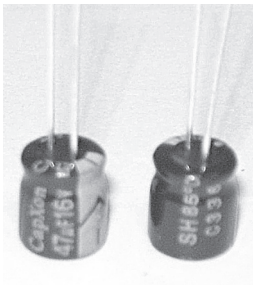
SH Series 7 mm 85℃ Long Life



Features

- ◆ Long life 2000 hrs.
- ◆ Design for space-saving and high density insertion.
- ◆ Applications: VTR, car radio, car stereos, charger, etc.
- ◆ For detail specifications, please refer to Engineering Bulletin No. E137

Specifications

Item	Performance Characteristics
Operating Temperature Range	-40 to +85℃
Rated Voltage Range	4 to 63 VDC
Capacitance Range	0.1 to 470 μF
Capacitance Tolerance	±20% (120Hz, +20℃)
Leakage Current(+20℃, max)	I≦0.01 CV or 3 (μA) After 1 minute, whichever is greater measured with rated working voltage applied.
Dissipation Factor(tan δ)	(+20℃,at 120Hz)

Working Voltage (VDC)	4	6.3	10	16	25	35	50	63
D.F. (%)max	25	22	20	16	14	12	10	9

Low Temperature Characteristics (120Hz) — Impedance ratio max.

Working Voltage (VDC)	4	6.3	10	16	25	35	50	63
Z-25℃ / Z+20℃	7	4	3	2	2	2	2	2
Z-40℃ / Z+20℃	15	8	6	4	4	3	3	3

Load Life

Test conditions
Duration time :2000 Hrs
Ambient temperature :+85℃
Applied voltage :Rated DC working voltage
After test requirements at +20℃
Capacitance change :≦ ±20% of the initial measured value (4V : ≦ ±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 :+85℃
Applied voltage :None

After test requirements at +20℃ : Same limits as Load life.
Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.

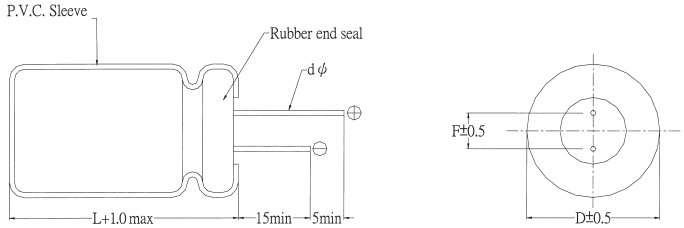
Multiplier for Ripple Current vs. Frequency

CAP(μF) \ Frequency(Hz)	60(50)	120	400	1K	10K	50K-100K
CAP≦10	0.8	1	1.30	1.45	1.65	1.70
10＜CAP≦100	0.8	1	1.23	1.36	1.48	1.53
100＜CAP≦1000	0.8	1	1.16	1.25	1.35	1.38

Multiplier for Ripple Current vs. Temperature

Temperature(℃)	45	60	70	85
Multiplier	1.8	1.50	1.35	1.0

Diagram of Dimensions:(unit:mm)



Dψ	4	5	6.3	8
F	1.5±0.5	2.0±0.5	2.5±0.5	3.5±0.5
dψ	0.45		0.5	

Case Size

ϕDxL(mm)

WV (SV) / μF	4 (5)		6.3 (8)		10 (13)		16 (20)		25 (32)	
	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
4.7									4x7	17
6.8							4x7	20	4x7	21
10							4x7	30	4x7	30
									5x7	33
15					4x7	28	4x7	32	5x7	38
22	4x7	23	4x7	31	4x7	35	4x7	37	5x7	45
							5x7	42	6.3x7	48
33	4x7	26	4x7	32	4x7	40	4x7	45	5x7	52
			5x7	35	5x7	45	5x7	50	6.3x7	60
47	4x7	35	4x7	40	4x7	47	5x7	61	6.3x7	68
			5x7	47	5x7	51	6.3x7	67	8x7	72
68	5x7	55	5x7	55	5x7	60	6.3x7	72	6.3x7	75
					6.3x7	68				
100	5x7	58	5x7	65	5x7	80	6.3x7	95	8x7	115
			6.3x7	75	6.3x7	90	8x7	105		
220	6.3x7	65	6.3x7	70	6.3x7	105				
			8x7	90	8x7	125				
330	6.3x7	90	8x7	120						
470	8x7	120								

WV (SV) / μF	35 (44)		50 (63)		63 (79)	
	Size	Ripple	Size	Ripple	Size	Ripple
0.1			4x7	1.5	4x7	1.5
0.15			4x7	1.8	4x7	1.8
0.22			4x7	2.5	4x7	2.5
0.33			4x7	3.5	4x7	3.5
0.47			4x7	5	4x7	6
0.68			4x7	7	4x7	7
1			4x7	10	4x7	12
1.5			4x7	13	4x7	14
2.2			4x7	19	4x7	19
3.3			4x7	24	5x7	25
4.7	4x7	22	4x7	27	5x7	29
			5x7	29	6.3x7	33
6.8	4x7	24	5x7	32	6.3x7	35
	5x7	28	6.3x7	33		
10	4x7	30	5x7	35	6.3x7	40
	5x7	35	6.3x7	38		
15	5x7	38	6.3x7	52	8x7	55
	6.3x7	45				
22	5x7	50	6.3x7	60	8x7	65
	6.3x7	58	8x7	63		
33	6.3x7	54	8x7	78		
	8x7	68				
47	8x7	80				
68	8x7	85				

Ripple Current (mA, rms) at 85℃ 120Hz