

### 3.4 High Voltage Snubber Capacitors :

#### STP-01RFT, STP-01RAN, 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, AC Filter 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 Characteristics : ( can be customized )

**STP-01RFT** – with a Screw Bolt and a Tab-Terminal

**STP-01RAN** – with Screw Nut x 2

**STP-01RFN** – with M6 Screw Nut + Screw Bolt

**STP-01RFB** – with M6 Screw Bolt x 2

**STP-01RBC** – with M6 Screw Bolt + a lead wire

**STP-01RNC** – with M6 Screw Nut + a lead wire

**Capacitance range** : 0.075uF – 10uF

**Rated Voltage range** : 350 – 4200Vrms / 1300 – 18KVndc

**Peak Current** : up to 5250App

**Ripple RMS Current** : up to 60A

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

**Testing Voltage** Terminal to Terminal : Vsurge 10 sec

**Testing Voltage** Terminal to Case: 5,000Vac 105C 1min.

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

250Vdc +85C >= 50,000Mohm

250Vdc +105C >= 5,000Mohm

**Reference Standard** : IEC61071

**Operate Temperature** : +70C / +85C / +105C

Ultra-Low Leakage version is available on request

#### Specifications and Size :

**STP-01Rxx** : Vndc = 1300V / Vrms = 350Vac / Vpeak = 500V 10s / Vsurge = 2080V 15s/day

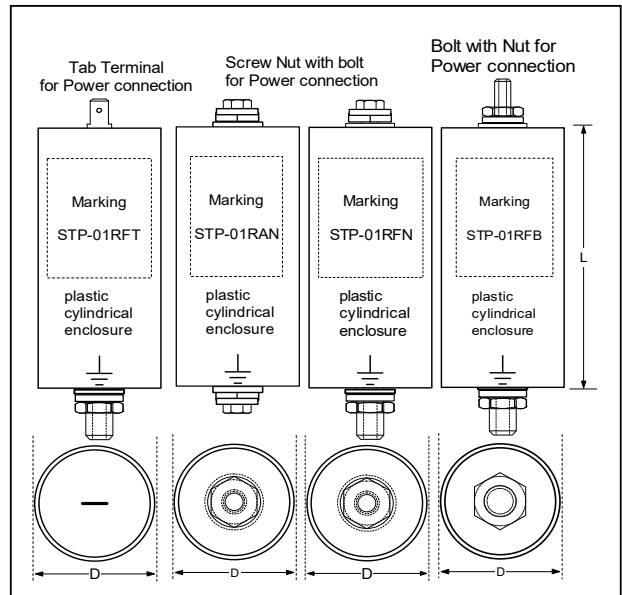
P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx305K1300D	3	65	130	500	1500	20	3.1	40	28	20
STP-01Rxx405K1300D	4	65	155	500	2000	22	2.8	40	28	20
STP-01Rxx505K1300D	5	90	130	500	2500	20	2.6	50	35	25
STP-01Rxx605K1300D	6	90	130	500	3000	20	2.4	55	38	28
STP-01Rxx805K1300D	8	90	155	400	3200	22	2.1	55	38	28
STP-01Rxx106K1300D	10	90	155	400	4000	22	1.8	60	40	30

**STP-01Rxx** : Vndc = 1600V / Vrms = 430Vac / Vpeak = 620V 10s / Vsurge = 2560V 15s/day

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx504K1600D	0.5	65	130	1400	700	20	3.3	20	15	12
STP-01Rxx105K1600D	1	65	130	1400	1400	20	3.1	25	18	15
STP-01Rxx155K1600D	1.5	65	130	1400	2100	20	1.9	30	20	18
STP-01Rxx205K1600D	2	65	155	1000	2000	22	1.8	30	20	18
STP-01Rxx225K1600D	2.2	65	155	1000	2200	22	1.8	30	20	18
STP-01Rxx255K1600D	2.5	90	130	1400	3500	20	1.7	40	30	22
STP-01Rxx305K1600D	3	90	155	1000	3000	22	1.6	40	30	22
STP-01Rxx405K1600D	4	90	155	1000	4000	22	1.3	50	35	25

