

1.1.3 High Voltage Snubber Capacitors :

STP-01RN, STP-01RB 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-01RB – with M6 / M8 / M10 Screw Threads

STP-01RN – with M6 / M8 / M10 Screw Nuts

Electrical Characteristics : (can be customized)

Rated Voltage : 900Vdc – 5,300Vdc / 280Vrms – 1,600Vrms

Capacitance range : 0.15 - 60uF

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

Ripple RMS Current : up to 80A

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 +70C / +85C / +105C
60,000 hours at rated Vdc +70C / +85C / +105C

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

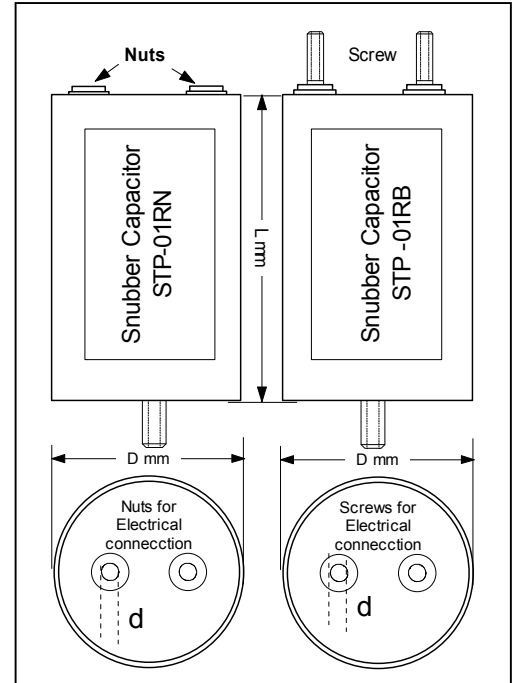
Specifications and Size :

STP-01RN Vndc = 900V / Vrms = 280Vac / Vpeak = 400V 10s / Vsurge = 1440V 10s/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 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J900D	2.2	65	100	2.2	20	720	1584	35	11	7	M6
STP-01RN335J900D	3.3	65	100	2.4	20	400	1320	30	9	6	M6
STP-01RN475J900D	4.7	65	100	2.3	20	400	1880	35	11	7	M6
STP-01RN685J900D	6.8	90	100	2.0	20	300	2040	40	12	8	M6
STP-01RN106J900D	10	90	100	1.9	20	300	3000	45	14	9	M6
STP-01RN156J900D	15	90	100	1.7	20	250	3750	50	15	10	M8
STP-01RN226J900D	22	90	165	2.0	35	250	5500	60	24	15	M8
STP-01RN336J900D	33	90	225	2.0	23	250	8250	80	32	20	M8
STP-01RN406J900D	40	90	225	1.7	23	250	10000	80	32	20	M8
STP-01RN506J900D	50	90	293	1.9	18	250	12500	80	32	20	M8
STP-01RN606J900D	60	90	293	1.7	18	250	15000	80	32	20	M8

STP-01RN Vndc = 1000V / Vrms = 300Vac / Vpeak = 450V 10s / Vsurge = 1600V 10s/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 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1000D	2.2	65	100	2.2	20	880	1936	35	11	7	M6
STP-01RN335J1000D	3.3	65	100	2.4	20	490	1617	30	9	6	M6
STP-01RN475J1000D	4.7	65	100	2.0	20	490	2303	40	12	8	M6
STP-01RN685J1000D	6.8	90	100	2.0	20	400	2720	40	12	8	M6
STP-01RN755J1000D	7.5	90	100	1.7	20	400	3000	45	14	9	M6
STP-01RN106J1000D	10	90	100	1.7	20	300	3000	45	14	9	M6
STP-01RN126J1000D	12	90	165	1.9	29	300	3600	50	20	13	M8
STP-01RN156J1000D	15	90	165	1.9	29	300	4500	60	24	15	M8
STP-01RN226J1000D	22	90	165	1.7	35	300	6600	70	28	18	M8
STP-01RN256J1000D	25	90	225	1.9	23	300	7500	80	32	20	M8
STP-01RN306J1000D	30	90	225	1.7	23	300	9000	80	32	20	M8
STP-01RN336J1000D	33	90	225	1.7	23	300	9900	80	32	20	M8
STP-01RN356J1000D	35	90	293	1.9	18	300	10500	80	32	20	M8
STP-01RN406J1000D	40	90	293	1.7	18	300	12000	80	32	20	M8



