20	M6
0.25	65	215	4300	1075	4.6	13	20	M6
0.3	65	215	4300	1290	5.5	13	20	M6
0.33	65	215	4300	1419	6.1	13	20	M6
0.47	65	245	3400	1598	6.0	13	22	M6
0.5	65	245	3400	1700	7.3	13	22	M6
0.6	65	285	2600	1560	6.8	13	24	M6

STHVE Specifications and Size : 12,000Vdc / 2400Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	Irms 100kHz 100C	ESR mohm 100khz	ESL nH	Electrical connection Thread / Nut d
0.05	65	170	13120	656	2.5	26	19	M6
0.075	65	170	13120	984	2.85	24	19	M6
0.1	65	170	13120	1312	3.75	24	19	M6
0.12	65	215	7200	864	3.4	22	20	M6
0.15	65	215	7200	1080	4.2	22	20	M6
0.2	65	245	5788	1157	3.9	20	22	M6
0.25	65	285	4470	1117	4.3	20	24	M6
0.3	65	285	4470	1341	5.1	20	24	M6

STHVE Specifications and Size : 15,000Vdc / 3000Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	Irms 100kHz 100C	ESR mohm 100khz	ESL NH	Electrical connection Thread / Nut d
0.05	65	205	16400	820	2.7	30	21	M6
0.075	65	205	16400	1230	3.3	30	21	M6
0.082	65	260	9000	738	2	25	22	M6
0.1	65	260	9000	900	2.4	25	22	M6
0.12	65	260	9000	1080	4.2	25	22	M6
0.15	65	295	7200	1080	3.3	23	24	M6

STHVE Specifications and Size : 20,000Vdc / 3300Vac

Capacitance uF	Diameter D mm	Length L mm	dv/dt v/us 105C	I _{peak} A 105C	Irms 100kHz 100C	ESR mohm 100khz	ESL NH	Electrical connection Thread / Nut d
0.033	65	240	18000	594	2.1	34	25	M6
0.05	65	240	18000	900	3.1	34	25	M6
0.056	65	240	18000	1008	3.5	34	25	M6
0.075	65	295	10000	750	2.8	32	28	M6
0.082	65	295	10000	820	3.2	32	28	M6
0.1	65	295	10000	1000	3.85	32	28	M6

For the other Capacitance value, Voltage, Dimension, RMS Current, dv/dt, high peak current that not listed above, please contact us for a design suited to your particular needs.

Medium Power Film Capacitor – DLFF series

Application :

- Automotive and Industrial application
- Converter and Inverter circuit
- DC Link circuit
- Smoothing and Filter circuit
- can be a better replacement for electrolytic capacitor
- AC / DC application

Properties and comparison with Electrolytic Capacitor :

Use segmented self-healing metallized polypropylene film

Lower ESR and ESL

Lower dielectric and resistive loss

high Capacitance volume ratio

higher r.m.s. current per capacitance

support higher voltage range

longer application life

Non polar dielectric

Dry construction

Don't have electrolyte leakage problem

can deliver higher ripple RMS current per capacitance

Electrical Characteristic :

Rated Voltage : 600Vdc ~ 1400Vdc

Capacitance range : 50uF ~ 1100uF

Test Voltage :

Terminal to Terminal : 1.5 x rated voltage for 10 seconds at 25C

Terminal to Case : 5000Vac 60 seconds at 25C

Operate Temperature : -25 to +85C / -40C to +105C

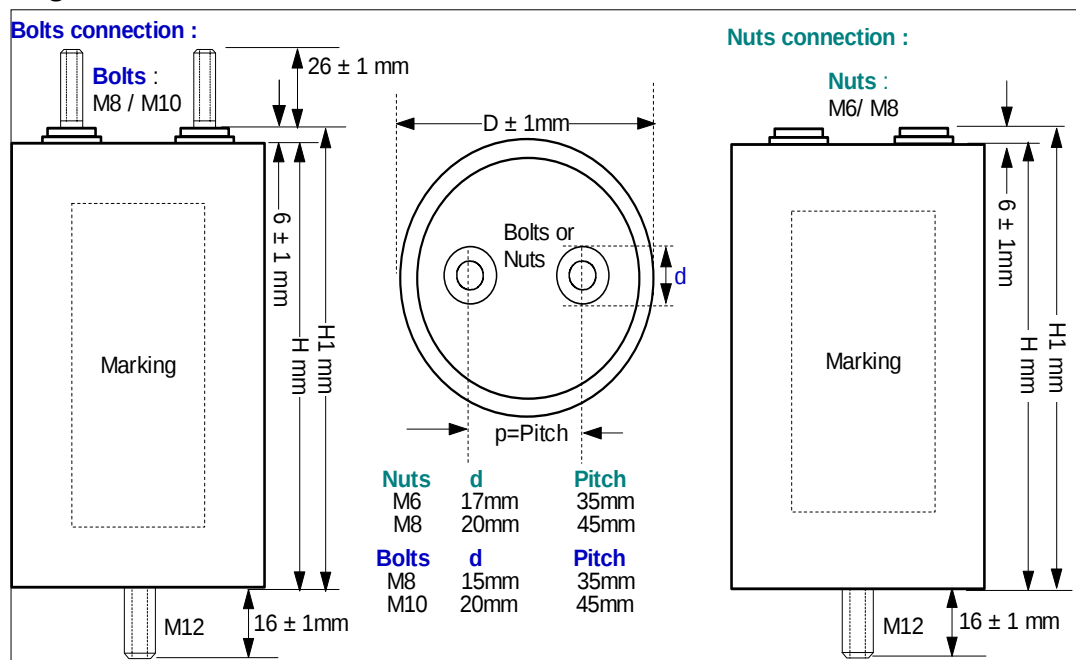
Reference Standard : IEC 61071

Options :

Thermocouple can be built-in :

- capacitor internal temperature can be measured
- output temperature signal can be used as one of reference signals in the circuit and trigger other function

Drawing :



Other voltage, Capacitance, Irms and configurations can be provided. Please contact us for details.

