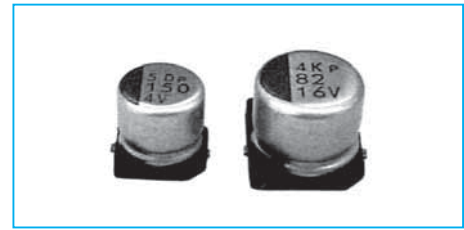


Chip Type GREEN CAP SMD Low ESR 105°C 2000hours Anti-cleaning solvent

- Super low E.S.R. and high ripple current are realized.
- Guaranteed 105°C, 2000 hours.



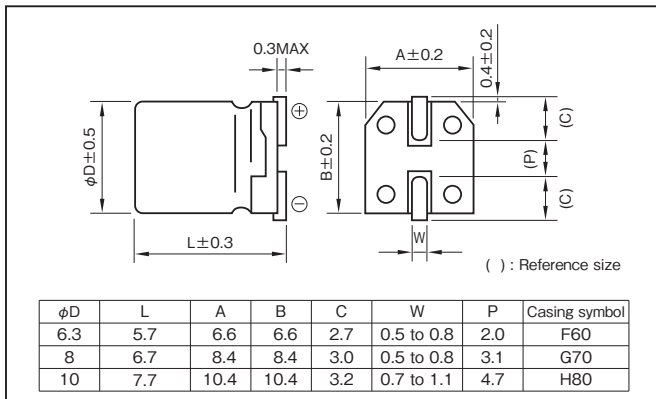
Specifications

Item	Performance	
Category temperature range (°C)	-55 to +105	
Tolerance at rated capacitance (%)	±20 (20°C, 120Hz)	
Leakage current (μA) *Note	Rated voltage (V)	2.5 to 20
	Leakage current (μA)	Less than 0.2 CV
C : Rated capacitance (μF) ; V : Rated voltage (V)		
Tangent of loss angle (tanδ)	Less than 0.12 (20°C, 120Hz)	
Characteristics at high and low temperature	Impedance ratio (max.)	
	Z-55°C/Z+20°C : 1.50 (100kHz)	
Endurance (105°C) (Applied ripple current)	Test time	2000 hours
	Leakage current	The initial specified value or less
	Percentage of capacitance change	Within ±20% of initial value
	Tangent of the loss angle	150% or less of the initial specified value
	E.S.R. change	200% or less of the initial specified value
Damp heat, steady state (humidity) 60°C, 90 to 95%RH	Test time	500 hours
	Leakage current	The initial specified value or less
	Percentage of capacitance change	Within ±20% of initial value
	Tangent of the loss angle	150% or less of the initial specified value
	E.S.R. change	200% or less of the initial specified value
Characteristics of applied surge voltage	The capacitors shall be subject to 1000 cycles each consisting of charge with the surge voltage specified at 15 to 35°C for 30 seconds through a protective resistor (Rc=1kΩ) in 6 minutes per cycle. Surge voltage : 1.15 times of rated voltage	
	Leakage current	The initial specified value or less
	Percentage of capacitance change	Within ±20% of initial value
	Tangent of the loss angle	150% or less of the initial specified value
	E.S.R. change	200% or less of the initial specified value
Failure rate	0.5% per 1000 hours maximum (Confidence level 60% at 105°C)	

*Note : If any doubt arises, measure the leakage current after following voltage application treatment.
Voltage application treatment : DC rated voltage are applied to the capacitors for 120 minutes at 105°C.

Outline Drawing

Unit : mm



- Soldering conditions are described on page 13.
- Land pattern size are described on page 11.
- The taping specifications are described on page 14.

Part numbering system (example : 4V151 M F60 E)					
PVH	4	V	151	M	F60 E
Series code	Rated voltage symbol	Rated capacitance symbol	Capacitance tolerance symbol	Casing symbol	Taping symbol

Standard Ratings

Rated voltage (V)	Item	2.5			4			6.3			10			16		
		Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current
		φD×L (mm)	(mΩ max.)	(mA rms)	φD×L (mm)	(mΩ max.)	(mA rms)	φD×L (mm)	(mΩ max.)	(mA rms)	φD×L (mm)	(mΩ max.)	(mA rms)	φD×L (mm)	(mΩ max.)	(mA rms)
33	—	—	—	—	—	—	—	—	—	—	—	—	6.3×5.7	37	2050	
39	—	—	—	—	—	—	—	—	—	—	—	—	6.3×5.7	37	2050	
47	—	—	—	—	—	—	—	—	—	—	6.3×5.7	31	2250	6.3×5.7	37	2050
56	—	—	—	—	—	—	—	—	—	—	6.3×5.7	31	2250	—	—	—
68	—	—	—	—	—	—	—	6.3×5.7	27	2400	—	—	—	—	—	—
82	—	—	—	—	—	—	—	6.3×5.7	27	2400	—	—	—	8×6.7	30	2700
100	—	—	—	6.3×5.7	26	2450	6.3×5.7	27	2400	8×6.7	27	2800	8×6.7	30	2700	
120	—	—	—	—	—	—	6.3×5.7	27	2400	8×6.7	27	2800	—	—	—	
150	—	—	—	6.3×5.7	26	2450	8×6.7	25	3020	8×6.7	27	2800	10×7.7	26	3430	
180	—	—	—	—	—	—	—	—	—	—	—	—	10×7.7	26	3430	
220	6.3×5.7	25	2500	8×6.7	25	3020	8×6.7	25	3020	10×7.7	24	3770	—	—	—	
270	—	—	—	—	—	—	—	—	—	10×7.7	24	3770	—	—	—	
330	8×6.7	23	3100	8×6.7	25	3020	10×7.7	20	4130	10×7.7	24	3770	—	—	—	
470	8×6.7	23	3100	10×7.7	20	4130	10×7.7	20	4130	—	—	—	—	—	—	
560	8×6.7	23	3100	—	—	—	—	—	—	—	—	—	—	—	—	
680	—	—	—	10×7.7	20	4130	—	—	—	—	—	—	—	—	—	
1000	10×7.7	19	4240	—	—	—	—	—	—	—	—	—	—	—	—	

Aluminum Electrolytic Capacitors
With Conductive Polymer Solid
Electrolyte

Rated voltage (V)	Item	20			25			35		
		Case	ESR	Rated ripple current	Case	ESR	Rated ripple current	Case	ESR	Rated ripple current
		φD×L (mm)	(mΩ max.)	(mA rms)	φD×L (mm)	(mΩ max.)	(mA rms)	φD×L (mm)	(mΩ max.)	(mA rms)
10	—	—	—	6.3×5.7	65	1500	8×6.7	200	750	
22	6.3×5.7	50	1650	8×6.7	50	1800	10×7.7	150	1000	
33	8×6.7	45	2000	10×7.7	45	2100	—	—	—	
39	8×6.7	45	2000	10×7.7	45	2100	—	—	—	
47	8×6.7	45	2000	—	—	—	—	—	—	
82	10×7.7	40	2500	—	—	—	—	—	—	

(Note) Rated ripple current : 105°C, 100kHz ; E.S.R. : 20°C, 100kHz