

# CapXon ST Series

## ST Series 5 mm 105

### Features

5.0±1 mm max height

Load life 105 °C, 1000 hrs assured

For detail specifications, please refer to Engineering Bulletin No. E112



### Specifications

Item	Performance Characteristics																								
Operating Temperature Range	-40 to +105																								
Rate Voltage Range	4 to 50 VDC																								
Capacitance Range	0.1 to 100 $\mu$ F																								
Capacitance Tolerance	$\pm 20\%$ (120Hz, +20 °C)																								
Leakage Current(+20 °C, max)	1 $\mu$ A / 0.01 CV or 3 ( $\mu$ A) After 2 minutes, whichever is greater measured with rated working voltage applied.																								
Dissipation Factor(tan $\delta$ )	<table border="1"> <thead> <tr> <th>Working Voltage (VDC)</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>D.F. (%)max</td> <td>37</td> <td>28</td> <td>24</td> <td>20</td> <td>16</td> <td>14</td> <td>12</td> </tr> </tbody> </table> (+20 °C, at 120Hz)	Working Voltage (VDC)	4	6.3	10	16	25	35	50	D.F. (%)max	37	28	24	20	16	14	12								
Working Voltage (VDC)	4	6.3	10	16	25	35	50																		
D.F. (%)max	37	28	24	20	16	14	12																		
Low Temperature Characteristics (120Hz)	Impedance ratio max. <table border="1"> <thead> <tr> <th>Working Voltage (VDC)</th> <th>4</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Z-25 °C / Z+20 °C</td> <td>6</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40 °C / Z+20 °C</td> <td>12</td> <td>8</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	Working Voltage (VDC)	4	6.3	10	16	25	35	50	Z-25 °C / Z+20 °C	6	3	3	2	2	2	2	Z-40 °C / Z+20 °C	12	8	5	4	3	3	3
Working Voltage (VDC)	4	6.3	10	16	25	35	50																		
Z-25 °C / Z+20 °C	6	3	3	2	2	2	2																		
Z-40 °C / Z+20 °C	12	8	5	4	3	3	3																		
Load Life	Test conditions Duration time : 1000 Hrs Ambient temperature : +105 Applied voltage : Rated DC working voltage After test requirements at +20 °C Capacitance change : $\pm 20\%$ of the initial measured value (4V : $\pm 30\%$ ) Dissipation factor : 200% of the initial specified value Leakage current : The initial specified value																								
Shelf Life	Test conditions Duration time : 1000 Hrs Ambient temperature : +105 Applied voltage : None  After test requirements at +20 °C : Same limits as Load life. Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																								

### Multiplier for Ripple Current vs. Frequency

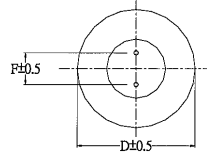
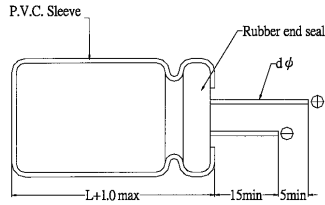
CAP( $\mu$ F) \ Hz	50(60)	120	1K	10K	
Multiplier	0.1~47	0.8	1	1.30	1.50
	100	0.8	1	1.15	1.20

### Multiplier for Ripple Current vs. Temperature

Temperature	60	85	105
Multiplier	1.90	1.40	1.00

# CapXon ST Series

## Diagram of Dimension: (unit:mm)



D	3	4	5	6.3
F	1.0±0.3	1.5±0.5	2.0±0.5	2.5±0.5
d	0.4	0.45		

## Case Size

WV(SV) μF	DxL(mm)						
	4 (5)	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1	→						3x5
0.22	→						3x5
0.33	→						3x5
0.47	→						4x5
1	→						4x5
2.2	→					3x5	4x5
3.3	→					4x5	4x5
4.7	→				4x5	4x5	5x5
10	→			4x5	5x5	5x5	6.3x5
22	4x5	4x5	5x5	5x5	6.3x5	6.3x5	—
33	5x5	5x5	5x5	6.3x5	6.3x5	—	—
47	5x5	5x5	6.3x5	6.3x5	—	—	—
100	6.3x5	6.3x5	—	—	—	—	—

## Maximum Ripple Current

WV(SV) μF	(mA, rms, 120Hz at 85 °C)						
	4 (5)	6.3 (8)	10 (13)	16 (20)	25 (32)	35 (44)	50 (63)
0.1	→						1.0
0.22	→						2.6
0.33	→						3.2
0.47	→						3.8
1	→						6.2
2.2	→					7.5	11
3.3	→					11	14
4.7	→				13	15	19
10	→			18	23	25	30
22	22	22	27	30	38	48	—
33	30	30	35	40	48	—	—
47	36	36	46	50	—	—	—
100	60	60	—	—	—	—	—