DLFF series**Specifications and Size : 600Vdc / 250Vac at 85C**

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
220	600	11	2420	44	37	31	22	75	115	121
250	600	11	2750	50	42	36	25	75	115	121
300	600	11	3300	60	51	43	30	90	115	121
400	600	9	3600	56	47	40	28	90	140	146
450	600	9	4050	63	53	45	32	90	140	146
500	600	8	4000	55	46	39	27	90	160	166
550	600	8	4400	61	51	44	30	90	160	166
600	600	10	6000	78	66	56	39	90	195	201
700	600	8	5600	64	54	46	32	90	250	256
800	600	8	6400	73	62	52	36	90	250	256
900	600	8	7200	82	69	59	41	90	250	256
1000	600	7	7000	72	61	52	36	90	295	301
1100	600	7	7700	80	68	57	40	90	295	301

Specifications and Size : 800Vdc / 300Vac at 85C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
150	800	15	2250	37	32	27	19	75	115	121
200	800	11	2200	35	30	25	17	75	140	146
200	800	15	3000	50	42	36	25	90	115	121
250	800	9	2250	35	29	25	17	75	160	166
250	800	11	2750	46	39	33	23	90	140	146
270	800	11	2970	37	31	27	19	75	160	166
300	800	9	2700	42	35	30	21	90	160	166
350	800	9	3150	49	41	35	24	90	160	166
400	800	13	5200	65	55	47	32	90	195	201
450	800	10	4500	52	44	37	26	90	250	256
500	800	10	5000	44	37	31	22	90	250	256
550	800	10	5500	63	53	45	31	90	250	256
600	800	8	4800	55	46	39	27	90	295	301
700	800	8	5600	64	54	46	32	90	295	301

Specifications and Size : 1000Vdc / 370Vac at 85C

Capacitance μF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
120	1000	17	2040	36	30	26	18	90	115	121
150	1000	17	2550	45	38	32	22	90	115	121
180	1000	12.5	2250	38	32	27	19	90	140	146
220	1000	11	2420	37	31	26	18	90	160	166
250	1000	15	3750	63	53	45	31	90	195	201
300	1000	11	3300	43	36	31	21	90	250	256
350	1000	11	3850	50	42	36	25	90	250	256
400	1000	10	4000	44	37	31	22	90	295	301
450	1000	10	4500	49	41	35	24	90	295	301

Specifications and Size : 1200Vdc / 420Vac at 85C

Capacitance μF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
70	1200	20	1400	25	21	18	12	75	115	121
100	1200	20	2000	35	29	25	17	90	115	121
150	1200	14.5	2175	37	31	26	18	90	140	146
170	1200	12	2040	33	28	23	16	90	160	166
200	1200	18	3600	46	39	33	23	90	195	201
220	1200	18	3960	35	29	25	17	90	195	201
250	1200	13	3250	40	34	28	20	90	250	256
300	1200	13	3900	48	40	34	24	90	250	256
320	1200	11	3500	42	35	30	21	90	295	301
350	1200	11	3850	44	37	31	22	90	295	301

Specifications and Size : 1400Vdc / 500Vac at 85C

Capacitance μF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 25C	I rms A 40C	I rms A 55C	I rms A 75C	Dimensions		
								D	H	H1
50	1400	23	1150	20	17	14	10	75	115	121
70	1400	23	1610	28	23	20	14	90	115	121
100	1400	17	1700	28	23	20	14	90	140	146
120	1400	14.5	1740	27	23	19	13	90	160	166
130	1400	14.5	1885	29	24	21	14	90	160	166
150	1400	23	3450	39	33	28	19	90	195	201
200	1400	17	3400	36	31	26	18	90	250	256
230	1400	14.5	3335	34	28	24	17	90	295	301
250	1400	14.5	3625	36	30	26	18	90	295	301
270	1400	14.5	3915	39	33	28	19	90	295	301

Specifications and Size : 600Vdc / 250Vac at 105C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
150	600	14	2100	46	41	35	29	24	11	90	115	121
200	600	14	2800	62	55	47	40	32	16	90	115	121
250	600	11	2750	55	49	42	35	28	14	90	140	146
270	600	11	2970	59	53	45	38	30	15	90	140	146
300	600	11	3300	63	56	48	41	32	16	90	140	146
350	600	13	3850	70	63	53	46	36	18	90	195	201
400	600	13	5200	80	72	61	52	41	21	90	195	201
450	600	10	4500	64	57	49	41	33	16	90	250	256
500	600	10	5000	70	63	53	46	36	18	90	250	256
550	600	10	5500	77	69	59	50	40	21	90	250	256
600	600	10	6000	85	76	65	55	44	22	90	250	256

Specifications and Size : 800Vdc / 300Vac at 105C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
120	800	17	2040	44	39	34	28	22	11	90	115	121
150	800	17	2550	54	48	41	35	28	14	90	115	121
180	800	12.5	2250	45	40	34	29	23	11	90	140	146
220	800	15	3300	58	53	45	38	30	15	90	195	201
250	800	15	2750	67	60	51	44	35	17	90	195	201
300	800	11	3300	57	51	43	37	29	14	90	250	256
350	800	11	3850	66	59	50	43	34	17	90	250	256
400	800	9	3600	56	50	43	36	29	14	90	295	301
450	800	9	4050	63	56	48	41	32	16	90	295	301

Specifications and Size : 1000Vdc / 350Vac at 105C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
60	1000	31	1860	42	37	32	27	21	10	90	90	96
70	1000	31	2170	49	44	37	31	25	12	90	90	96
100	1000	20	2000	42	37	32	27	21	10	90	115	121
170	1000	18	3060	53	53	45	38	30	15	90	195	201
200	1000	18	3600	63	56	48	41	32	16	90	195	201
220	1000	13	2860	48	43	37	31	25	12	90	250	256
250	1000	13	3250	56	50	43	36	29	14	90	250	256
300	1000	11	3300	48	43	37	31	25	12	90	295	301
320	1000	11	3520	52	46	39	33	27	13	90	295	301