STP-01RN V_{ndc} = 1300V / V_{rms} = 400Vac / V_{peak} = 580V 10s / V_{surge} = 2100V 10s/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	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1300D	2.2	65	100	2.3	20	680	1496	30	9	6	M6
STP-01RN335J1300D	3.3	90	100	1.7	20	520	1716	40	12	8	M6
STP-01RN475J1300D	4.7	90	100	1.8	20	520	2444	45	14	9	M6
STP-01RN685J1300D	6.8	90	165	2.2	25	520	3536	50	20	13	M8
STP-01RN755J1300D	7.5	90	165	1.9	29	520	3900	50	20	13	M8
STP-01RN106J1300D	10	90	165	1.9	35	400	4000	55	22	14	M8
STP-01RN126J1300D	12	90	165	1.7	35	400	4800	60	24	15	M8
STP-01RN156J1300D	15	90	225	1.9	23	400	6000	70	28	18	M8
STP-01RN206J1300D	20	90	293	1.9	18	400	8000	80	32	20	M8
STP-01RN226J1300D	22	90	293	1.7	18	400	8800	80	32	20	M8
STP-01RN256J1300D	25	90	293	1.7	18	400	10000	80	32	20	M8

STP-01RN V_{ndc} = 1500V / V_{rms} = 450Vac / V_{peak} = 640V 10s / V_{surge} = 2400V 10s/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	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1500D	2.2	90	100	1.9	20	660	1452	35	11	7	M6
STP-01RN335J1500D	3.3	90	100	1.7	20	660	2178	40	12	8	M6
STP-01RN405J1500D	4	90	100	1.7	20	500	2000	40	12	8	M6
STP-01RN455J1500D	4.5	90	100	1.7	20	500	2250	45	14	9	M6
STP-01RN685J1500D	6.8	90	165	1.7	29	500	3400	55	22	14	M8
STP-01RN755J1500D	7.5	90	165	1.8	35	500	3750	55	22	14	M8
STP-01RN106J1500D	10	90	225	1.8	19	500	5000	70	28	18	M8
STP-01RN126J1500D	12	90	225	1.7	23	500	6000	70	28	18	M8
STP-01RN156J1500D	15	90	293	1.8	18	500	7500	80	32	20	M8
STP-01RN186J1500D	18	90	293	1.7	18	500	9000	80	32	20	M8

STG-01RN V_{ndc} = 1700V / V_{rms} = 530Vac / V_{peak} = 750V 10s / V_{surge} = 2720V 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	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225K1700D	2.2	65	105	1.8	25	1200	2640	50	37	25	M6
STP-01RN255K1700D	2.5	65	125	2.0	35	680	1700	45	33	22	M6
STP-01RN305K1700D	3	65	125	2.3	35	680	2040	45	33	22	M6
STP-01RN405K1700D	4	65	145	2.2	40	520	2080	45	33	22	M6
STP-01RN505K1700D	5	65	165	2.3	50	400	2000	45	33	22	M6
STP-01RN605K1700D	6	65	165	1.9	50	400	2400	55	40	26	M8
STP-01RN755K1700D	7.5	90	165	1.6	50	400	3000	60	45	30	M8

STP-01RN V_{ndc} = 1800V / V_{rms} = 540Vac / V_{peak} = 760V 10s / V_{surge} = 2900V 10s/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	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN225J1800D	2.2	90	100	1.9	20	800	1760	35	11	7	M6
STP-01RN335J1800D	3.3	90	165	2.5	29	800	2640	45	18	11	M6
STP-01RN475J1800D	4.7	90	165	2.0	35	620	2914	45	18	11	M6
STP-01RN685J1800D	6.8	90	225	2.0	23	620	4216	55	22	14	M8
STP-01RN805J1800D	8	90	225	1.8	23	620	4960	55	22	14	M8
STP-01RN106J1800D	10	90	293	1.8	18	620	6200	80	32	20	M8
STP-01RN126J1800D	12	90	293	1.7	18	620	7440	80	32	20	M8

STP-01RN V_{ndc} = 2500V / V_{rms} = 700Vac / V_{peak} = 1070V 10s / V_{surge} = 4000V 10s/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	Irms 70C	Irms 85C	Irms 105C	d (mm)
STP-01RN254J2500D	0.25	65	100	2.5	20	2650	662.5	20	6.0	4.0	M6
STP-01RN504J2500D	0.5	65	100	2.4	20	1450	725	20	6.0	4.0	M6
STP-01RN105J2500D	1	90	100	1.8	20	1100	1100	25	8.8	5.0	M6
STP-01RN155J2500D	1.5	90	100	1.7	20	1100	1650	30	9.0	6.0	M6
STP-01RN205J2500D	2	90	165	1.9	29	1100	2200	40	16.0	10.0	M6
STP-01RN225J2500D	2.2	90	165	1.9	35	880	1936	40	16.0	10.0	M6
STP-01RN335J2500D	3.3	90	225	1.9	23	880	2904	55	22.0	13.8	M8
STP-01RN405J2500D	4	90	225	1.8	23	880	3520	55	22.0	13.8	M8
STP-01RN505J2500D	5	90	293	1.8	18	880	4400	70	28.0	17.5	M8
STP-01RN605J2500D	6	90	293	1.7	18	880	5280	70	28.0	17.5	M8

