

1.1.4 High Voltage Snubber Capacitors :

STP-01RFN, STP-01RFB series

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

Applications :

High Voltage SCR Snubber and Commutation, Thyristor controlled rectifier circuits, High Current Snubber circuit, Reduce or eliminate voltage or current spikes, Limit dv/dt & di/dt, Motor Speed Control & Static Drive, Harmonic Filter, Inverter, Converter and high RMS ripple Current application

Properties :

Low ESR, 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 Connections :

STP-01RFB – with M6 Screw Thread

STP-01RFN – with M6 Screw Nut

Electrical Characteristics : (can be customized)

Rated Voltage : 2500Vdc - 6,900Vdc / 800Vrms - 2000Vrms

Capacitance range : 0.1 - 1uF

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

Ripple RMS Current : up to 30A

Equivalent Series Resistance (ESR) : at 23C 100kHz

Testing Voltage Terminal to Terminal : Vsurge 10 sec

Testing Voltage Terminal to Case : 4500Vac at 105C 1min.

Insulation Resistance :250Vdc +25C >= 300,000Mohm

250Vdc +85C >= 50,000Mohm

250Vdc +105C >= 5,000Mohm

Reference Standard : IEC61071

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

Expected Service Life : 30,000 hours at rated Vac +85C / +105C

60,000 hours at rated Vdc +85C / +105C

Accelerated Life : 1.25 x rated AC voltage at +85C / +105C 2,000 hours

Specifications and Size :

STP-01RFN Vndc = 2500V / Vrms = 800Vac / Vpeak = 1280V 10s / Vsurge = 4000V 30s/day

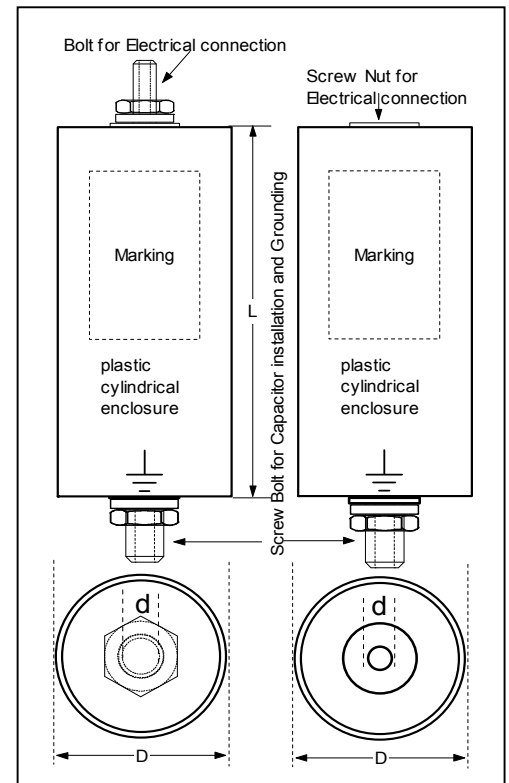
Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I _{peak} A	Irms 85C	Irms 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K2500D	0.1	35	87	10.0	90	1800	180	8.5	4.5	M6	M8
STP-01RFN124K2500D	0.12	35	87	9.0	90	1800	216	10	5	M6	M8
STP-01RFN154K2500D	0.15	35	87	8.5	90	1800	270	10	4	M6	M8
STP-01RFN204K2500D	0.2	35	87	8.0	90	1800	360	10	4	M6	M8
STP-01RFN224K2500D	0.22	35	87	7.0	90	1800	396	10	4.5	M6	M8
STP-01RFN334K2500D	0.33	40	87	6.0	90	1800	594	15	6.5	M6	M8

STP-01RFN Vndc = 3000V / Vrms = 900Vac / Vpeak = 1440V 10s / Vsurge = 4800V 30s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I _{peak} A	Irms 85C	Irms 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K3000D	0.1	35	87	10.0	90	2800	280	8	3.5	M6	M8
STP-01RFN124K3000D	0.12	35	87	9.0	90	2800	336	10	4.5	M6	M8
STP-01RFN154K3000D	0.15	35	87	8.5	90	2800	420	10	4	M6	M8
STP-01RFN204K3000D	0.2	40	87	8.0	90	2800	560	10	4.5	M6	M8
STP-01RFN224K3000D	0.22	40	87	7.0	90	2800	616	10	4.5	M6	M8
STP-01RFN254K3000D	0.25	40	87	6.0	90	2800	700	15	6	M6	M8