Specifications and Size : 1200Vdc / 400Vac at 105C

Capacitance uF	Voltage Vdc	Dv/dt V/us	Peak Current A	I rms A 40C	I rms A 55C	I rms A 75C	I rms A 85C	I rms A 90C	I rms A 105C	Dimensions		
										D	H	H1
50	1200	35	1750	38	34	29	24	19	10	90	90	96
70	1200	23	1610	32	29	24	21	16	8	90	115	121
100	1200	17	1700	33	29	25	21	17	8	90	140	146
130	1200	21	2730	45	40	34	29	23	11	90	195	201
150	1200	21	3150	51	46	39	33	27	13	90	195	201
200	1200	15	3000	50	45	38	32	26	13	90	250	256
225	1200	13	2925	41	36	31	26	21	10	90	295	301
230	1200	13	2990	42	37	32	27	21	10	90	295	301
250	1200	13	3250	45	40	34	29	23	11	90	295	301
270	1200	13	3510	49	44	37	31	25	12	90	295	301

RC Snubber Network : - STRC series

Application :

Interference suppression; elimination of spark and transient phenomena in power switch and relay; arc suppressing for industrial heavy duty application; electrical automation control, starting, stopping, regulating or protecting electric motors

Transient and dV/dt suppression for power Thyristor and Triacs in snubber circuit

Fan Speed Regulator and Motor Speed Regulator

Suitable for AC and DC voltage application

Construction :

Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

Mounting system :

Cylindrical Plastic Case : with Stud - M8 or without Stud (see P.30)

Box Plastic Case: Screw mounting hole / without Screw mounting hole(see p.33)

Electrical Characteristic :

Capacitance value : 0.1 ~ 2.0 μ F

Voltage : 125Vac, 220Vac, 240Vac, 480Vac, 600Vac

Resistance and rate power of the Resistor : customer design, 1/4W ~ 100W

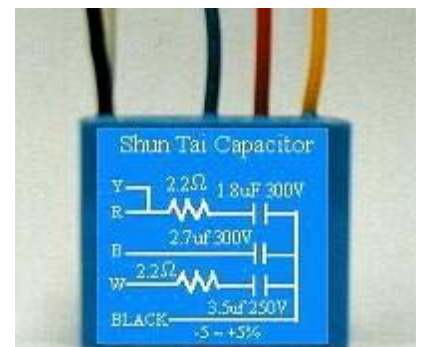
Operating temperature : -25 ~ +85C / -40 ~ +105C

Testing Voltage : : 1.5 x U_n 10sec (can be customized design)

Varistor options available

Circuit :

connection for Resistor and Capacitor : series, parallel or three phase



The combination of Capacitance value, Voltage, Resistor type, Resistance, Power Rating and Dimension, please contact us for a design suited to your particular needs.

Feed Through Capacitor : - STF-series

Application :

- High Frequency and High Current AC, DC filter circuit
- EMC Filter application

Specification :

- high feed through current capacity
- Contact Surface Area : reinforced, flat and even design
- large contact surface area
- can withstand stronger external force
- very low losses and low inductance
- high Insulation Resistance
- not easy to oxidation – lower contact resistance
- will not flashover on the contact surfaces
- Solderable

Construction :

- Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility
- wrap with flame-retardant tape + strong Contact Surface Area

Electrical Characteristic :

Capacitance : 0.1uF ~ 20uF

Tolerance : +/-10%, +/-5% at 23C 1kHz

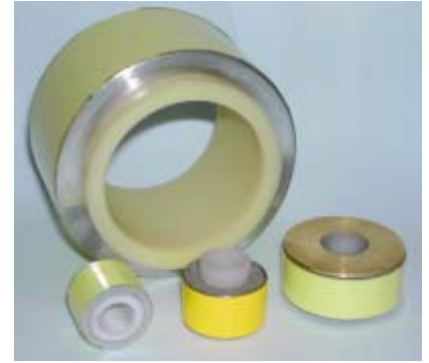
Voltage : AC & DC is available,
48Vac ~ 1200Vac
100Vdc ~ 3000Vdc

Testing Voltage :

- DC Voltage : $1.6 \times U_n$ 60sec (can be customized design)
- AC Voltage : according to EN132400 (can be customized design)
- according to X1, X2, Y1 and Y2

Temperature range : -25 ~ +70C / -40 ~ +85C (full voltage rating)

Pulse Voltage rise & fall time dv/dt : detail information available on request.



The combination of Capacitance value and Voltage or should there be a Dimensional constraint, please contact us for a design suited to your particular needs.

High Power Filter Capacitor : - STFC-series

Application :

- High Frequency and Current AC, DC filter circuit;
- act as discharge capacitor to trigger laser or energy storage function
- EMC Filter application
- Voltage Converters and Frequency Converters
- Traction drives and Industrial drives
- UPS and Equipment

Electrical Connecting and Mounting:

- high current carrying capacity construction
- copper terminal tab
- copper M6, M8, M10 screw nut
- Contact Surface Area : reinforced, flat and even design

Construction :

- Axial Thermoplastic case with Epoxy Resin end sealed : so that the capacitor can be operated at a higher temperature range and harsh working environment (all plastic parts and epoxy resin being used are self-extinguishing UL94V-0 grade)
- Supporting different Capacitor Configuration, electrical connections and mounting options so as to increase your design flexibility

Electrical Characteristic :

Capacitance : 3uF – 100uF

Tol : +/-10%, +/-5% at 23C 1kHz

Voltage : 200V – 2150V

Testing Voltage :

- DC Voltage : $1.5 \times U_n$ 30sec (can be customized design)
- AC Voltage : according to EN61071 (can be customized design)
- Terminal ~ Case : $2 \times U_n + 1000\text{Vac}$ 60 seconds

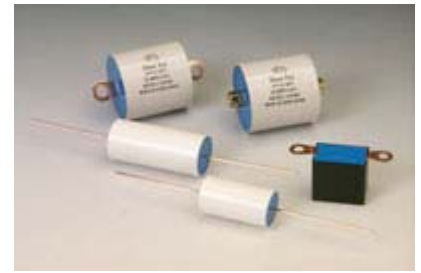
very low losses and low inductance

High Current carrying capacity

Thermoplastic case pot with UL90V-0 epoxy – so that the capacitor can be operated at a higher temperature range and harsh working environment

Temperature range : -25 ~ +85C / -40 ~ +105C

Pulse Voltage rise & fall time dv/dt : detail information available on request



The combination of Capacitance value and Voltage or should there be a Dimensional constraint, please contact us for a design suited to your particular needs.

