

## SPI Series

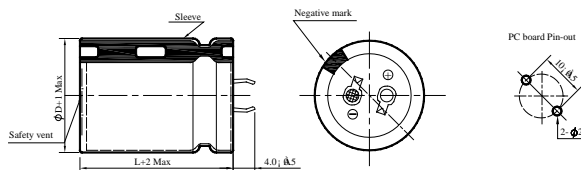
- Endurance with ripple current: 3,000 hours at 105°C

### ◆ SPECIFICATIONS

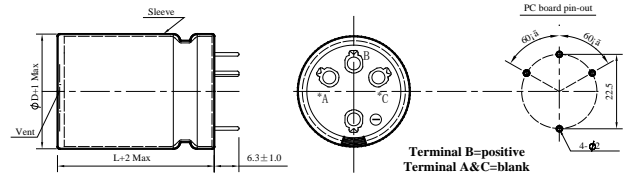
Item	Performance Characteristics								
Category Temperature Range	-25 ~ +105°C								
Working Voltage Range	400 ~ 450Vdc								
Capacitance Range	56 ~ 680μF								
Capacitance Tolerance	±20% (at 25°C and 120Hz)								
Dissipation Factor (tanδ) (at 25°C, 120Hz)	<table border="1"> <tr> <td>Rated Voltage (V)</td> <td>400</td> <td>420</td> <td>450</td> </tr> <tr> <td>tanδ(Max)</td> <td>0.15</td> <td>0.20</td> <td>0.20</td> </tr> </table>	Rated Voltage (V)	400	420	450	tanδ(Max)	0.15	0.20	0.20
	Rated Voltage (V)	400	420	450					
tanδ(Max)	0.15	0.20	0.20						
Leakage Current	$I \leq 3 \sqrt{CV}$ I : Leakage current (μA) C : Rated capacitance (μF) V : Rated voltage (V) Impress the rated voltage for 5 minutes.								
Endurance	The following requirements shall be satisfied when the capacitor are restored to 25°C after the rated voltage applied for 3,000 hours at 105°C. <table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±20% of the initial value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 200% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ The initial specified value</td> </tr> </table>	Capacitance change	≒ ±20% of the initial value	Dissipation factor(tanδ)	≒ 200% of the specified value	Leakage current	≒ The initial specified value		
Capacitance change	≒ ±20% of the initial value								
Dissipation factor(tanδ)	≒ 200% of the specified value								
Leakage current	≒ The initial specified value								
Shelf Life	The following requirements shall be satisfied when the capacitor are restored to 25°C after exposing them for 1,000 hours at 105°C without voltage applied. <table border="1"> <tr> <td>Capacitance change</td> <td>≒ ±15% of the initial value</td> </tr> <tr> <td>Dissipation factor(tanδ)</td> <td>≒ 150% of the specified value</td> </tr> <tr> <td>Leakage current</td> <td>≒ The initial specified value</td> </tr> </table>	Capacitance change	≒ ±15% of the initial value	Dissipation factor(tanδ)	≒ 150% of the specified value	Leakage current	≒ The initial specified value		
Capacitance change	≒ ±15% of the initial value								
Dissipation factor(tanδ)	≒ 150% of the specified value								
Leakage current	≒ The initial specified value								
Others	Conforms to JIS-C-5101-4 (1998), characteristic W.								

### ◆ DIMENSIONS (mm)

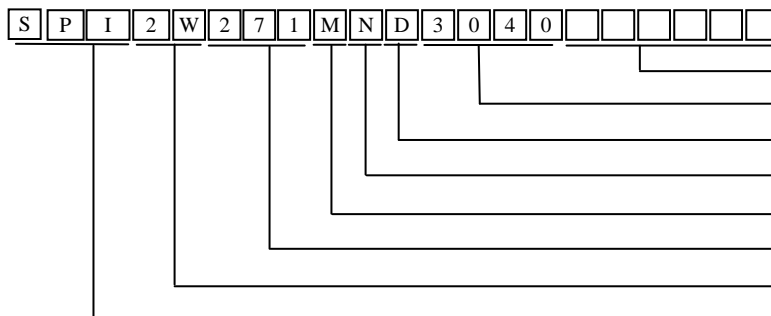
Terminal Code : ND : Standard



Terminal Code :K6 (ø35)



### ◆ PART NUMBERING SYSTEM( Example : 450V 270μF )



- Special Request
- Size code(3040 : 30×40)
- Terminal length code
- Lead forming Type code
- Capacitance tolerance code(M:±20%)
- Capacitance code(270μF)
- Voltage code(450V)
- Series code (SPI)

## SPI Series

◆ Case size & Permissible rated ripple current (A rms) at 105 °C /120Hz:

Vdc ΦD uF	400								420							
	Φ 22		Φ 25.4		Φ30		Φ35		Φ 22		Φ 25.4		Φ30		Φ35	
	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC
82	22×25	0.61							22×25	0.61	25.4×25	0.62				
100	22×30	0.66	25.4×25	0.67					22×30	0.66	25.4×25	0.66				
120	22×35	0.71	25.4×25	0.71	30×25	0.73			22×35	0.71	25.4×30	0.71	30×25	0.71		
150	22×40	0.83	25.4×30	0.84	30×25	0.84	35×25	0.84	22×40	0.84	25.4×35	0.84	30×25	0.84		
180	22×45	0.93	25.4×35	0.93	30×30	0.93	35×25	0.93	22×45	0.91	25.4×35	0.91	30×30	0.91	35×25	0.91
220	22×50	1.05	25.4×40	1.05	30×30	1.05	35×25	1.05	22×50	1.05	25.4×45	1.05	30×35	1.05	35×25	1.05
270			25.4×45	1.16	30×35	1.16	35×30	1.16			25.4×50	1.16	30×40	1.16	35×30	1.16
330			25.4×50	1.37	30×40	1.37	35×30	1.37					30×45	1.40	35×35	1.40
390			25.4×60	1.44	30×45	1.44	35×35	1.44					30×50	1.50	35×40	1.50
470					30×50	1.81	35×40	1.81							35×45	1.81
560					30×60	2.00	35×45	2.00							35×50	2.05
680							35×50	2.15							35×60	2.15

Vdc ΦD uF	450							
	Φ 22		Φ 25.4		Φ30		Φ35	
	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC	ΦD×L	RC
56	22×25	0.40						
68	22×30	0.51	25.4×25	0.51				
82	22×30	0.61	25.4×25	0.61				
100	22×35	0.66	25.4×30	0.66	30×25	0.66		
120	22×40	0.76	25.4×35	0.76	30×25	0.76	35×25	0.76
150	22×45	0.84	25.4×35	0.84	30×30	0.84	35×25	0.84
180	22×50	0.96	25.4×40	0.96	30×30	0.96	35×30	0.96
220			25.4×45	1.07	30×35	1.07	35×30	1.07
270			25.4×60	1.12	30×40	1.12	35×35	1.12
330					30×50	1.38	35×40	1.38
390					30×60	1.44	35×40	1.44
470							35×50	1.76
560							35×60	1.82

◆ RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Vdc	Frequency (Hz)					
	50	120	300	1K	10K	50K
400 ~ 450	0.77	1.00	1.16	1.30	1.41	1.43