**STP-01Rxx** : Vndc = 2500V / Vrms = 660Vac / Vpeak = 940V 10s / Vsurge = 4000V 15s/day

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx504K2500D	0.5	65	130	2500	1250	20	2.9	20	15	12
STP-01Rxx105K2500D	1	65	130	2500	2500	20	2.7	25	18	15
STP-01Rxx155K2500D	1.5	90	130	2500	3750	20	2.4	35	25	18
STP-01Rxx205K2500D	2	90	130	2500	5000	20	2.1	50	35	25
STP-01Rxx225K2500D	2.2	90	155	1900	4180	22	1.9	50	35	25
STP-01Rxx255K2500D	2.5	90	130	1900	4750	22	1.4	60	40	30



For other Capacitance, Voltage, dv/dt, Peak Current and RMS Current not listed, please contact us for a suggestion.

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**STP-01Rxx : Vndc = 3300V / Vrms = 880Vac / Vpeak = 1250V 10s / Vsurge = 5200V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx334K3300D	0.33	65	190	3300	1089	20	3.1	20	15	12
STP-01Rxx504K3300D	0.5	65	190	3300	1650	20	2.9	20	15	12
STP-01Rxx105K3300D	1	90	190	3300	3300	20	2.7	35	25	18
STP-01Rxx125K3300D	1.2	90	190	3300	3960	20	2.4	40	28	20
STP-01Rxx155K3300D	1.5	90	240	2500	3750	22	2.1	40	28	20
STP-01Rxx205K3300D	2	90	240	2500	5000	22	1.9	55	38	28

**STP-01Rxx : Vndc = 3900V / Vrms = 1030Vac / Vpeak = 1470V 10s / Vsurge = 6200V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx254K3900D	0.25	65	102	1600	400	60	6.0	15	12
STP-01Rxx334K3900D	0.33	65	102	1600	528	60	5.4	15	12
STP-01Rxx504K3900D	0.5	65	102	1600	800	70	5	18	15
STP-01Rxx684K3900D	0.68	65	102	1600	1088	70	4.6	25	20
STP-01Rxx754K3900D	0.75	65	102	1600	1200	70	4.2	25	20
STP-01Rxx824K3900D	0.82	65	102	1600	1312	70	3.7	25	20
STP-01Rxx105K3900D	1	90	139	1600	1600	70	3.3	30	25
STP-01Rxx125K3900D	1.2	90	139	1600	1920	70	2.8	30	25
STP-01Rxx155K3900D	1.5	90	139	1600	2400	70	2.5	35	30

**STP-01Rxx : Vndc = 4600V / Vrms = 1200Vac / Vpeak = 1700V 10s / Vsurge = 7300V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx254K4600D	0.25	65	240	4600	1150	20	3.2	25	18	13
STP-01Rxx334K4600D	0.33	65	240	4600	1518	20	3.1	25	18	13
STP-01Rxx504K4600D	0.5	90	240	4600	2300	20	2.9	30	20	15
STP-01Rxx754K4600D	0.75	90	240	4600	3450	20	2.8	35	25	18
STP-01Rxx105K4600D	1	90	240	4600	4600	20	2.6	40	28	22
STP-01Rxx125K4600D	1.2	90	295	3500	4200	22	2.4	40	28	22
STP-01Rxx155K4600D	1.5	90	295	3500	5250	22	2.1	50	35	25

