

SM Series 7 mm 85°C Standard

Features

- ◆ Design for space-saving and high density insertion.
- ◆ Applications: VTR, car radio, car stereos, charger, etc.
- ◆ RoHS Compliant



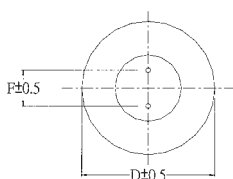
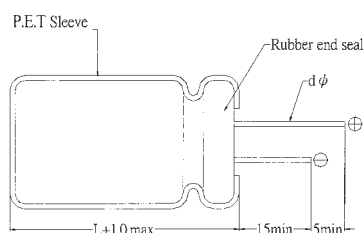
Specifications

Item	Performance Characteristics																																			
Operating Temperature Range	-40 to +85°C																																			
Rated Voltage Range	4 to 63 VDC																																			
Capacitance Range	0.1 to 470 μF																																			
Capacitance Tolerance	±20% (120Hz, +20°C)																																			
Leakage Current(+20°C, max)	I≤0.01 CV or 3 (μA) After 1 minute, whichever is greater measured with rated working voltage applied.																																			
Dissipation Factor (tan δ , at 20°C , 120Hz)	<table><tr><td>Rated Voltage(VDC)</td><td>4</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td></tr><tr><td>D.F. (%)max.</td><td>25</td><td>22</td><td>20</td><td>16</td><td>14</td><td>12</td><td>10</td><td>9</td></tr></table>									Rated Voltage(VDC)	4	6.3	10	16	25	35	50	63	D.F. (%)max.	25	22	20	16	14	12	10	9									
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D.F. (%)max.	25	22	20	16	14	12	10	9																												
Low Temperature Characteristics (at 120Hz)	Impedance ratio max																																			
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	Rated Voltage(VDC)	4	6.3	10	16	25	35	50	63																											
	Z-25°C／Z+20°C	7	4	3	2	2	2	2	2																											
Z-40°C／Z+20°C	15	8	6	4	4	3	3	3																												
Endurance	Test conditions																																			
	Duration time :1000 Hrs																																			
	Ambient temperature :+85°C																																			
	Applied voltage :Rated DC working voltage																																			
	After test requirement at +20°C																																			
	Capacitance change :≤ ±20% of the initial measured value (4V : ≤ ±30%)																																			
	Dissipation factor :≤ 200% of the initial specified value																																			
Shelf Life	Leakage current :≤ The initial specified value																																			
	Test conditions																																			
	Duration time :1000 Hrs																																			
	Ambient temperature :+85°C																																			
	Applied voltage :None																																			
	After test requirement at +20°C : Same limits as Endurance.																																			
	Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.																																			

Multiplier for Ripple Current vs. Frequency

Frequency(Hz) \ CAP(µ F)	50(60)	120	400	1K	10K	50K-100K
CAP ≤ 10	0.80	1.00	1.30	1.45	1.65	1.7
10 < CAP ≤ 100	0.80	1.00	1.23	1.36	1.48	1.53
100 < CAP ≤ 1000	0.80	1.00	1.16	1.25	1.35	1.38

Diagram of Dimensions:(unit:mm)



D φ	4	5	6.3	8
F	1.5±0.5	2.0±0.5	2.5±0.5	3.5±0.5
d φ	0.45		0.5	

Case Size

WV (Vdc)	Cap (uF)	Size (mm)	Rated Ripple current (mAmps/85°C /120Hz)
4	33	4x7	33
4	47	4x7	35
4	68	4x7	42
4	100	4x7	55
4	100	5x7	61
4	150	5x7	72
4	220	6.3x7	110
4	330	6.3x7	120
4	330	8x7	165
4	470	8x7	235
6.3	15	4x7	28
6.3	22	4x7	35
6.3	33	4x7	40
6.3	33	5x7	42
6.3	47	4x7	46
6.3	47	5x7	48
6.3	68	5x7	50
6.3	100	5x7	75
6.3	100	6.3x7	80
6.3	150	6.3x7	82
6.3	150	8x7	85
6.3	220	6.3x7	120
6.3	220	8x7	133
6.3	330	8x7	160
10	15	4x7	32
10	22	4x7	36
10	22	5x7	38
10	33	4x7	43
10	33	5x7	45
10	47	4x7	50
10	47	5x7	58
10	68	5x7	60
10	100	5x7	82
10	100	6.3x7	90
10	150	6.3x7	95
10	220	6.3x7	136
10	220	8x7	140
10	330	8x7	182
16	4.7	4x7	15
16	6.8	4x7	20
16	10	4x7	28
16	15	4x7	35
16	22	4x7	40
16	22	5x7	42
16	33	4x7	45
16	33	5x7	55
16	47	5x7	65
16	47	6.3x7	68
16	68	6.3x7	70
16	100	6.3x7	98
16	100	8x7	105
16	150	8x7	111
16	220	8x7	152
25	4.7	4x7	20
25	6.8	4x7	22
25	10	4x7	30
25	15	5x7	37

WV (Vdc)	Cap (uF)	Size (mm)	Rated Ripple current (mAmps/85°C /120Hz)
25	22	4x7	46
25	22	5x7	50
25	33	5x7	52
25	33	6.3x7	58
25	47	6.3x7	71
25	68	6.3x7	79
25	100	8x7	113
35	3.3	4x7	18
35	4.7	4x7	22
35	6.8	5x7	25
35	10	4x7	31
35	10	5x7	33
35	15	5x7	37
35	22	5x7	47
35	22	6.3x7	55
35	33	6.3x7	65
35	33	8x7	68
35	47	8x7	85
35	68	8x7	88
35	100	8x7	119
50	0.1	4x7	1
50	0.15	4x7	2
50	0.22	4x7	3
50	0.33	4x7	4
50	0.47	4x7	5
50	0.68	4x7	8
50	1	4x7	10
50	1.5	4x7	13
50	2.2	4x7	17
50	3.3	4x7	23
50	4.7	4x7	24
50	4.7	5x7	26
50	6.8	5x7	28
50	10	5x7	35
50	10	6.3x7	38
50	15	6.3x7	42
50	22	6.3x7	59
50	22	8x7	63
50	33	8x7	75
50	47	8x7	88
63	0.1	4x7	1
63	0.15	4x7	2
63	0.22	4x7	3
63	0.33	4x7	4
63	0.47	4x7	6
63	0.68	4x7	8
63	1	4x7	12
63	1.5	4x7	14
63	2.2	4x7	18
63	3.3	5x7	25
63	4.7	5x7	30
63	4.7	6.3x7	33
63	6.8	6.3x7	31
63	10	6.3x7	48
63	15	8x7	45
63	22	8x7	65