Motor Run Capacitor : – continuous operation

Typical Application :

Motor Run Capacitor – ideal for various motor applications in washing machine, air conditioner, electric water pump, power factor collection

By connecting the capacitor in series with the starting winding motor, allow motors with two or three windings to function on a single-phase supply.

Construction :

Self-healing, low dielectric loss metallized polypropylene

Cylindrical or Box Plastic Case : self-extinguishing (UL94-V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Epoxy Resin : self-extinguishing (UL94-V0 grade)

Size : Cylindrical : Diameter : 30-65mm / High : 65-118mm

Box : Width: 32-60mm High: 20-38mm Thickness: 14-26mm

Electrical Connecting :

Soldering terminal

Single or double quick terminal

Stiff wire

Flexible wire

Twin-core cable

Wire or cable with receptacle or terminal

Tin plated copper lead wire (Box type only)

Mounting system :

Cylindrical Plastic Case : with Stud - M8 / without Stud

Box Plastic Case : Screw mounting tab / without Screw mounting tab

Properties :

Low Dissipation Factor, high Insulation Resistance, Self-Healing, Non inductive, long operating time

Providing different connections and mounting options so as to increase your design flexibility.

Safety Class : P0 P1 P2

Reference standard :

EN60252-1994, VDE0560-8, IEC.252-1993, UL810, CSA C 22.2, JIS : 4908-1995

Electrical Characteristic :

Capacitance range : 2.5 - 100uF

Rated Voltage : 370Vac, 400Vac, 450Vac, 500Vac, 600Vac, 650Vac

Capacitance Tolerance : +/-5%; +/-10%

Dissipation factor (DF) < 0.002 at 23C 50/60Hz

I.R. : Terminal – Terminal >5000 ohm uF

Terminal – Case >1000M ohm uF

Min. / Max. Operate Temperature : -25~+85C / -40~+105C

Rated frequency : 50 ~ 60Hz

Testing Voltage : Terminal – Terminal : $2.15 \times U_n$ 10sec (can be customized design)

Terminal – Case : 3000AC 10sec

Maximum Permissible Overvoltage : 110% of rated voltage

Maximum Permissible Overcurrent : 130% of rated current

Maximum Permissible Reactive output (Voltage-Ampere) : 135% of rated Volt-Ampere

Pulse Voltage rise & fall time dV/dt : detail information available on request

Life Expectancy :

Class A	Class B	Class C	Class D
30,000hrs	10,000hrs	3,000hrs	1000hrs



The combination of Capacitance value and Voltage or should there be a dimensional constraint, please contact us for a design suited to your particular needs.

Cylindrical Capacitor Configuration - Electrical Connection and Mounting :

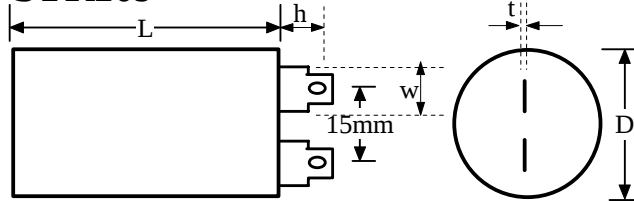
Quick Terminal : 187 : w4.75 x h10 x t0.5mm

250D / 250S : w6.35 x h10 x t0.8mm

Solder Terminal : T280 : w2 + 2.8 x h12 x t0.5mm - pulse grade capacitor only

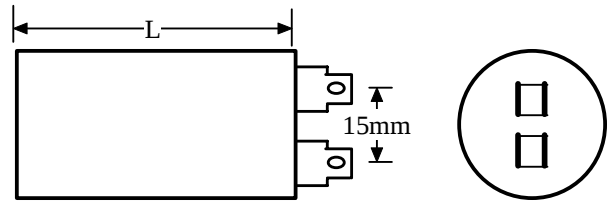
Electrical Wire length : 100mm, other length is available;
6.35mm female terminals (optional)