**STP-01Rxx : Vndc = 4700V / Vrms = 1200Vac / Vpeak = 1700V 10s / Vsurge = 7500V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx254K4700D	0.25	65	139	1900	475	70	6.3	15	10
STP-01Rxx334K4700D	0.33	65	139	1900	627	70	5.6	15	10
STP-01Rxx504K4700D	0.5	65	139	1900	950	70	5.1	25	20
STP-01Rxx684K4700D	0.68	90	139	1900	1292	70	4.6	25	20
STP-01Rxx754K4700D	0.75	90	139	1900	1425	70	4	30	25
STP-01Rxx824K4700D	0.82	90	139	1900	1558	70	3.7	30	25
STP-01Rxx105K4700D	1	90	139	1900	1900	70	3.4	35	30
STP-01Rxx125K4700D	1.2	90	139	1900	2280	70	3	35	30

**STP-01Rxx : Vndc = 5900V / Vrms = 1400Vac / Vpeak = 2100V 10s / Vsurge = 9400V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx224K5900D	0.22	65	295	5900	1298	20	3.3	20	15	10
STP-01Rxx254K5900D	0.25	65	295	5900	1475	20	3.2	25	18	13
STP-01Rxx334K5900D	0.33	65	295	5900	1947	20	3.1	25	18	13
STP-01Rxx504K5900D	0.5	90	295	5900	2950	20	2.9	30	20	16
STP-01Rxx684K5900D	0.68	90	295	5900	4012	20	2.6	35	25	18
STP-01Rxx754K5900D	0.75	90	295	5900	4425	20	2.1	40	28	20

**STP-01Rxx : Vndc = 6300V / Vrms = 1620Vac / Vpeak = 2300V 10s / Vsurge = 10080V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx224K6300D	0.22	65	139	2800	616	70	7	12	10
STP-01Rxx254K6300D	0.25	65	139	2800	700	70	6.0	12	10
STP-01Rxx334K6300D	0.33	65	139	2800	924	70	5.3	15	12
STP-01Rxx504K6300D	0.5	65	139	2800	1400	70	4.8	25	20
STP-01Rxx684K6300D	0.68	90	139	2800	1904	70	4.3	30	25
STP-01Rxx754K6300D	0.75	90	139	2800	2100	70	3.9	30	25
STP-01Rxx824K6300D	0.82	90	139	2800	2296	70	3.5	33	30

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**STP-01Rxx : V<sub>ndc</sub> = 7000V / V<sub>rms</sub> = 1550Vac / V<sub>peak</sub> = 2200V 10s / V<sub>surge</sub> = 11200V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx254K7000D	0.25	65	165	2600	650	35	5.3	20	15
STP-01Rxx334K7000D	0.33	65	272	2600	858	35	4.8	20	15
STP-01Rxx504K7000D	0.5	90	272	2600	1300	35	4.2	35	30
STP-01Rxx654K7000D	0.65	90	272	2600	1690	35	3.8	45	40
STP-01Rxx754K7000D	0.75	90	215	2600	1950	45	3.4	50	45
STP-01Rxx105K7000D	1	90	215	2600	2600	45	3	50	45

**STP-01Rxx : V<sub>ndc</sub> = 7900V / V<sub>rms</sub> = 2000Vac / V<sub>peak</sub> = 2900V 10s / V<sub>surge</sub> = 12600V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx224K7900D	0.22	65	295	9000	1980	22	3.3	20	15	10
STP-01Rxx254K7900D	0.25	65	295	9000	2250	22	3.2	20	15	10
STP-01Rxx334K7900D	0.33	65	295	9000	2970	22	3.1	25	18	13
STP-01Rxx504K7900D	0.5	90	295	9000	4500	22	2.9	30	20	15

**STP-01Rxx : V<sub>ndc</sub> = 7900V / V<sub>rms</sub> = 2050Vac / V<sub>peak</sub> = 2900V 10s / V<sub>surge</sub> = 12160V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx154K7900D	0.15	65	139	4400	660	70	9	8	7
STP-01Rxx224K7900D-V1	0.22	65	139	4400	968	70	7.6	10	8
STP-01Rxx254K7900D-V1	0.25	65	139	4400	1100	70	6.8	12	10
STP-01Rxx334K7900D-V1	0.33	90	139	4400	1452	70	6.1	15	12
STP-01Rxx504K7900D-V1	0.5	90	139	4400	2200	70	5.2	25	20