STP-01RFN Vndc = 3400V / Vrms = 1000Vac / Vpeak = 1600V 10s / Vsurge = 5400V 30s/day

Part Number	Cn uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I _{peak} A	Irms 85C	Irms 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN224K3400D	0.22	65	118	6.0	120	1300	286	20	11	M6	M12
STP-01RFN334K3400D	0.33	65	118	6.0	120	1300	429	20	11	M6	M12
STP-01RFN474K3400D	0.47	65	118	8.0	120	1300	611	20	9	M6	M12
STP-01RFN684K3400D	0.68	65	118	7.0	120	1300	884	20	11	M6	M12
STP-01RFN754K3400D	0.75	65	118	7.0	120	1300	975	24	12	M6	M12
STP-01RFN105K3400D	1	65	118	5.0	120	1300	1300	30	16	M6	M12



STP-01RFN V_{ndc} = 4000V / V_{rms} = 1200Vac / V_{peak} = 1900V 10s / V_{surge} = 6400V 30s/day

Part Number	C _n uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I _{peak} A	I _{rms} 85C	I _{rms} 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K4000D	0.1	65	118	10.0	120	1800	180	10	5	M6	M12
STP-01RFN124K4000D	0.12	65	118	8.0	120	1800	216	10	5	M6	M12
STP-01RFN154K4000D	0.15	65	118	7.0	120	1800	270	10	6	M6	M12
STP-01RFN224K4000D	0.22	65	118	6.0	120	1800	396	20	10	M6	M12
STP-01RFN334K4000D	0.33	65	118	6.0	120	1800	594	20	11	M6	M12
STP-01RFN474K4000D	0.47	65	118	7.0	120	1800	846	20	11	M6	M12
STP-01RFN684K4000D	0.68	65	118	5.0	120	1800	1224	27	15	M6	M12

STP-01RFN V_{ndc} = 4600V / V_{rms} = 1300Vac / V_{peak} = 2080V 10s / V_{surge} = 7360V 30s/day

Part Number	C _n uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I _{peak} A	I _{rms} 85C	I _{rms} 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K4600D	0.1	65	118	10.0	120	2275	227	10	5	M6	M12
STP-01RFN124K4600D	0.12	65	118	8.0	120	2275	273	10	6	M6	M12
STP-01RFN154K4600D	0.15	65	118	7.0	120	2275	341	10	7	M6	M12
STP-01RFN224K4600D	0.22	65	118	6.0	120	2275	500	16	9	M6	M12
STP-01RFN334K4600D	0.33	65	118	6.0	120	2275	750	20	11	M6	M12
STP-01RFN474K4600D	0.47	65	118	6.0	120	2275	1069	20	12	M6	M12
STP-01RFN684K4600D	0.68	65	118	5.0	120	2275	1547	28	17	M6	M12

STP-01RFN V_{ndc} = 5700V / V_{rms} = 1700Vac / V_{peak} = 2720V 10s / V_{surge} = 9120V 30s/day

Part Number	C _n uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I _{peak} A	I _{rms} 85C	I _{rms} 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K5700D	0.1	65	118	10.0	120	2600	260	10	5	M6	M12
STP-01RFN124K5700D	0.12	65	118	8.0	120	2600	312	10	6	M6	M12
STP-01RFN154K5700D	0.15	65	118	7.0	120	2600	390	12	7	M6	M12
STP-01RFN224K5700D	0.22	65	118	6.0	120	2600	572	20	11	M6	M12
STP-01RFN334K5700D	0.33	65	118	6.0	120	2600	858	22	12	M6	M12

STP-01RFN V_{ndc} = 6900V / V_{rms} = 2000Vac / V_{peak} = 3200V 10s / V_{surge} = 11040V 30s/day

Part Number	C _n uF	Diameter D mm	Length L mm	ESR mohm 100khz	ESL nH	dv/dt v/us	Peak Current I _{peak} A	I _{rms} 85C	I _{rms} 105C	Screw Nut d	Screw Bolt (Mounting)
STP-01RFN104K6900D	0.1	65	118	10.0	120	4000	400	10	5	M6	M12
STP-01RFN124K6900D	0.12	65	118	8.0	120	4000	480	10	6	M6	M12
STP-01RFN154K6900D	0.15	65	118	7.0	120	4000	600	12	6	M6	M12
STP-01RFN204K6900D	0.2	65	118	6.5	120	4000	800	14	8	M6	M12
STP-01RFN224K6900D	0.22	65	118	6.0	120	4000	880	16	9	M6	M12