STR10s



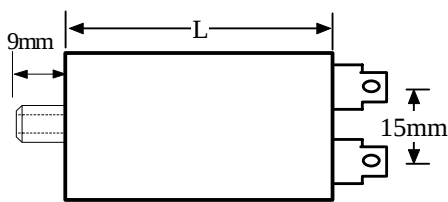
single quick terminal

STR10d



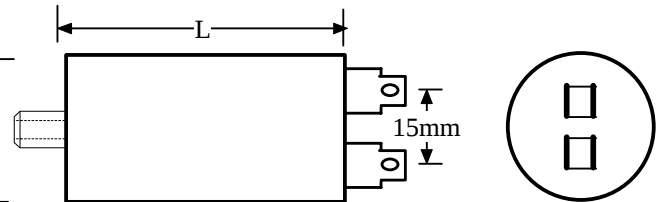
double quick terminal

STR14s



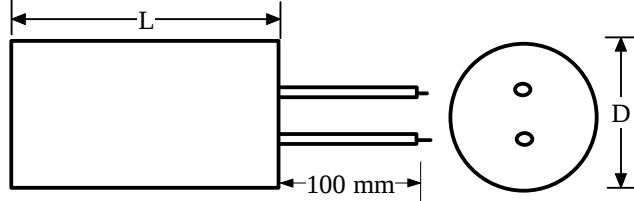
M8 stud with
single quick terminal

STR14d



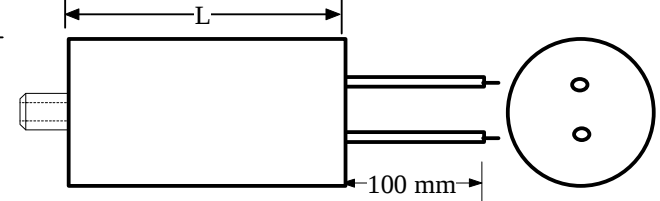
M8 stud with
double quick terminal

STR20



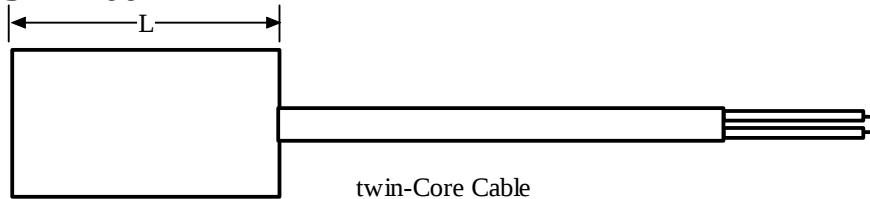
electrical wire

STR24

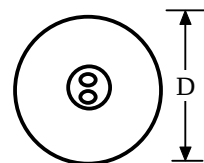


M8 stud with
electrical wire

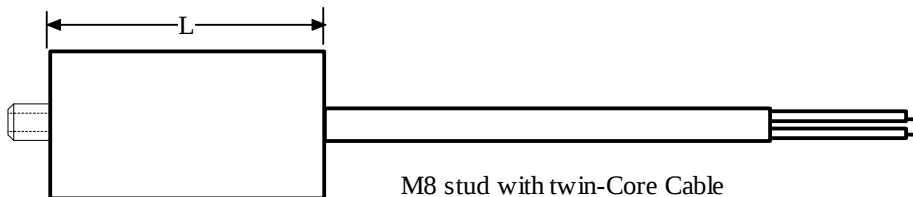
STR20t



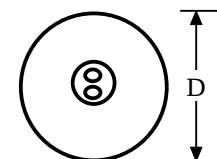
twin-Core Cable



STR24t



M8 stud with twin-Core Cable



: Optional Faston Terminal 6.35mm for STR-20, STR-24,
there are some other Terminals for your choice, please refer to page 34

Detail drawing for the Tab Terminal, please refer to page 33.

The above packaging configuration can be applied for all cylindrical type capacitors.

Cylindrical Motor Capacitor dimension :

	Dimension : Diameter x Length in mm	
Capacitance uF	250Vac	400Vac
4uF	30 x 55	30 x 55
5uF	30 x 55	30 x 55
6uF	30 x 55	30 x 55
7uF	30 x 55	30 x 55
8uF	30 x 55	30 x 55
9uF	30 x 55	35 x 55
10uF	30 x 55	35 x 55
12uF	30 x 55	35 x 55
15uF	35 x 55	35 x 73
20uF	35 x 73	40 x 73
25uF	35 x 73	40 x 73
30uF	35 x 73	45 x 73
35uF	40 x 73	45 x 73
40uF	40 x 73	45 x 93
45uF	45 x 93	45 x 93
50uF	45 x 93	45 x 128
55uF	45 x 93	45 x 128
60uF	45 x 93	45 x 128
70uF	45 x 128	
80uF	45 x 128	

Motor Run Capacitor : box type :

Typical Application :

This series of Motor Run Capacitors are specially designed for AC mini motors and electrical apparatus.

Applications like Electric Fan, Ceiling Fan, Bread Maker and Home Appliance.

Features :

high Insulated Resistance

loss dielectric loss : less electrical energy loss by the capacitor during operation

stable temperature characteristic : dissipation factor and capacitance remain stable and will not be changed by ambient temperature

Construction :

Self-healing low, loss metallized polypropylene

Box Plastic Case and Epoxy Resin : self-extinguishing (UL-94V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Electrical Connecting :

Soldering terminal

Single or double quick terminal

Stiff electrical wire

Flexible electrical wire

Electrical wire with receptacle or terminal

Tin plated copper lead wire (Box type only)

Mounting system :

Screw mounting tab / without Screw mounting tab

Properties :

Low Dissipation Factor, high Insulation Resistance, Self-Healing, Non inductive, long operating time

Providing different connections and mounting options so as to increase your design flexibility.

Reference standard :

EN60252-1994, VDE0560-8, IEC.252-1993, UL810, CSA C 22.2, JIS : 4908-1995

Safety Class : P0 P1 P2

Electrical Characteristic :

Capacitance range : 1 ~ 35uF

Rated Voltage : 250Vac, 370Vac, 400Vac, 450Vac

Capacitance Tolerance : +/-5%

Dissipation factor (DF) < 0.002 at 23C 50/60Hz

I.R. : Terminal – Terminal >100M ohm uF at 100VDC 1min.20C

Terminal – Case >200M ohm uF at 500VDC 1min.20C

Min. / Max. Operate Temperature : -25~+70C / -40~+85C

Rated frequency : 50 ~ 60Hz

Testing Voltage : Terminal – Terminal : $2.15 \times U_n$ 10sec (can be customized design)

Terminal – Case : 3000AC 10sec



Box Type Capacitor Configuration - Electrical Connection and Mounting :