**STP-01Rxx : V<sub>ndc</sub> = 8000V / V<sub>rms</sub> = 1700Vac / V<sub>peak</sub> = 2400V 10s / V<sub>surge</sub> = 11500V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx224K8000D	0.22	65	215	3500	770	45	5.5	22	18
STP-01Rxx254K8000D	0.25	65	215	3500	875	45	4.9	22	18
STP-01Rxx334K8000D	0.33	65	215	3500	1155	45	4.4	25	20
STP-01Rxx504K8000D	0.5	65	215	3500	1750	45	4.1	35	30
STP-01Rxx654K8000D	0.65	90	215	3500	2275	45	3.6	40	35
STP-01Rxx754K8000D	0.75	90	215	3500	2625	45	3.2	50	45
STP-01Rxx105K8000D	1	90	215	3500	3500	45	2.9	60	55

**STP-01Rxx : V<sub>ndc</sub> = 8000V / V<sub>rms</sub> = 1900Vac / V<sub>peak</sub> = 2700V 10s / V<sub>surge</sub> = 12800V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx224K8000D	0.15	65	215	5000	750	45	6	15	13
STP-01Rxx204K8000D	0.2	65	215	5000	1000	45	5.4	18	15
STP-01Rxx224K8000D-V1	0.22	65	215	5000	1100	45	4.7	20	17
STP-01Rxx254K8000D-V1	0.25	65	215	5000	1250	45	4.2	25	20
STP-01Rxx334K8000D-V1	0.33	65	215	5000	1650	45	3.8	25	22
STP-01Rxx504K8000D-V1	0.5	90	215	5000	2500	45	3.4	40	35
STP-01Rxx654K8000D-V1	0.65	90	215	5000	3250	45	3.1	50	45
STP-01Rxx754K8000D-V1	0.75	90	215	5000	3750	45	2.8	50	45

**STP-01Rxx : V<sub>ndc</sub> = 9200V / V<sub>rms</sub> = 2400Vac / V<sub>peak</sub> = 3400V 10s / V<sub>surge</sub> = 14700V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C	Max. Amp 105C
STP-01Rxx104K9200D	0.1	65	295	13600	1360	15	4.5	20	15	10
STP-01Rxx124K9200D	0.12	65	295	13600	1632	15	3.8	20	15	10
STP-01Rxx154K9200D	0.15	90	295	13600	2040	15	3.2	25	20	15
STP-01Rxx204K9200D	0.2	90	295	13600	2720	15	2.9	30	25	20
STP-01Rxx224K9200D	0.22	90	295	13600	2992	15	2.6	35	30	25
STP-01Rxx254K9200D	0.25	90	295	13600	3400	15	2.4	35	30	25

**STP-01Rxx : V<sub>ndc</sub> = 9500V / V<sub>rms</sub> = 2470Vac / V<sub>peak</sub> = 3500V 10s / V<sub>surge</sub> = 15200V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx104K9500D	0.1	65	196	4800	480	75	10	8	7
STP-01Rxx124K9500D	0.12	65	196	4800	576	75	9	8	7
STP-01Rxx154K9500D	0.15	65	196	4800	720	75	8.2	8	7
STP-01Rxx224K9500D	0.22	90	196	4800	1056	75	7.3	12	10
STP-01Rxx254K9500D	0.25	90	196	4800	1200	75	6.5	15	12
STP-01Rxx334K9500D	0.33	90	196	4800	1584	75	5.9	20	15