STP-01RN V_{ndc} = 2700V / V_{rms} = 770Vac / V_{peak} = 1100V 10s / V_{surge} = 4350V 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} 70C	I _{rms} 85C	I _{rms} 105C	d (mm)
STP-01RN205K2700D	2	65	165	2.4	50	1000	2000	35	26	17	M6
STP-01RN225K2700D	2.2	65	165	2.0	50	1000	2200	35	26	17	M6
STP-01RN255K2700D	2.5	65	185	2.4	60	800	2000	35	26	17	M6
STP-01RN335K2700D	3.3	65	225	2.3	75	600	1980	35	26	17	M6
STP-01RN405K2700D	4	65	225	1.9	75	600	2400	40	30	20	M6
STP-01RN455K2700D	4.5	90	225	1.8	75	600	2700	45	33	21	M6
STP-01RN505K2700D	5	90	225	1.6	75	600	3000	50	37	25	M8

STP-01RN V_{ndc} = 3100V / V_{rms} = 900Vac / V_{peak} = 1300V 10s / V_{surge} = 5000V 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} 70C	I _{rms} 85C	I _{rms} 105C	d (mm)
STP-01RN155K3100D	1.5	65	165	2.4	50	1320	1980	30	22	15	M6
STP-01RN205K3100D	2	65	185	2.2	60	1000	2000	30	22	15	M6
STP-01RN225K3100D	2.2	65	185	2.0	60	1000	2200	30	22	15	M6
STP-01RN255K3100D	2.5	65	185	1.8	60	1000	2500	35	26	17	M6
STP-01RN305K3100D	3	65	225	1.9	75	800	2400	35	26	17	M6
STP-01RN335K3100D	3.3	90	225	1.8	75	800	2640	35	26	17	M6
STP-01RN355K3100D	3.5	90	225	1.7	75	800	2800	40	30	20	M6

STP-01RN V_{ndc} = 3600V / V_{rms} = 1100Vac / V_{peak} = 1600V 10s / V_{surge} = 5760V 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} 70C	I _{rms} 85C	I _{rms} 105C	d (mm)
STP-01RN155K3600D	1.5	65	205	2.4	70	1355	2032.5	35	24	16	M6
STP-01RN205K3600D	2	65	245	2.5	85	1000	2000	35	25	17	M6
STP-01RN255K3600D	2.5	65	285	2.4	100	800	2000	35	24	16	M6
STP-01RN305K3600D	3	65	285	1.9	100	800	2400	40	30	20	M6
STP-01RN355K3600D	3.5	90	285	1.8	100	800	2800	45	35	23	M6
STP-01RN405K3600D	4	90	285	1.6	100	800	3200	50	35	23	M8

STP-01RN V_{ndc} = 4500V / V_{rms} = 1350Vac / V_{peak} = 1950V 10s / V_{surge} = 7200V 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} 70C	I _{rms} 85C	I _{rms} 105C	d (mm)
STP-01RN254K4500D	0.25	65	135	3.2	35	5000	1250	15	12	8	M6
STP-01RN504K4500D	0.5	65	165	2.7	50	2900	1450	15	13	8	M6
STP-01RN754K4500D	0.75	65	165	1.9	50	2900	2175	25	19	12	M6
STP-01RN105K4500D	1	65	185	1.8	60	2200	2200	25	20	13	M6
STP-01RN125K4500D	1.2	65	225	1.9	75	1700	2040	25	19	12	M6
STP-01RN155K4500D	1.5	90	225	1.6	75	1700	2550	30	23	15	M6

STP-01RN V_{ndc} = 5300V / V_{rms} = 1600Vac / V_{peak} = 2300V 10s / V_{surge} = 8500V 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} 70C	I _{rms} 85C	I _{rms} 105C	d (mm)
STP-01RN254K5300D	0.25	65	135	2.4	35	7000	1750	19	14	9	M6
STP-01RN504K5300D	0.5	65	165	2.0	50	3900	1950	21	16	10	M6
STP-01RN754K5300D	0.75	65	225	2.4	75	2300	1725	19	14	9	M6
STP-01RN105K5300D	1	90	225	1.8	75	2300	2300	25	19	12	M6

The combination of Capacitance value, Voltage, Dimension, please contact us for a design suited to your application needs.