Box type : STA and STB series

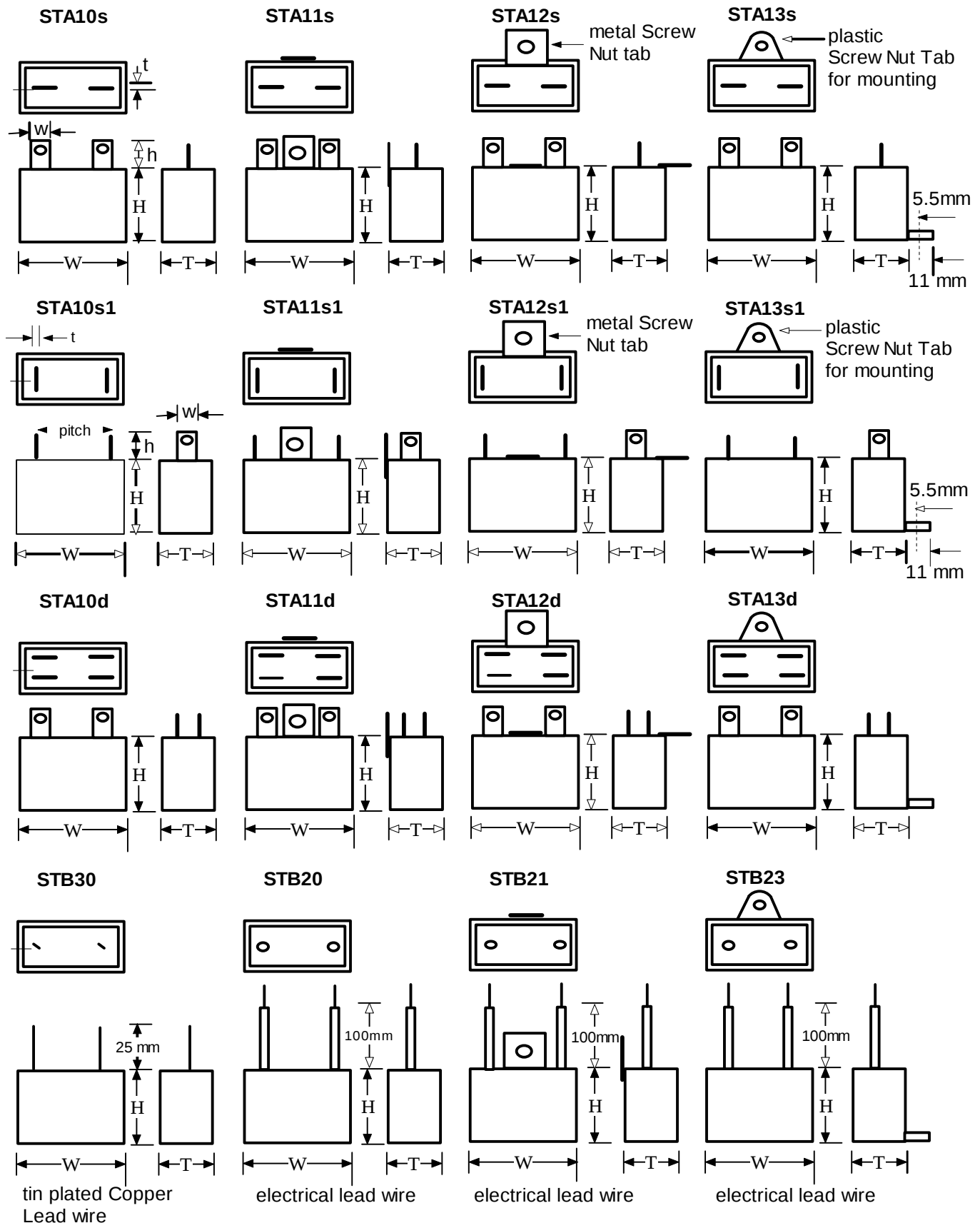
Quick Terminal : 187 type : w4.75 x h10 x t0.5mm

250 type : w6.35 x h10 x t0.8mm

Solder Terminal : T1 type : w4 x h8 x t0.5mm

Tin Plated Copper Lead

standard electrical lead wire length : 100mm, other length is available



The above packaging configuration can be applied for all plastic box type capacitor.

Motor Run Capacitor Box type : STA and STB series size :

Dimension in mm

Capacitance: uF	Rated Voltage														
	250Vac			300Vac			350Vac			400Vac			450Vac		
	W	T	H	W	T	H	W	T	H	W	T	H	W	T	H
1.0	32	11	21	37	13.5	25	37	13.5	25	37	13.5	25	37	14.5	25
1.5	32	11	21	37	13.5	25	37	13.5	25	38	18	29	38	18	29
2.0	32	11	21	37	13.5	25	38	18	29	38	18	29	50	20	30
2.5	32	11	21	37	14.5	26	38	18	29	50	20	30	50	20	30
3.0	32	13	23.5	38	18	29	37	19	29	50	20	30	51	22	32
3.5	32	13	23.5	38	18	29	50	20	30	50	20	30	58	23	35
4.0	37	14	25	37	19	29	50	20	30	51	22	32	58	23	35
4.5	37	13.5	25	50	20	30	50	20	30	58	23	35	58	23	35
5.0	37	13.5	25	50	20	30	51	22	32	58	23	35			
5.5	37	13.5	25	50	20	30	51	22	32	58	23	35			
6.0	37	14.5	26	51	22	32	58	23	35	58	23	35			
6.5	38	18	29	51	22	32	58	23	35	58	23	35			
7.0	38	18	29	51	22	32	58	23	35						
8.0	38	18	29	58	23	35	58	23	35						
9.0	37	19	29	58	23	35									
10.0	50	20	30	58	23	35									
11.0	50	20	30	58	23	35									
12.0	50	20	30												
13.0	50	20	30												
14.0	50	20	30												
15.0	50	22	32												
16.0	50	22	32												

Other combination of Capacitance value and Voltage or should there be a dimensional constraint, please contact us for a design suited to your particular needs.

Motor Run Capacitor – Part Number System :

ST _ _ _ _ - _ _ _ _ _
1 2 3 4 a 5 5 5 6 6 6 7 8

- 1 : series designation
ST
- 2 : basic design
 - A: capacitors with Tab Terminal - Box
 - B: capacitors with Leads - Box
 - R: capacitors with cylindrical shaped enclosure
- 3 : electrical connection
 - 1. tab terminals
 - 2. standard copper leads
 - 3. Tin-plated copper wire
- 4 : mounting means
 - 0. with no mounting design
 - 1. straight mounting tab – Box type
 - 2. angled mounting tab – Box type
 - 3. integral flat mounting bolt of enclosure – Box type
 - 4. integral threaded mounting bolt of enclosure – cylindrical type
- a. : Terminals and Electrical Wires type – electrical connection
 - single terminal - s
 - double terminal - d
 - Twin-core cable (cylindrical type) - t
 - Stiff wire (cylindrical type) - w
 - Flexible wire (cylindrical type) - f
 - Wire or cable with receptacle or terminal : t, w, f + terminal code
- 5 : capacitance
 - 105 : 1uF
 - 106 : 10uF
 - 107 : 100uF
 - 108 : 1000uF
- 6 : voltage : AC voltage
 - 220V 250V 370V 400V 450V 500V 600V 630V 800V
- 7 : tolerance
 - J : +/-5% K : +/-10%
- 8 : Safety Class :
 - nil: - P0
 - P1 : - P1
 - P2 : - P2



Capacitors Module :

Dual-Capacitance Capacitor :

This series of Motor Run Capacitors content two independent capacitors in a single-housing.

A typical application is in the air conditioning units where capacitors are required for both compressor and fan motors.

Construction :

Self-healing, low loss metallized polypropylene

Cylindrical or Box Plastic Case : self-extinguishing (UL94-V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Resin : self-extinguishing (UL94-V0 grade)

Size : Diameter : 30-65mm / High : 65-118mm

Box : Width: 32-60 High: 20-38 Thickness : 14-26mm

Properties :

Non inductive, Low Dissipation Factor, high Insulation Resistance, Self-Healing, spaces efficient.