**STP-01Rxx : Vndc = 10000V / Vrms = 2400Vac / Vpeak = 3400V 10s / Vsurge = 16000V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx124K10kD	0.12	65	262	5800	696	60	6.2	15	13
STP-01Rxx154K10kD	0.15	65	262	5800	870	60	5.7	15	13
STP-01Rxx204K10kD	0.2	65	262	5800	1160	60	5	20	17
STP-01Rxx224K10kD	0.22	65	262	5800	1276	60	4.5	20	17
STP-01Rxx254K10kD	0.25	65	262	5800	1450	60	4	25	22
STP-01Rxx334K10kD	0.33	90	262	5800	1914	60	3.7	30	25
STP-01Rxx504K10kD	0.5	90	262	5800	2900	60	3.2	45	40
STP-01Rxx654K10kD	0.65	90	262	5800	3770	60	3.0	50	45

**STP-01Rxx : Vndc = 11900V / Vrms = 3100Vac / Vpeak = 4400V 10s / Vsurge = 19040V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx753K11900D	0.075	65	272	6100	458	90	12	7	6
STP-01Rxx104K11900D	0.1	65	272	6100	610	90	10.5	9	7
STP-01Rxx124K11900D	0.12	65	272	6100	732	90	9.6	10	8
STP-01Rxx154K11900D	0.15	90	272	6100	915	90	8.7	12	10
STP-01Rxx204K11900D	0.2	90	272	6100	1220	90	7.6	12	10
STP-01Rxx224K11900D	0.22	90	272	6100	1342	90	6.8	18	15
STP-01Rxx254K11900D	0.25	90	272	6100	1525	90	6.2	18	15

**STP-01Rxx : Vndc = 12000V / Vrms = 2900Vac / Vpeak = 4100V 10s / Vsurge = 19000V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx104K12kD	0.1	65	295	7300	730	70	6.5	15	13
STP-01Rxx124K12kD	0.12	65	295	7300	876	70	5.9	15	13
STP-01Rxx154K12kD	0.15	65	295	7300	1095	70	5.3	20	17
STP-01Rxx204K12kD	0.2	65	295	7300	1460	70	4.7	20	17
STP-01Rxx224K12kD	0.22	65	295	7300	1606	70	4.3	20	17
STP-01Rxx254K12kD	0.25	90	295	7300	1825	70	3.9	30	25
STP-01Rxx334K12kD	0.33	90	295	7300	2409	70	3.6	40	25
STP-01Rxx504K12kD	0.5	90	295	7300	3650	70	3.1	50	45

**STP-01Rxx : Vndc = 17000V / Vrms = 4400Vac / Vpeak = 6300V 10s / Vsurge = 27200V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx753K17kD	0.075	65	272	8200	615	90	13	8	7
STP-01Rxx104K17kD	0.1	65	272	8200	820	90	11.2	10	8
STP-01Rxx124K17kD	0.12	65	272	8200	984	90	10	12	10
STP-01Rxx154K17kD	0.15	90	272	8200	1230	90	9	15	12
STP-01Rxx204K17kD	0.2	90	272	8200	1640	90	7.7	15	12
STP-01Rxx224K17kD	0.22	90	272	8200	1804	90	6.9	20	15
STP-01Rxx254K17kD	0.25	90	272	8200	2050	90	6.1	25	20

**STP-01Rxx : Vndc = 18000V / Vrms = 4200Vac / Vpeak = 6000V 10s / Vsurge = 28800V 15s/day**

P/N :	Cn uF	Diameter D mm	Length L mm	dv/dt v/us	Peak Current I <sub>p-p</sub> A	ESL nH	ESR (mohm) 100KHz	Max. Amp 70C	Max. Amp 85C
STP-01Rxx104K18kD	0.1	65	295	10900	1090	80	6.2	20	17
STP-01Rxx124K18kD	0.12	65	295	10900	1308	80	5.6	20	17
STP-01Rxx154K18kD	0.15	90	295	10900	1635	80	5	25	20
STP-01Rxx204K18kD	0.2	90	295	10900	2180	80	4.5	30	25
STP-01Rxx224K18kD	0.22	90	295	10900	2398	80	4	35	30
STP-01Rxx254K18kD	0.25	90	295	10900	2725	80	3.4	40	35

For other Capacitance, Voltage, dv/dt, Peak Current and RMS Current not listed, please contact us for a suggestion.