Providing different connections and mounting options so as to increase your design flexibility.

Electrical Connecting :

Soldering terminal

Quick terminal

Stiff wire

Flexible wire

Core cable

Wire or cable with receptacle or terminal

Tin plated copper lead wire (Box type only)

Mounting system :

Cylindrical Plastic Case : with Stud -M8 / without Stud

Box Plastic Case : Screw mounting tab / without Screw mounting tab

Reference standard :

EN60252-1994, UL810, CSA C 22.2, JIS : 4908-1995

Electrical Characteristic :

Capacitance range : 0.1uF ~ 10uF + 0.1uF ~ 60uF

Rated Voltage : 125Vac, 220Vac, 250Vac, 370Vac, 400Vac, 450Vac, 500Vac, 600Vac

Circuit for the capacitors can be customized design

Capacitance Tolerance : +/-5%; +/-10%

Dissipation factor (DF) < 0.002 at 23C 50/60Hz

I.R. : Terminal – Terminal >5000M ohm uF

Terminal – Case >1000M ohm uF

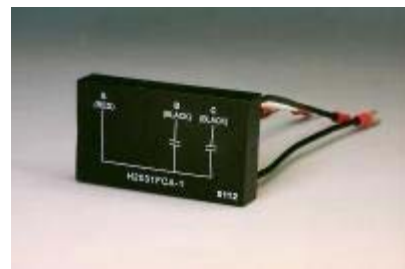
Min. / Max. Operate Temperature : -25~+85C / -40~+105C

Rated frequency : 50 ~ 60Hz

Testing Voltage : Terminal – Terminal : $2.15 \times U_n$ 10sec (can be customized design)

Terminal – Case : 3000AC 10sec

Pulse Voltage rise & fall time dV/dt : detail information available on request



The combination of Capacitance value, Voltage, Dimension or even connection between Capacitors, please contact us for a design suited to your particular needs.

Multi-Capacitance Capacitor :

This series of Capacitors are intent to provide more than two capacitance in a single-housing.

Suitable for multi-speed control or improve output torque for Motor - Fan Speed Regulator and Motor Speed Regulator

Construction :

Self-healing, low loss metallized polypropylene

Cylindrical or Box Plastic Case : self-extinguishing (UL94-V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Resin : self-extinguishing (UL94-V0 grade)

The inner connection and the capacitance can be tailor made according to the application

Properties :

Non inductive, Low Dissipation Factor, high Insulation Resistance, Self-Healing, spaces efficient.

Providing different connections and mounting options so as to increase your design flexibility.

Electrical Connecting :

Soldering terminal

Quick terminals

Stiff wire

Flexible wire

core cable

Wire or cable with receptacle or terminal

Tin plated copper lead wire (Box type only)

Mounting system :

Cylindrical Plastic Case : with Stud - M8 / without Stud

Box Plastic Case : Screw mounting tab / without Screw mounting tab

Reference standard :

EN60252-1994, UL810, CSA C 22.2, JIS : 4908-1995

Electrical Characteristic :

Capacitance range : customer design

Rated Voltage : 125Vac, 220Vac, 250Vac, 370Vac, 400Vac, 450Vac, 500Vac, 600Vac

Circuit for the capacitors can be customized design

Capacitance Tolerance : +/-5%; +/-10%

Dissipation factor (DF) < 0.002 at 23C 50/60Hz

I.R. : Terminal – Terminal >5000M ohm uF Terminal – Case >1000M ohm uF

Min. / Max. Operate Temperature : -25~+70C / -40~+85C

Rated frequency : 50 ~ 60Hz

Testing Voltage : Terminal – Terminal : $2.15 \times U_n$ 10sec (can be customized design)

Terminal – Case : 3000AC 10sec

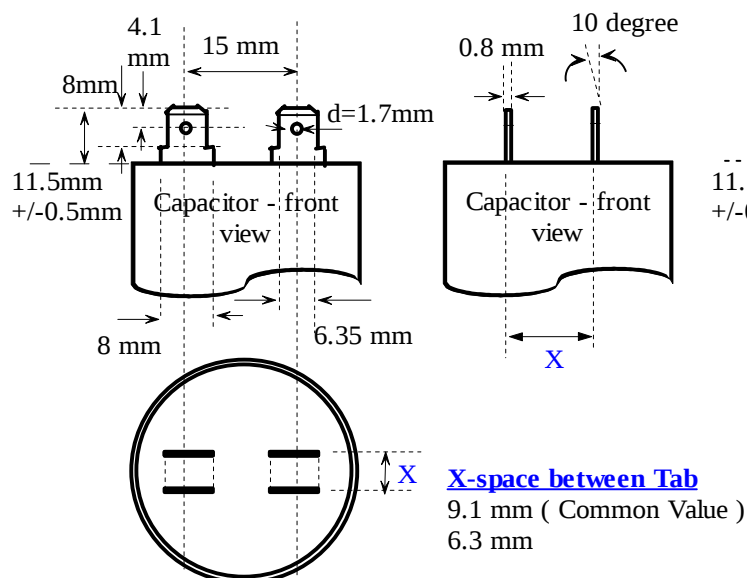
Pulse Voltage rise & fall time dV/dt : detail information available on request



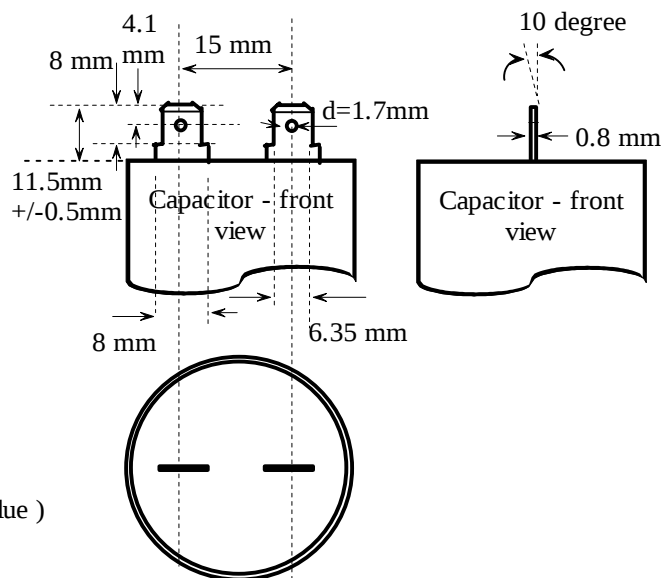
The combination of Capacitance value, Voltage, Dimension or even connection between Capacitors, please contact us for a design suited to your particular needs.

Cylindrical Capacitor Tab Terminals Size and Drawing :

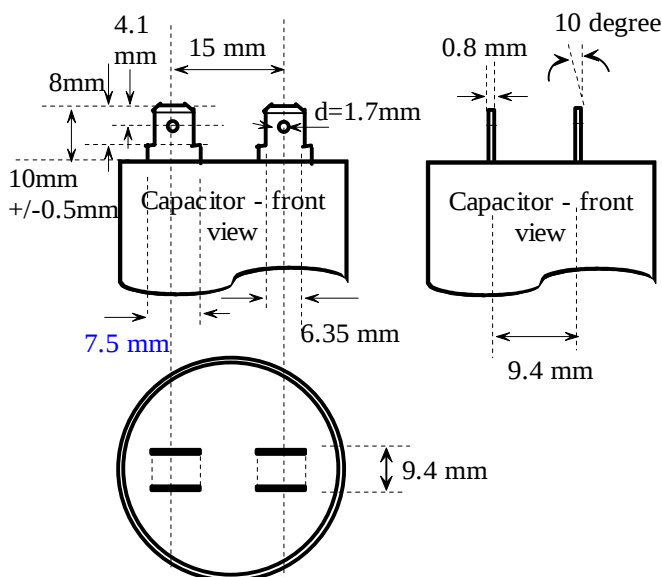
1) 250 type standard DQC Tab Terminal : 250D+X



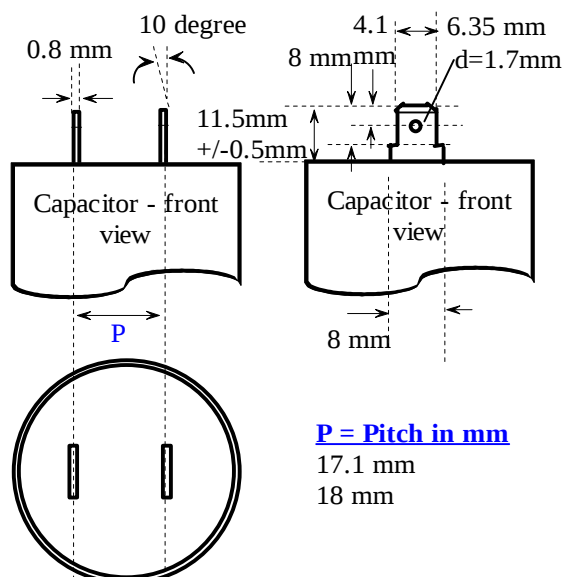
3) 250 type single Tab Terminal : 250S1



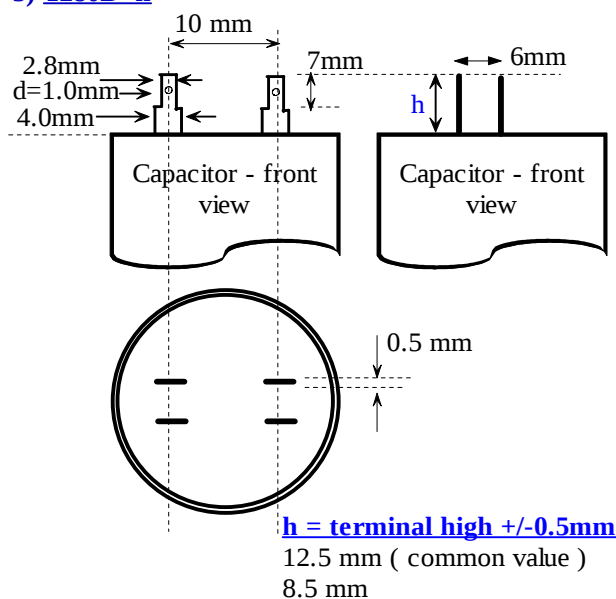
2) 9.4 + 6.35mm DQC Tab Terminal : 250D+9.4



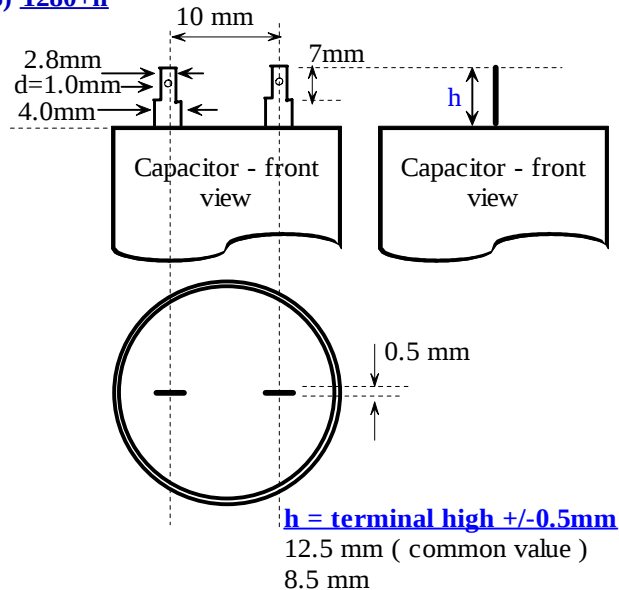
4) 250 type single Tab Terminal : 250S+P



5) T280D+h



6) T280+h



Electrical Connecting Options :

Terminal Receptacle – can be applied to most of the capacitors

TR-1 ~ TR-3 for Terminal : 250 : W6.35 x H10 x 0.8mm (250 Faston)

TR-4 for Terminal : 187 : W4.75 x H10 x 0.5mm



TR-1



TR-2



TR-3



TR-4



PT-1



YT-1



YT-2



YT-3



RT-1



T-1

Size : M5 M6 M8 M10 M12



There are some other connectors can be used with our capacitors so as to increase your design flexibly.

Please complete the form below as much detail as possible and send the form to Our Sales Department by pressing the “Submit” button at the bottom of the page.

[illegible]